



Groundwater Monitoring Report for the
September 2003 Sampling Event
Old Navy Fuel Farm
Naval Air Station, Brunswick, Maine

Contract No. N62472-92-D-1296
Contract Task Order No. 0035



Prepared for

Department of the Navy
Engineering Field Activity Northeast
Naval Facilities Engineering Command
North Loop & American Way, Building G
Lester, Pennsylvania 19113-2090

Prepared by

EA Engineering, Science, and Technology, Inc.
Southborough Technology Park
333 Turnpike Road, Route 9
Southborough, Massachusetts 01772

August 2004
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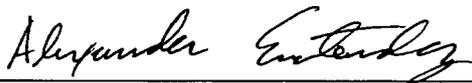
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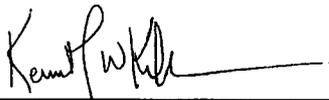
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Alexander C. Easterday, P.G.
CTO Manager

31 August 2004

Date



Kenneth W. Kilmer
Program Manager

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QUALITY REVIEW STATEMENT

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Groundwater Monitoring Report for the September 2003 Sampling Event, Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine

EA CTO Manager: Alexander C. Easterday, P.G.

In compliance with EA's Quality Procedures for review of deliverables outlined in the Quality Management Plan, this final deliverable has been reviewed for quality by the undersigned Senior Technical Reviewer(s). The information presented in this report/deliverable has been prepared in accordance with the approved Implementation Plan for the Contract Task Order (CTO) and reflects a proper presentation of the data and/or the conclusions drawn and/or the analyses or design completed during the conduct of the work. This statement is based upon the standards identified in the CTO and/or the standard of care existing at the time of preparation.

Senior Technical Reviewer



Peter L. Nimmer, P.G.
Geologist

31 August 2004

(Date)

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1. INTRODUCTION

Under Contract No. N62472-92-D-1296, Engineering Field Activity Northeast, Naval Facilities Engineering Command issued Contract Task Order No. 0035 to EA Engineering, Science, and Technology, Inc. to conduct groundwater monitoring at the Old Navy Fuel Farm (ONFF), Naval Air Station (NAS) Brunswick, Maine. NAS Brunswick is located south of the Androscoggin River and south of Route 1 between Routes 24 and 123. NAS Brunswick is an active base, owned and operated by the Federal Government through the Department of the Navy. The ONFF site is located on the northeast portion of NAS Brunswick (Figure 1).

A Groundwater Monitoring Plan (EA 2000a) was developed to support the Navy's overall strategy for remediation at the ONFF at NAS Brunswick. The ONFF has petroleum-impacted soil and groundwater. A soil removal action was completed in Fall 2000 during which approximately 15,000 tons of petroleum-impacted soil was removed by the Navy's Remedial Action Contractor, Foster Wheeler Environmental Corporation. The monitoring program was implemented to evaluate the effectiveness of the removal action in achieving cleanup goals. This report summarizes the September 2003 groundwater sampling event that was completed to monitor groundwater concentrations of petroleum impacts.

1.1 SITE DESCRIPTION

The ONFF is located on the northeast portion of NAS Brunswick (Figure 1), and is bounded by Avenue B to the south, 6th Street to the west, and by undeveloped land to the north and east. The topography of the area is characterized as flat and exhibits little relief. Surface grade consists of two newly constructed baseball fields, a level field of grass, and paved access roads. The ball fields were constructed during the construction seasons of 2002 and 2003. The site is located greater than 2,000 ft of the Brunswick public water supply wells. The shallow aquifer onsite, which has been determined to be impacted by petroleum, is not used as a potable water supply source.

1.2 SITE GEOLOGIC CONDITIONS

Previous hydrogeologic investigations (O'Brien & Gere Engineers, Inc. 1990, 1992) revealed that the site is underlain by a sandy deposit (Upper Sand) which is continuous and underlain by a glacio-marine silty clay deposit (designated as the Presumpscot Formation by the Maine Geologic Survey). The sandy deposit thickness ranges from 2.5 to 9.0 ft with thicker zones located at the northwest section of the site. The groundwater table occurs in the sandy zone, and groundwater flow is generally to the southeast, parallel to the surface drainage.

1.3 HISTORICAL PETROLEUM BULK STORAGE AND ENVIRONMENTAL INVESTIGATION SUMMARY

Prior to decommissioning in 1993, the ONFF consisted of two separate petroleum bulk storage tank farms which, together, included nine mounded underground storage tanks (USTs). The older, western tank farm included five USTs, previously identified as USTs T-101 through T-105. USTs T-101, T-102, and T-103 were 100,000-gal capacity tanks used for storage of petroleum sludge, unleaded gasoline, and aviation gasoline, respectively. At some time prior to April 1990, USTs T-101 through T-103 were taken out of service. USTs T-104 and T-105 were both 25,000-gal capacity tanks used for storage of ethylene glycol. The newer, eastern Fuel Farm included four USTs, previously identified as USTs T-202 through T-205. Each of these USTs was 567,000-gal capacity tanks used for storage of JP-5. All USTs, piping, and associated appurtenances were removed during facility decommissioning completed in 1993.

Previous environmental investigations (O'Brien & Gere Engineers, Inc. 1990, 1992) identified a dissolved-phase hydrocarbon plume located in the east central portion of the ONFF (east of 7th Street) which appeared to originate in the vicinity of former JP-5 UST T-202. This plume previously extended downgradient from the former location of T-202 toward the south-southeast and consisted primarily of benzene, toluene, ethylbenzene, and xylene (BTEX) compounds. In November 1991, a supplemental groundwater investigation confirmed the presence of this dissolved-phase hydrocarbon plume (O'Brien & Gere Engineers, Inc. 1992).

In October and November 1993, HRP Associates, Inc., of Plainville, Connecticut completed a groundwater investigation at the ONFF following facility decommissioning and associated UST removals, with the exception of T-202 and T-203 (HRP Associates, Inc. 1993). The results of these groundwater investigations indicated that the dissolved-phase BTEX plume located in the eastern Fuel Farm had exhibited a significant reduction in total BTEX concentrations with little or no indication of plume migration. The extent of the dissolved-phase BTEX plume did not exhibit significant change from April 1990 to October-November 1993. However, the maximum dissolved-phase BTEX concentration decreased from greater than 20,000 µg/L in 1990 to 4,777 µg/L in 1993, with similar reductions in dissolved-phase BTEX concentrations throughout the plume area. These observations document that significant natural attenuation of petroleum hydrocarbons at the ONFF has occurred.

It should be noted that groundwater samples collected by both O'Brien & Gere Engineers, Inc. and HRP Associates, Inc. during the period of 1990-1993 indicated the presence of a separate, dissolved-phase hydrocarbon release area in the western Fuel Farm (west of 7th Street). However, insufficient samples were collected to delineate the extent of the western dissolved-phase hydrocarbon plume at these times.

1.4 SUMMARY OF REMEDIAL PROGRAMS AT THE OLD NAVY FUEL FARM

Remedial programs completed at the ONFF include the following:

- Operation of an existing soil vapor extraction/air sparging system as a biosparging system (i.e., low-flow air injection without vapor extraction) during the period of August 1996 – December 1998
- Active soil vapor extraction/air sparging system operation (with groundwater recovery) during March-July 1999
- Biosparging system operation during September 1999 – August 2000
- Remedial excavation of residual source area soils during September-November 2000.

The following sections provide brief summaries of each remedial program outlined above.

1.4.1 Biosparging System Operation (August 1996 – December 1998)

A soil vapor extraction/air sparging system for remediation of vadose and saturated zone hydrocarbon contamination at the ONFF was designed by HRP Associates, Inc. OHM, Inc. completed soil vapor extraction/air sparging system installation in early 1996. In June 1996, a pre-start investigation was conducted during which it was found that the water table elevation was at or above the level of the lateral soil vapor extraction intake screens, preventing operation of the soil vapor extraction system. Since effective operation of the soil vapor extraction system was not possible, the Navy obtained approval from the Maine Department of Environmental Protection (MEDEP) to operate the system as a biosparging system to enhance *in situ* biodegradation of petroleum hydrocarbons. The ONFF biosparging system was activated on 8 August 1996 with the injection of compressed air into both lateral soil vapor extraction screens and air sparging wells throughout the eastern and western dissolved-phase plume areas.

The biosparging system was operated until December 1998, at which point the system was de-activated to allow completion of system modifications for soil vapor extraction operations. Based on a comparison of groundwater samples collected prior to, and following this biosparging period (i.e., 7-8 August 1996 baseline sampling event and 15-18 June 1999 sampling event, respectively), a measurable reduction in both the extent and concentration of dissolved-phase BTEX concentrations was exhibited throughout the ONFF. This observation is supported by 5 additional groundwater sampling events, conducted bi-annually during the biosparging system operational period (EA 1997a, 1997b, 1998a, 1998b, 2000b).

1.4.2 Soil Vapor Extraction/Air Sparging System Operation (March-July 1999)

In an effort to increase the effectiveness of active remedial operations at the ONFF, modifications were made to allow operation of the soil vapor extraction system (which had previously been inoperable due to elevated water table conditions). The modifications included installation of a dual-phase extraction and separation system and were completed during the period of October 1998 – March 1999. The soil vapor extraction/air sparging system was activated on 9 March 1999 and continued operation until 16 July 1999, when the vapor-phase granular activated carbon emission treatment system became saturated. During the active soil vapor extraction/air sparging period, approximately 600 lb of petroleum hydrocarbons were removed from the site (EA 2000a). Additional *in situ* treatment (i.e., biodegradation) due to enhanced oxygen delivery (both from active air sparging and vadose zone air entrainment) is likely to have occurred but was not quantified.

Following the rapid saturation of the vapor-phase granular activated carbon emission treatment system, the Navy performed an economic analysis of various remedial alternatives and identified excavation of residual source area soils followed by natural attenuation as the most suitable remedial strategy for the ONFF. During the interim period prior to remedial soil excavation (i.e., September 1999 – September 2000), the biosparging system was re-activated.

1.4.3 Remedial Soil Excavation Program

From 9 August to 2 September 1999, a direct-push investigation was completed to delineate the remaining petroleum-impacted source areas and to identify remedial excavation target areas (EA 2000c). The results of the direct-push investigation were used to identify areas for subsequent test pit excavation completed by Foster Wheeler Environmental Corporation, Inc. (Foster Wheeler 2001). Based on the results of the direct-push and test pit sampling programs, excavation target areas were identified.

During the period of 11 September to 7 November 2000, Foster Wheeler Environmental Corporation removed approximately 14,677 tons of petroleum-impacted soil from the ONFF site. Confirmatory sampling results of the excavation bottom and sidewall samples indicated that residual petroleum-impacted soil remains onsite at concentrations ranging from non-detect to 840 mg/kg total petroleum hydrocarbon (TPH) (reported as cumulative TPH-diesel range organic [DRO] and TPH-gasoline range organic [GRO]).

During the test pitting and soil excavation process, the existing soil vapor extraction/air sparging system field components were either removed from the site or abandoned in-place. Existing monitoring wells and well points located within the ONFF fence line were decommissioned during 23-30 April 2001 in accordance with MEDEP Solid Waste Management Rules (EA 2001). Therefore, groundwater sampling events conducted after 30 April 2001 include only monitoring wells located downgradient of the ONFF fence line. These monitoring wells assess the potential for offsite migration of dissolved-phase petroleum compounds. The locations of the decommissioned wells are depicted on Figure 2.

1.5 GROUNDWATER SAMPLING EVENTS

Following completion of the remedial soil excavation program, EA collected groundwater samples from monitoring wells located downgradient from the ONFF fence line for seven events between December 2000 and September 2003 to monitor reductions of petroleum impacts to groundwater (EA 2004a). This report presents the monitoring data from the September 2003 groundwater sampling event completed at the ONFF from 15 to 19 September.

1.6 REPORT ORGANIZATION

This Groundwater Monitoring Report details the findings, conclusions, and recommendations based on the September 2003 monitoring event. This section provides an introduction and background of the remedial and monitoring program activities at the ONFF site. Section 2 details the September 2003 monitoring event. Section 3 presents the results of the September 2003 monitoring event. Section 4 presents conclusions and recommendations based on the results. Appendix A provides completed response to comments from the Maine Department of Environmental Protection on the draft report. Graphs showing trends in analytical data results are presented in Appendix B. The complete analytical data Form 1s are provided in Appendix C. Appendix D includes the Field Record of Well Gauging, Purging, and Sampling forms. Appendix E provides a tag map for TPH-GRO and TPH-DRO.

2. MONITORING PLAN

2.1 GROUNDWATER MONITORING

2.1.1 Sampling Locations

A total of 13 monitoring wells were sampled between 15 and 19 September 2003 (MW-NASB-46, MW-NASB-49, MW-NASB-51, MW-NASB-58, MW-NASB-62, MW-NASB-98, MW-NASB-206, MW-NASB-207, MW-NASB-208AR, MW-NASB-209R, MW-NASB-210, MW-NASB-244, and MW-NASB-245).

Monitoring wells MW-NASB-54, MW-NASB-61, and MW-NASB-213 were not sampled as presented in the ONFF Groundwater Monitoring Plan (EA 2000a) because these wells were decommissioned between 23 and 30 April 2001 (well locations shown on Figure 2). The ONFF area has been developed into athletic fields for NAS Brunswick personnel, therefore, these wells were decommissioned.

2.1.2 Groundwater Sampling Program

Prior to collecting groundwater samples, measurement and recording of groundwater elevations were conducted at site wells. In accordance with the Groundwater Monitoring Plan (EA 2000a), only the shallow well was gauged and sampled at nested monitoring well clusters (shallow and deep screened monitoring wells). An oil/water interface probe was utilized to assess the presence or absence of light, non-aqueous phase liquid on the groundwater surface. During the September 2003 sampling event, no light, non-aqueous phase liquid was detected in the groundwater monitoring wells at the ONFF site.

During the sampling round, 1 groundwater sample was collected via low-flow sampling methods from each of the groundwater monitoring wells as presented in Section 2.1.1. Two duplicate samples were collected from groundwater monitoring wells MW-NASB-207 and MW-NASB-209R for the September 2003 sampling event. One field equipment rinsate blank was collected and analyzed to assess sample collection quality control and quality assurance procedures. One trip blank (four total) was collected and analyzed per sample shipment to the laboratory to document the potential introduction of contaminants during sample shipment and evaluate potential cross-contamination of the samples.

2.1.3 Sampling Parameters

Groundwater samples collected in September 2003 were analyzed for the following:

- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B.

- TPHs by Department of Human Services Health and Environmental Testing Laboratory, State of Maine Method 4.1.25 (DRO)
- TPHs by Department of Human Services Health and Environmental Testing Laboratory, State of Maine Method 4.2.17 (GRO)
- Methane by EPA Method 8015B Modified
- Alkalinity by EPA Method 310.1
- Chloride by EPA Method 325.2
- Nitrate by EPA Method 353.2
- Sulfate by EPA Method 375.4
- Total organic carbon by EPA Method 415.1
- Iron by Hach Methods 8146
- Manganese by Hach Method 8149.

The analytical results of groundwater samples collected during this event were compared to the Maximum Exposure Guidelines (MEGs) obtained from the State of Maine Department of Human Services to assess whether there were any exceedances of applicable regulatory standards. Analytical results for the September 2003 sampling events are presented in Table 1. Laboratory Form 1s are provided in Appendix C.

3. SAMPLING RESULTS

3.1 WATER LEVEL GAUGING PROGRAM

During the September 2003 sampling event, groundwater monitoring wells at the ONFF site were gauged prior to sampling as presented in Section 2.1.1. An interpretive groundwater table contour map was developed from the September 2003 gauging data. The gauging data from the September 2003 sampling event is presented in Table 2. The interpreted groundwater table contour map is based upon the water levels recorded during the sampling event and are presented on Figure 3.

A tar-like substance was observed inside the apron of the roadbox and on the outside of the polyvinyl chloride riser of MW-NASB-208AR, possibly resulting from the paving activities around this well. This substance on the polyvinyl chloride riser was noted on the field form.

3.2 GROUNDWATER MONITORING

3.2.1 Volatile Organic Compounds

VOCs were detected in 2 of 13 groundwater samples, however, the VOC concentrations did not exceed the MEG at the sampling locations. At monitoring well MW-NASB-098, methyl tertiary-butyl ether (MTBE) was detected at 16 $\mu\text{g/L}$, which is below the MEDEP MEG of 35 $\mu\text{g/L}$. At monitoring well MW-NASB-208AR, toluene was detected at 4 $\mu\text{g/L}$, which is below the MEDEP MEG of 1,400 $\mu\text{g/L}$. A summary of the VOC groundwater data for the September 2003 sampling event is presented in Table 1.

3.2.2 Total Petroleum Hydrocarbons

3.2.2.1 Total Petroleum Hydrocarbons–Diesel Range Organics

TPH-DRO was detected in 4 of 13 groundwater samples and exceeded the MEG (50 $\mu\text{g/L}$) in 2 samples (MW-NASB-210 at 68 $\mu\text{g/L}$ and MW-NASB-208AR at 505 $\mu\text{g/L}$). The concentrations of TPH-DRO were detected in samples collected from wells MW-NASB-098, MW-NASB-208AR, MW-NASB-210, and MW-NASB-245 at concentrations of 35 $\mu\text{g/L}$, 505 $\mu\text{g/L}$, 68 $\mu\text{g/L}$, and 48 $\mu\text{g/L}$, respectively. Table 2 presents a summary of the data for the September 2003 sampling event. Appendix E presents a tag map for TPH-DRO. Figure 4 shows TPH-DRO concentrations in groundwater.

3.2.2.2 Total Petroleum Hydrocarbons–Gasoline Range Organics

No TPH-GRO was detected in the 13 groundwater samples during this event. Table 2 presents a summary of the data for the September 2003 sampling event. Appendix E presents a tag map for TPH-GRO. Figure 4 shows TPH-GRO concentrations in groundwater.

3.2.3 Monitored Natural Attenuation Parameters

Groundwater samples were analyzed for monitored natural attenuation parameters during sampling events at the ONFF to support a potential future evaluation of monitored natural attenuation as a remedy for the ONFF. This report will present the monitored natural attenuation data and discuss the results, but is not intended to be a formal monitored natural attenuation evaluation. The monitored natural attenuation parameter data are presented in Table 3.

3.2.3.1 Alkalinity

Alkalinity was collected during the groundwater sampling event completed at the ONFF. Detected concentrations of alkalinity from the sampling data range from 9.4 to 357 mg/L.

3.2.3.2 Chloride

Chloride was collected during the groundwater sampling event completed at the ONFF. Detected concentrations of chloride from the sampling data range from 3.1 to 123 mg/L.

3.2.3.3 Nitrate

Nitrate was collected during the groundwater sampling event completed at the ONFF. Detected concentrations of nitrate from the sampling data range from 0.011 to 0.13 mg/L.

3.2.3.4 Sulfate

Sulfate was collected during the groundwater sampling event completed at the ONFF. Detected concentrations of sulfate from the sampling data range from 5.1 to 30.6 mg/L.

3.2.3.5 Sulfide

Sulfide is no longer collected at the ONFF.

3.2.3.6 Total Organic Carbon

Total organic carbon was collected during the groundwater sampling event completed at the ONFF. Detected concentrations of total organic carbon from the sampling data range from 1.1 to 24.5 mg/L.

3.2.3.7 Iron

Iron was collected during the groundwater sampling event completed at the ONFF. Detected concentrations of iron from the sampling data range from 0.4 to 3.0 µg/L.

3.2.3.8 Manganese

Manganese was collected during the groundwater sampling event completed at the ONFF. Manganese was not detected during the September 2003 event.

3.2.3.9 Hydrogen

Hydrogen was not collected from ONFF during the September 2003 groundwater sampling event. Hydrogen has not been detected in the wells at the ONFF for the past six sampling rounds. Hydrogen was an optional additional parameter collected by the Navy to gain a better understanding of the natural attenuation taking place at the ONFF.

3.2.3.10 Methane

Methane was collected during the groundwater sampling event completed at the ONFF. Detected concentrations of methane from the sampling data range from 127 to 4,020 µg/L.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

4.1.1 Water Level Gauging Program

The results of the water level gauging program performed for the September 2003 event indicate that groundwater flow direction is generally toward the east to southeast across the ONFF site. Light, non-aqueous phase liquid was not identified in the groundwater monitoring wells gauged for this sampling event.

4.1.2 Groundwater Monitoring and Sampling Program

The results of the groundwater sampling and analysis program conducted during the September 2003 sampling event identified the following:

- There were no exceedances of the applicable MEGs for VOCs. Low concentrations of VOCs (toluene and MTBE) have been detected at 2 ONFF wells, ranging up to 16 µg/L. The VOC data indicate that the detected concentrations of VOCs have remained stable during the last seven sampling events, and that continued groundwater impacts from the ONFF for VOCs are minimal.
- The detection of MTBE (16 µg/L) in well MW-NASB-098 suggests another source area may be present other than the ONFF. Historically, detections of MTBE have been noted in well MW-NASB-209R. MW-NASB-098 is not downgradient of the ONFF and, therefore, areas with current or historical petroleum use to the north-northwest of this well should be considered as potential source areas for MTBE. Although MTBE is below the state MEG of 35 µg/L, the upgradient areas should be investigated to collect additional data on the extent of this compound in groundwater.
- Dissolved-phase TPH-DRO was detected in 2 monitoring wells during the last sampling event at concentrations exceeding the MEG (50 µg/L) in samples collected from wells MW-NASB-208AR and MW-NASB-210. The detected TPH-DRO concentrations exceeding the MEG are 505 µg/L and 68 µg/L, respectively. Dissolved phase TPH-DRO concentrations have remained at or below the MEG (50 µg/L) in all the site wells except for well MW-NASB-245, which has only remained below the MEG for the last two monitoring events. Overall dissolved-phase TPH-DRO concentrations have demonstrated a downward trend in the groundwater monitoring wells sampled during the last seven sampling events. Concentrations of TPH-DROs have increased at MW-NASB-208AR for the last three events, although this well may not be representative of site groundwater conditions, as the well integrity may be compromised (Section 4.2). Concentrations of TPH-DRO have increased at MW-NASB-210 since the last sampling

event, although this well may not be representative of site groundwater conditions. MW-NASB-210 is located to the south and west (crossgradient) of the ONFF site. With the groundwater flow direction being toward the southeast, the detected concentrations of TPH-DRO are potentially not directly attributable to past ONFF activities.

- Dissolved-phase TPH-GRO concentrations were not detected in the monitoring wells during this sampling event. Dissolved-phase TPH-GRO concentrations have stabilized at concentrations below the State MEG of 50 mg/L.
- The effectiveness of natural attenuation for mitigating residual petroleum hydrocarbons at the ONFF is evidenced by analytical trend data for BTEX, TPH-GRO, and TPH-DRO, which exhibit continued reductions in dissolved-phase concentrations. In addition to the analytical trend data, water quality indicator parameters continue to demonstrate a large demand for electron acceptors (particularly oxygen) within the residual petroleum-impacted area. The reduction in electron acceptor concentrations, coupled with the concurrent production of metabolic end products (i.e., carbon dioxide and methane), support the conclusion that biodegradation of residual petroleum compounds is occurring. This conclusion is further evidenced by the downgradient monitoring well data, which demonstrate that the hydrocarbon plumes have reached steady state and that offsite migration of hydrocarbon compounds is effectively prevented by natural attenuation mechanisms.
- The groundwater data from this reporting period support the conclusion of the February 2002 BIOSCREEN Modeling of Total Petroleum Hydrocarbons at the ONFF (EA 2002) that the plumes (east and west plumes) have reached steady state and that further migration is not likely to occur. This is supported by the groundwater data presented in this report that indicate TPH-GRO concentrations are not detected southeast of Fitch Avenue, and that downgradient concentrations of dissolved-phase TPH-DROs continue to remain stable near the State MEG of 50 µg/L.
- The soil removal has resulted in significant decreases in petroleum impacts to groundwater which were limited to TPH-DRO at MW-NASB-208AR (a possibly compromised well) and MW-NASB-210. Other site wells do not show significant impacts from the ONFF.

4.2 RECOMMENDATIONS

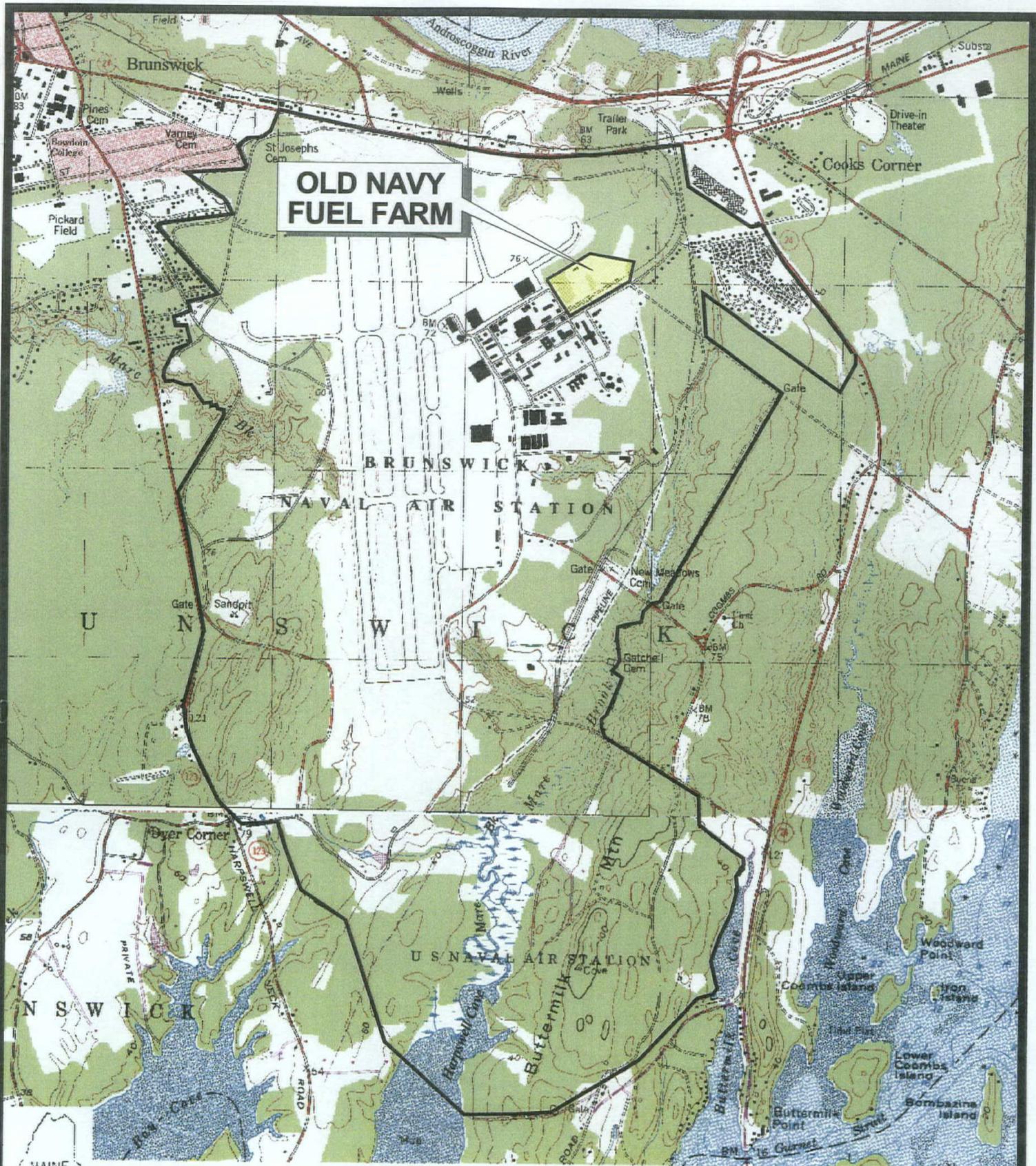
The following recommendations are based on the results of September 2003 sampling event:

- Collect groundwater samples from upgradient of MW-NASB-098 to establish the extent of MTBE in groundwater, and to delineate the source area of this compound, if possible.
- Continue to perform monitoring of VOCs (BTEX and MTBE) and dissolved-phase

TPH-DRO analysis in order to provide additional data to identify groundwater trends and determine the effectiveness of the removal actions at the site.

- Eliminate dissolved-phase TPH-GRO analysis from the ONFF groundwater sampling program after obtaining MEDEP concurrence.
- Install 3 shallow groundwater monitoring wells along Avenue B to provide coverage of the shallow groundwater conditions proximal to the former source area. Several former wells within the central portion of the ONFF were decommissioned for future construction activities that were included in the groundwater monitoring program for the ONFF.
- Inspect MW-NASB-208AR to determine if the well's integrity has been compromised. MW-NASB-208AR has elevated contaminants that are not representative of the rest of the site. In addition, gauging data at this well are anomalous. It is believed that the elevated TPH-DRO concentrations are not representative of true subsurface conditions at the ONFF. Possible causes of these anomalies could be, but are not limited to: (1) a faulty well cap which is allowing runoff from the paved parking area to drain into the well, (2) paving material which entered the well during construction, and/or (3) a leaky water supply line in the close proximity to the well.
- Possible corrective measures for MW-NASB-208AR include:
 - Checking the seal around the well and replacing the well cap; if the cap is found to be faulty, then a new cap should be installed before the next sampling event
 - Checking for leaks in base piping, or reinstalling MW-NASB-208AR due to the possibility that the well's integrity was compromised during paving activities surrounding the well.
 - This well should be inspected and repaired/replaced prior to the next scheduled event (March 2004).
- The Navy would like to discuss the representativeness of sampling location MW-NASB-210 during the next conference call or meeting.
- Request approval from MEDEP to conduct bi-annual monitoring of the ONFF to coincide with the spring and fall Long-Term Monitoring Program activities at the National Priorities List sites at NAS Brunswick.
- Revise the list of monitored natural attenuation parameters to the following:
 - Iron II (field measurement)
 - Dissolved oxygen

- Methane
 - Nitrate
 - Conductivity
 - pH
 - Oxidation reduction potential
 - Total organic carbon.
- The sampling program at the site should be reassessed following the installation and sampling of the three proposed monitoring wells within the central portion of the ONFF. A reduction in sampling points and/or sampling frequency may be appropriate if concentrations of petroleum constituents remain below State MEGs at wells located along the perimeter of the site.



SOURCE MAPS: USGS ORRS ISLAND (1978) AND BRUNSWICK (1980) 7.5 MINUTE QUADRANGLES.



OLD NAVY FUEL FARM
NAVAL AIR STATION
BRUNSWICK, MAINE

FIGURE I
SITE LOCATION MAP

PROJECT MGR ACE	DESIGNED BY BT	DRAWN BY DC	CHECKED BY CS	SCALE AS SHOWN	DATE 22 DEC 2003	PROJECT No 29600.35	FILE No I:\NASB_GIS NAVY.APR
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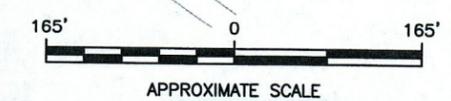
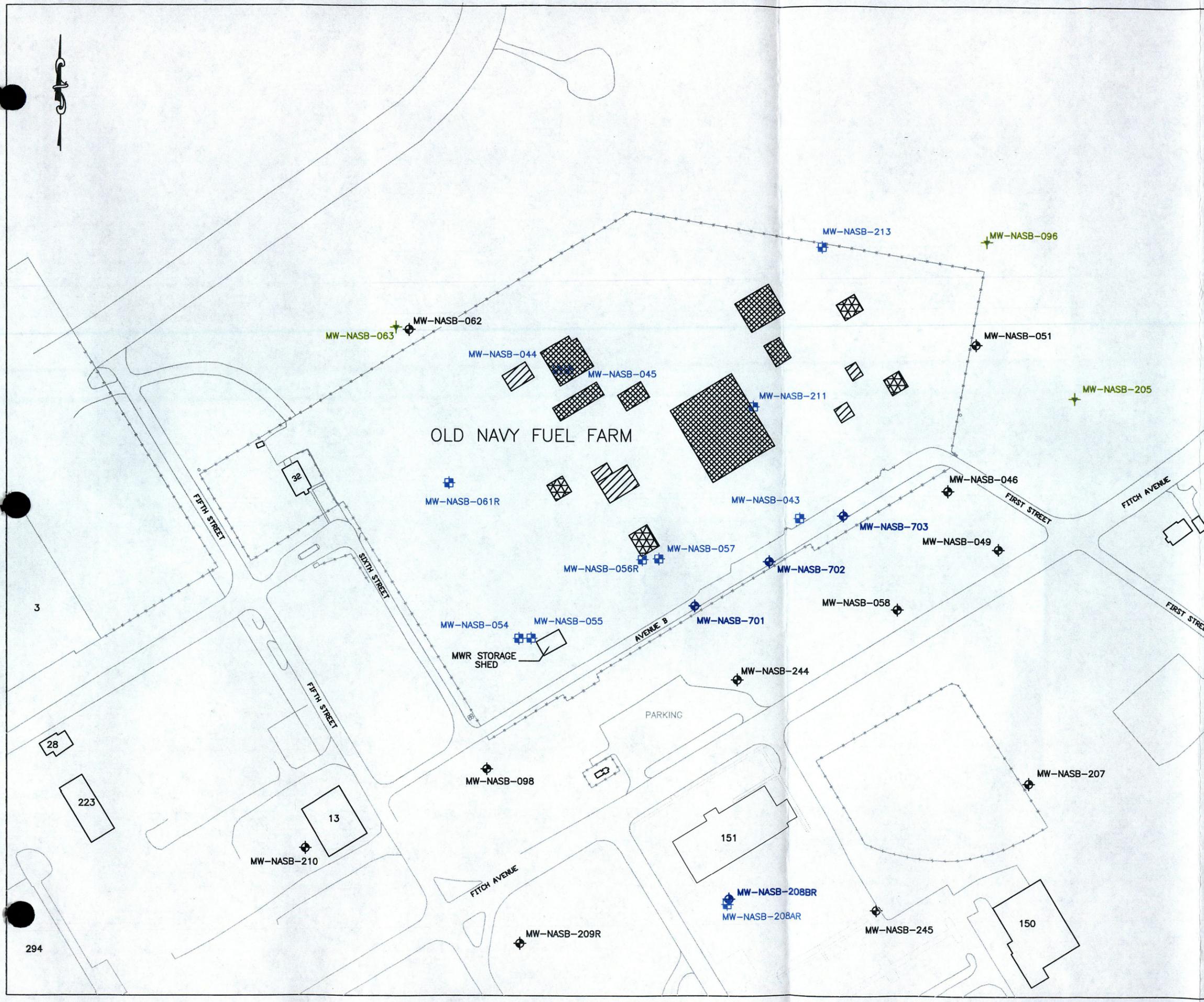
LEGEND

-  MONITORING WELL LOCATION
-  MW-NASB-058
DECOMMISSIONED MONITORING WELL LOCATION
-  MW-NASB-054
MONITORING WELL NOT IN SAMPLING PROGRAM
-  MW-NASB-096
NEW MONITORING WELL LOCATION
-  MW-NASB-701
CHAIN LINK FENCE

APPROXIMATE LOCATIONS OF EXCAVATION AREAS BY FOSTER WHEELER, JANUARY 2001

-  EXTENT OF EXCAVATION (6 FT DEEP)
-  EXTENT OF EXCAVATION (8 FT DEEP)
-  EXTENT OF EXCAVATION (10 FT DEEP)

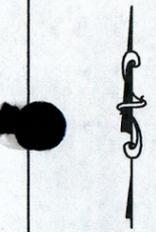
NOTE: EXCAVATION AREAS TAKEN FROM THE FINAL REPORT FOR REMEDIATION OF THE OLD NAVY FUEL FARM, DRAFT FINAL REPORT BY FOSTER WHEELER ENVIRONMENTAL CORP., JANUARY 2001.



DWG. FILE No. F:\FEDERAL\DDO\NAVY\2960035\CAD\FD&M\SEPT2003\FIG2-REV4-6-04.DWG

**FIGURE 2
SITE PLAN
OLD NAVY FUEL FARM
NAVAL AIR STATION
BRUNSWICK, MAINE**

DESIGN	SY	DATE	6 APRIL 2004
DRAWN	SAP	SCALE	AS SHOWN
CHECKED	CS	PROJECT NO.	29600.35
PROJECT MANAGER	AE	SHEET NO.	-

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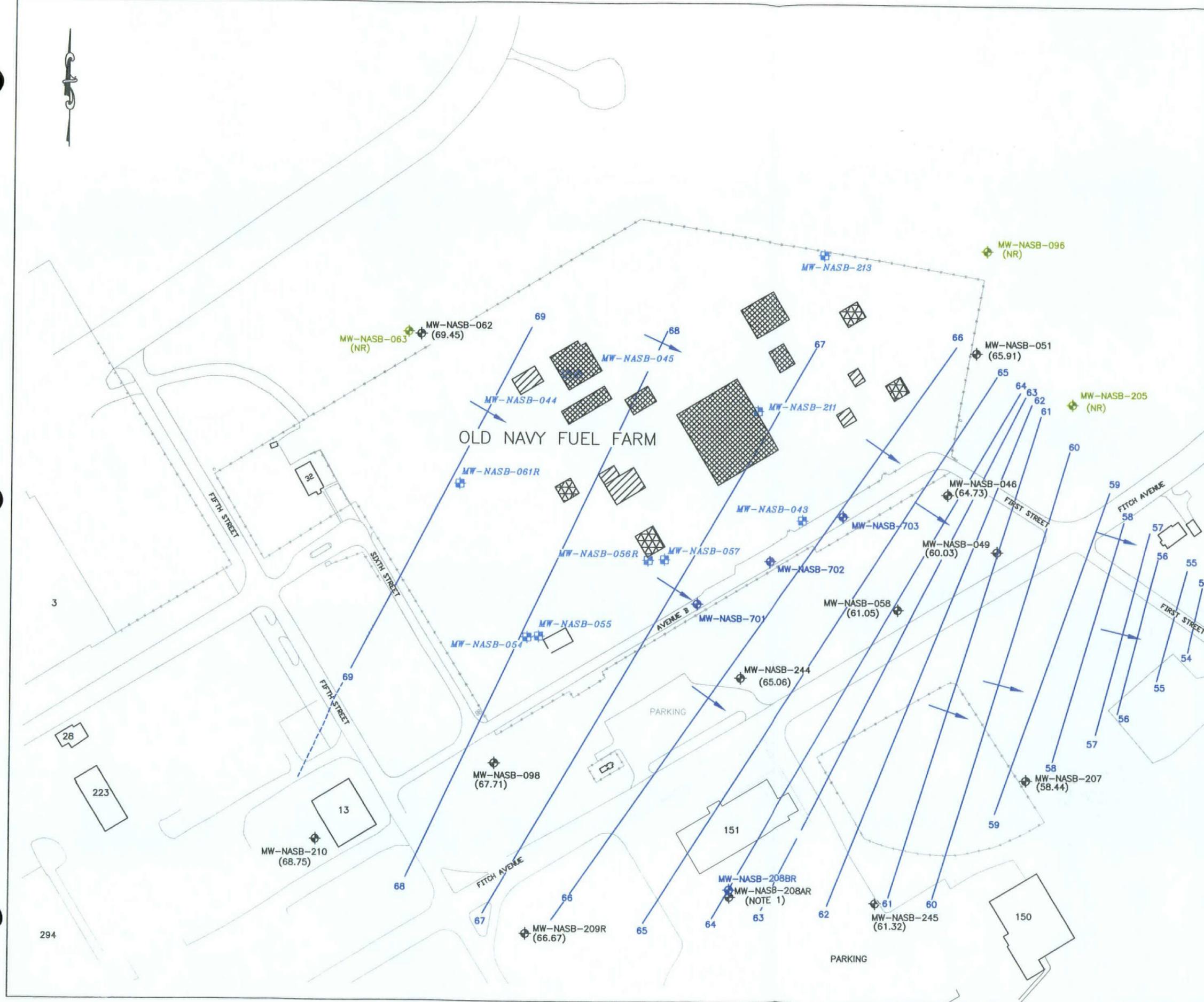
294

LEGEND

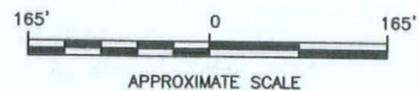
- MONITORING WELL LOCATION (POTENTIOMETRIC SURFACE ELEVATION, FT MSL)
- DECOMMISSIONED MONITORING WELL LOCATION
- MONITORING WELL NOT IN SAMPLING PROGRAM
- PROPOSED MONITORING WELL LOCATION
- (NR) NOT REQUIRED
- GROUNDWATER CONTOUR (FT MSL) (DASHED WHERE INFERRED)
- INFERRED GROUNDWATER FLOW DIRECTION
- CHAIN LINK FENCE

APPROXIMATE LOCATIONS OF EXCAVATION AREAS BY FOSTER WHEELER, JANUARY 2000

- EXTENT OF EXCAVATION (6' DEEP)
- EXTENT OF EXCAVATION (8' DEEP)
- EXTENT OF EXCAVATION (10' DEEP)



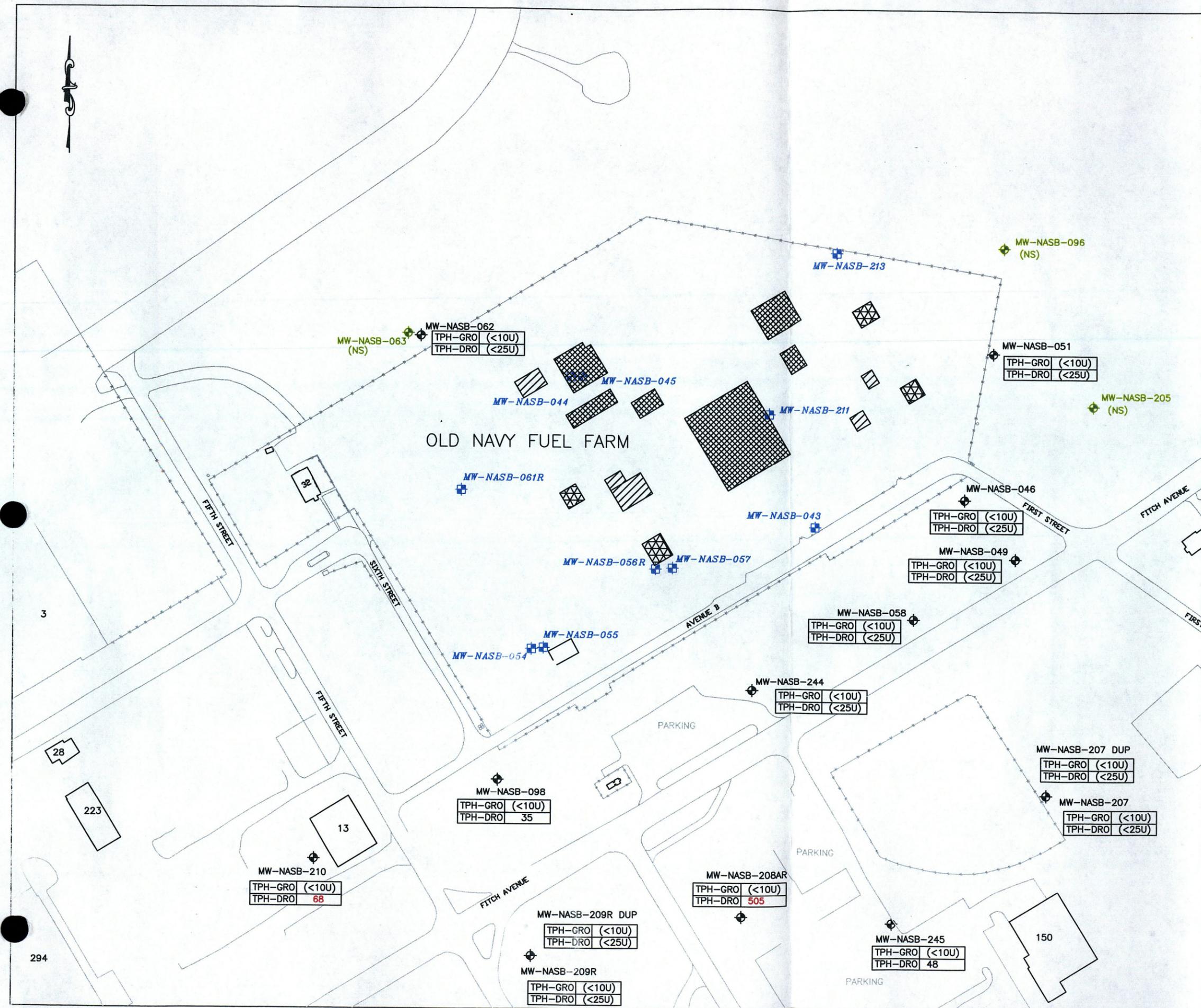
- NOTES:**
- GROUNDWATER ELEVATION MEASURED IS ANOMALOUS (68.01) AND WAS NOT USED IN COMPLETION OF THIS CONTOUR MAP.
 - CONTOURS REPRESENT EVALUATION OF PROBABLE CONDITIONS BASED ON PRESENTLY AVAILABLE DATA. SOME VARIATION FROM THESE CONDITIONS MUST BE EXPECTED.
 - EXCAVATION AREAS WERE TAKEN FROM THE FINAL REPORT FOR REMEDIATION OF THE OLD NAVY FUEL FARM, DRAFT FINAL REPORT BY FOSTER WHEELER ENVIRONMENTAL CORP., JANUARY 2000.



DWG. FILE No. F:\FEDERAL\000\NAVY\2960035\CAD\F08M\SEPT2003\FIG3-REV.DWG

FIGURE 3
INTERPRETED GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP 15 SEPTEMBER 2003
 OLD NAVY FUEL FARM, NAS BRUNSWICK, MAINE

DESIGN	SY		DATE	9 DECEMBER 03
DRAWN	SAP		SCALE	AS SHOWN
CHECKED	CS		PROJECT NO.	29600.35
PROJECT MANAGER	AE		SHEET NO.	-



LEGEND

- MW-NASB-058 MONITORING WELL LOCATION
- MW-NASB-211 DECOMMISSIONED MONITORING WELL LOCATION
- MW-NASB-703 MONITORING WELL NOT IN SAMPLING PROGRAM
- MW-NASB-245 DISSOLVED-PHASE TPH-GRO AND TPH-DRO CONCENTRATIONS (ug/L)

TPH-GRO	<10U
TPH-DRO	48

U=NOT DETECTED. SAMPLE QUANTITATION LIMIT SHOWN AS <U
 TPH-GRO=TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE ORGANICS
 TPH-DRO=TOTAL PETROLEUM HYDROCARBONS DIESEL RANGE ORGANICS

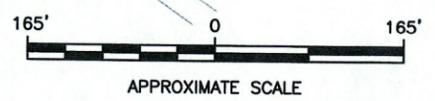
RED SHADED VALUES EXCEED THE STATE MEG. CHAIN LINK FENCE

APPROXIMATE LOCATIONS OF EXCAVATION AREAS BY FOSTER WHEELER, JANUARY 2000

- EXTENT OF EXCAVATION (6' DEEP)
- EXTENT OF EXCAVATION (8' DEEP)
- EXTENT OF EXCAVATION (10' DEEP)

NOTE: EXCAVATION AREAS TAKEN FROM THE FINAL REPORT FOR REMEDIATION OF THE OLD NAVY FUEL FARM, DRAFT FINAL REPORT BY FOSTER WHEELER ENVIRONMENTAL CORP., JANUARY 2000.

MW-NASB-206	TPH-GRO	<10U
	TPH-DRO	<25U



DWG. FILE No. F:\FEDERAL\000\NAVY\2960035\CAD\F0&M\SEPT2003\SEPT03_TAGMAP.DWG

FIGURE 4
 DISSOLVED-PHASE TPH-GRO AND TPH-DRO
 DETECTED IN GROUNDWATER SAMPLES COLLECTED
 DURING SEPTEMBER 2003
 OLD NAVY FUEL FARM, NAS BRUNSWICK, MAINE

DESIGN	SY	DATE	22 DECEMBER 03
DRAWN	SAP	SCALE	AS SHOWN
CHECKED	CS	PROJECT NO.	29600.35
PROJECT MANAGER	AE	SHEET NO.	



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TABLE 1 SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED IN SEPTEMBER 2003

GENERAL WATER QUALITY PARAMETERS BY EPA 300/400 SERIES METHODS (mg/L)

		MW NASB 046	MW NASB 049	MW NASB 051	MW NASB 058	MW NASB 062	MW NASB 098	MW NASB 206	MW NASB 207	MW NASB 207 (Dup)	MW NASB 208AR*	MW NASB 209R	MW NASB 209R (Dup)	MW NASB 210	MW NASB 244	MW NASB 245
Compound/Element	MEG															
Alkalinity as CaCO ₃	---	119	122	28.3	26.2	24.3	25.6	58.7	184	357	23.5	71.2	65.2	46.9	9.4	180
Chloride	---	3.1	6.6	5.6	4.3	12.3	12.2	12.9	12.2	12.2	10.1	123	120	6.9	11.7	53.9
Nitrate as N	10	0.014	0.032	(<0.01U)	0.13	0.028	0.011	0.13	0.024	0.03	0.027	(<0.01U)	0.011	0.12	0.053	(<0.01U)
Sulfate	---	30.6	(<5U)	6.6	19	12	7.7	10.1	6.2	6.3	(<5U)	(<5U)	(<5U)	(<5U)	5.1	(<5U)
TOC	---	3.8	10.2	1.1	1.5	5.1	4	1.2	2.8	2	20.5	4.9	4.3	11.5	9.7	24.5

HACH METHODS 8146 AND 8149 (mg/L)

		MW NASB 046	MW NASB 049	MW NASB 051	MW NASB 058	MW NASB 062	MW NASB 098	MW NASB 206	MW NASB 207	MW NASB 207 (Dup)	MW NASB 208AR*	MW NASB 209R	MW NASB 209R (Dup)	MW NASB 210	MW NASB 244	MW NASB 245
Compound/Element	MEG															
Iron	---	ND	2.7	ND	0.4	ND	3	ND	ND	NS	2.5	2	NS	ND	2	2
Manganese	500	ND	NS	ND	ND	NS	ND	ND	ND							

METHANE BY MODIFIED SW-846 METHOD 8015B (µg/L)

		MW NASB 046	MW NASB 049	MW NASB 051	MW NASB 058	MW NASB 062	MW NASB 098	MW NASB 206	MW NASB 207	MW NASB 207 (Dup)	MW NASB 208AR*	MW NASB 209R	MW NASB 209R (Dup)	MW NASB 210	MW NASB 244	MW NASB 245
Methane	---	(<50U)	1,090	(<50U)	(<50U)	(<50U)	127	(<50U)	(<50U)	(<50U)	433	(<50U)	(<50U)	(<50U)	368	4,020

TPH BY DHS-HETL METHODS 4.1.25 AND 4.2.17 (µg/L)

		MW NASB 046	MW NASB 049	MW NASB 051	MW NASB 058	MW NASB 062	MW NASB 098	MW NASB 206	MW NASB 207	MW NASB 207 (Dup)	MW NASB 208AR*	MW NASB 209R	MW NASB 209R (Dup)	MW NASB 210	MW NASB 244	MW NASB 245
Compound/Element	MEG															
TPH-DRO	50	(<25U)	(<25U)	(<25U)	(<25U)	(<25U)	35	(<25U)	(<25U)	(<25U)	505	(<25U)	(<25U)	68	(<25U)	48
TPH-GRO	50	(<10U)	(<10U)	(<10U)	(<10U)	(<10U)	(<10U)	(<10U)								

TABLE 1 (CONTINUED)

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B ($\mu\text{g/L}$)

Compound/Element	MEG	MW NASB 046	MW NASB 049	MW NASB 051	MW NASB 058	MW NASB 062	MW NASB 098	MW NASB 206	MW NASB 207	MW NASB 207 (Dup)	MW NASB 208AR*	MW NASB 209R	MW NASB 209R (Dup)	MW NASB 210	MW NASB 244	MW NASB 245
Benzene	12	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)								
Ethylbenzene	70	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)								
Toluene	1,400	(<2U)	4	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)								
Xylenes, total	14,000	ND	ND	ND	ND	ND	ND	ND								
Total BTEX	---	ND	4	ND	ND	ND	ND	ND								
MTBE	35	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	16	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)	(<2U)

TABLE 1 (CONTINUED)

NOTES:

MEG (Maximum Exposure Guideline) obtained from State of Maine, Department of Human Services, Maximum Exposure Guidelines, memorandum dated 23 October 1992. Dashes (---) indicate compound has no applicable MEG.

MEDEP = Maine Department of Environmental Protection.

EPA = U. S. Environmental Protection Agency.

ND = Not detected.

NR = Not reported.

U = Not detected. Sample quantitation limit is shown as (<__ U)

BTEX = Benzene, toluene, ethylbenzene, and total xylenes.

MTBE = Methyl tertiary-butyl ether.

TPH = Total petroleum hydrocarbons.

GRO = Gasoline range organics.

DRO = Diesel range organics.

TOC = Total organic carbon.

DHS- HETL = Department of Human Services, Health and Environmental Testing Laboratory, State of Maine.

(Dup) = Duplicate sample.

CaCO₃ = Calcium carbonate.

N = Nitrogen

No volatile organic compounds were detected in the trip blank or equipment rinsate blank.

Bold, shaded values exceed the MEG.

* The well MW-NASB-208AR was impacted during construction activities at Building 151, and, therefore, the data may not be representative of groundwater quality at this location.

**TABLE 2 GROUNDWATER MONITORING WELL DETAIL SUMMARY,
15 SEPTEMBER 2003**

Well No.	Ground Elevation (ft MSL)	Top of Casing Elevation (ft MSL)	Total Depth of Well (ft bgs)	Screened Interval (ft bgs)	15 SEPTEMBER 2003	
					Depth to Water (ft bgs)	Water Elevation (ft MSL)
MW-NASB-46	69.8	71.30	15.00	5.00-15.00	6.57	64.73
MW-NASB-49	65.0	68.29	12.23	2.23-12.23	8.26	60.03
MW-NASB-51	71.2	73.41	13.00	3.00-13.00	7.50	65.91
MW-NASB-54	74.0	76.23	16.51	6.51-16.51	(a)	(a)
MW-NASB-58	68.0	68.00	16.30	6.30-16.30	6.95	61.05
MW-NASB-61R	72.2	75.52	12.00	3.00-9.50	(a)	(a)
MW-NASB-62	78.7	80.73	15.00	5.00-15.00	11.28	69.45
MW-NASB-98	73.4	76.53	13.00	3.00-13.00	8.82	67.71
MW-NASB-206	67.1	59.01	11.30	1.30-11.30	6.91	52.1
MW-NASB-207	64.4	66.22	17.65	7.65-17.65	7.78	58.44
MW-NASB-208AR	(b)	(b)	20.00	10.00-20.00	(b)	(b)
MW-NASB-209R	73.2	72.94	10.00	5.00-10.00	6.27	66.67
MW-NASB-210	75.7	77.55	16.20	6.20-16.20	8.80	68.75
MW-NASB-213	74.8	77.30	11.50	1.5-11.50	(a)	(a)
MW-NASB-244	70.9	70.73	10.00	5.00-10.00	5.67	65.06
MW-NASB-245	67.7	67.51	10.00	5.00-10.00	6.19	61.32

(a) Wells were decommissioned on 23-30 April 2001 and, therefore, were not gauged for the subsequent sampling events.
(b) MW-NASB-208AR has not been surveyed since it was damaged during the construction of Building 151.

NOTE: MSL = Mean sea level.
bgs = Below ground surface.

**TABLE 3 MONITORED NATURAL ATTENUATION PARAMETERS,
15-19 SEPTEMBER 2003**

Well No.	Dissolved Oxygen (mg/L)	Redox Potential (mV)	pH	Conductivity (μ mhos/cm)	Temperature (C)	Turbidity (NTU)
MW-NASB-46	1.30	146	6.03	342	18.32	8
MW-NASB-49	1.20	16	5.95	244	17.83	10
MW-NASB-51	1.80	1.4	5.90	81	15.18	18
MW-NASB-54	(a)	(a)	(a)	(a)	(a)	(a)
MW-NASB-58	1.90	77	5.66	90	17.09	2
MW-NASB-61R	(a)	(a)	(a)	(a)	(a)	(a)
MW-NASB-62	0.57	1.5	5.66	68	15.92	4
MW-NASB-98	0.18	2.7	5.89	123	15.85	9
MW-NASB-206	1.35	157	6.05	187	22.35	8
MW-NASB-207	0.91	197	6.09	357	19.80	5
MW-NASB-208AR	0.99	-15	5.46	45	22.68	82
MW-NASB-209R	0.57	66	6.00	523	20.52	9
MW-NASB-210	0.73	126	6.14	109	20.78	28
MW-NASB-213	(a)	(a)	(a)	(a)	(a)	(a)
MW-NASB-244	0.41	0.4	5.30	88	18.18	8
MW-NASB-245	0.79	-55	5.31	501	18.26	29
(a) Wells were decommissioned on 23-30 April 2001 and, therefore, were not gauged for the subsequent sampling events.						

REFERENCES

- EA Engineering, Science, and Technology, Inc. 1997a. Summary Report, Biosparging System Operations at Old Navy Fuel Farm, August-December 1996, Naval Air Station, Brunswick, Maine. April.
- EA. 1997b. Summary Report, Biosparging System Operations at Old Navy Fuel Farm, January-June 1997, Naval Air Station, Brunswick, Maine. September.
- EA. 1998a. Summary Report, Biosparging System Operations at Old Navy Fuel Farm, July-December 1997, Naval Air Station, Brunswick, Maine. July.
- EA. 1998b. Summary Report, Biosparging System Operations at Old Navy Fuel Farm, January-June 1998, Naval Air Station, Brunswick, Maine. November.
- EA. 2000a. Groundwater Monitoring Plan, Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. December.
- EA. 2000b. Summary Report Biosparging System Operations at Old Navy Fuel Farm, July-December 1998, Naval Air Station, Brunswick, Maine. February.
- EA. 2000c. Direct-Push Investigation at the Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. April.
- EA. 2001. Letter Report of Monitoring Well Decommissioning Conducted at the Old Navy Fuel Farm in April 2001, Naval Air Station, Brunswick, Maine. August.
- EA. 2002. BIOSCREEN Modeling of Total Petroleum Hydrocarbons at the Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. February.
- EA. 2004a. Groundwater Monitoring Report for Six Sampling Events at the Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. March.
- EA. 2004b. Summary of Monitoring Well Installations Conducted on 15 and 16 March 2004 at the Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. April.
- Foster Wheeler Environmental Corporation. 2001. Final Report for Remediation of the Old Navy Fuel Farm. Naval Air Station, Brunswick, Maine. Contract No. N62472-99-D-0032, Contract Task Order No. 003. January.
- HRP Associates, Inc. 1993. Report of Air Sparging/Soil Vapor Pilot Extraction Tests and Related Investigations. Old Fuel Farm, Brunswick Naval Air Station, Brunswick, Maine. December.

O'Brien & Gere Engineers, Inc. 1990. Design and Installation of Underground Storage Tank Monitoring System, Naval Air Station Fuel Farm, Brunswick, Maine. Prepared for Department of the Navy, NAVFAC, Northern Division. April.

O'Brien & Gere Engineers, Inc. 1992. Remedial Investigation, Fuel Farm, Naval Air Station, Brunswick, Maine. Department of the Navy, NAVFAC, Northern Division. July.

Appendix A

**Completed Response to Comments from
the Maine Department of Environmental
Protection on the Draft Report**

**RESPONSE TO NAVY RESPONSE TO COMMENTS
FROM THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
ON THE DRAFT OLD NAVY FUEL FARM
GROUNDWATER MONITORING REPORT – SEPTEMBER 2003
NAVAL AIR STATION, BRUNSWICK, MAINE**

Commentor: Claudia Sait	
Comment Issue Date: 28 July 2004	Navy Response Date: 6 August 2004

The Maine Department of Environmental Protection (MEDEP) has reviewed the Navy's Response to Comments (RTCs) dated 6 May 2004 for the Groundwater Monitoring Report for the September 2003 Event at the Old Navy Fuel Farm (March 2004), prepared by EA Engineering, Science, and Technology. Based on that review, MEDEP has one follow-up comment.

5. Section 3.1, Water Level Gauging Program, p. 8, 2nd paragraph:

“A tar-like substance was observed in the well protective casing and on the outside of the polyvinyl chloride riser of MW-NASB-208R, possibly resulting from the recent paving activities around this well.”

MEDEP Comment—MEDEP strongly recommends that the Navy needs to thoroughly investigate the situation described above to determine if the paving is responsible. The quantity of the substance in the annulus between the two casings, including its length along the riser, should be determined. The above description would suggest that the well construction has been compromised, as the protective well casing protrudes about 2 feet above the ground surface according to Table 2. If compromised, the elevated DRO found at this well (505 µg/L) may not be representative of in-situ contamination if the substance is entering the well. Other evidence of abnormality to consider regarding MW-NASB-208B include: (1) the well has the deepest well screen in the current monitoring network at the fuel farm, (2) the specific conductance of sampled water in September 2003 is very low (45 µmhos/cm) and resembles surface water-runoff, and (3) the turbidity of purged water was 82 NTUs.

Interestingly, MW-NASB-208R is located about midway on a line that runs east-southeast from MW-NASB-098 to MW-NASB-245, both of which still have DRO detections (35 and 48 µg/L, respectively). Perhaps not coincidentally, this orientation is the same as that mapped for groundwater flow. (RR)

The Navy must also resolve the contradictory information regarding the MW-NASB-208R well construction. (See comment 8 below) (RR)

Navy Response—The actual situation at this well was not accurately noted in the report. The tar-like substance was present on the exterior of the polyvinyl chloride well casing, and there was residue on the apron of the roadbox in which the well is located. This substance is at the

ground surface, and was not present before paving activities. Therefore, it is a reasonable conclusion that this is the result of the recent paving activities. To clarify this issue, the sentence in Section 3.1, Water Level Gauging Program, Page 8, 2nd paragraph, 1st sentence, will be revised to clarify the surface completion of well MW-208AR. The sentence will be revised as follows:

A tar-like substance was observed ~~inside the well protective casing~~ the apron of the roadbox and on the outside of the polyvinyl chloride riser of MW-NASB-208AR, possibly resulting from the ~~recent~~ paving activities around this well.

MEDEP Follow-Up Comment—The Navy’s response would suggest that the tar-like substance may not have entered the PVC well riser, and that the integrity of MW-NASB-208AR was not compromised. However, the question of whether the measured DRO groundwater concentration of 505 µg/L was due to the paving activities was not answered. The Navy’s response to MEDEP’s Comment 6 states that MW-NASB-208 AR was decommissioned and a new well (MW-NASB-208BR) was installed. In the April 22, 2004 letter report on new well constructions at the Old Fuel Farm, the Navy stated “In addition, one existing monitoring well (MW-NASB-208AR) was decommissioned and replaced since it was damaged during construction activities in the area of Building 151.” Inspection of the DRO graph for the MW-NASB-208 (2000-2003) indicates that DRO concentrations for spring and fall of 2003 show a significant rise. No other monitoring well at the Old Fuel Farm showed a significant rise in 2003. Therefore, a qualifier should added to the trend graph in Appendix A (page 13) and Table 1. A decision on whether the data from this well is accurate or erroneous will need to be made upon review of the spring 2004 data.

Navy Follow-Up Response—It appears that the detection of 505 µg/L of DRO in former well MW-NASB-208AR was attributable to paving activities (referred to “as construction activities in the area of Building 151” in the 22 April 2004 letter report). The March 2004 data from the replacement well MW-NASB-208BR, which was installed at the same screened interval as former well MW-NASB-208AR, did not identify DRO concentration greater than the laboratory detection limit of 50 µg/L. A qualifier will be added to Table 1 and the trend graph for MW-NASB-208BR in the final report.

**RESPONSE TO COMMENTS FROM THE
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
ON THE DRAFT GROUNDWATER MONITORING REPORT
FOR THE SEPTEMBER 2003 EVENT
OLD NAVY FUEL FARM**

Commentor: Claudia Sait	
Comment Issue Date: 8 April 2004	Navy Response Date: 6 May 2004

The Maine Department of Environmental Protection (MEDEP) has reviewed the draft "Groundwater Monitoring Report for the September 2003 Event at the Old Navy Fuel Farm," dated March 2004, prepared by EA Engineering, Science, and Technology. Based on that review, MEDEP has the following comments and issues.

GENERAL COMMENTS

1. MEDEP notes that the trend graphs are nicely done with the proper y-axis scale for easy readability. (NR)

Response—We appreciate MEDEP's comment.

2. While the September 2003 data do not support the conclusion that dissolved-phase DRO concentrations have continued to decrease from past levels, most of the monitoring wells had concentrations below 25 µg/L, which is below the Maximum Exposure Guideline (MEG). Apparent slight rises in DRO concentrations occurred at two wells, while a third well's data are in question due to a possible breach in well integrity. With an increase in seasonal precipitation in the late summer and fall of 2003, a slight rise in DRO is not surprising. If well integrity at MW-NASB-208R is not the reason for a large increase at this location, possibly a residual pocket of weathered petroleum yet exists, and was flushed by an increase in rainfall infiltration. See Specific Comments 5 & 7 below. (RR)

Response—We continue to believe that the September 2003 TPH-DRO data demonstrate a continued decreasing trend. To add clarity to this statement in Section 4.1.2, the 2nd text bullet will be revised as follows:

Dissolved phase TPH-DRO was detected in 2 monitoring wells during the last sampling event at concentrations exceeding the MEG (50 µg/L) in samples collected from wells MW-NASB-208AR and MW-NASB-210. The detected TPH DRO concentrations exceeding the MEG are 505 µg/L and 68 µg/L, respectively. Dissolved phase TPH-DRO concentrations have remained at or below the MEG (50 µg/L) in all the site wells except for well MW-NASB-245, which has only remained below the MEG for the last two monitoring events. Overall dissolved-phase TPH-DRO concentrations have demonstrated a overall downward trend in the groundwater monitoring wells sampled during the last seven sampling events. Concentrations of TPH-DRO have increased at...

Monitoring well MW-NASB-208AR was decommissioned in March 2004 and was replaced with a new well identified as MW-NASB-208BR. MW-NASB-208BR was installed at the same depth and screened interval as MW-NASB-208AR. A groundwater sample was collected from the well in April 2004, and no TPH-DRO, TPH-GRO, or VOCs were detected in the groundwater sample. As MEDEP noted, there was an increase in precipitation during the late summer and early Fall 2003; however, water elevations were within normal historical ranges for the site (see attached water level and rainfall graph).

SPECIFIC COMMENTS

3. Section 1.2, Site Geologic Conditions, p. 1, last sentence:

“The groundwater table occurs in the sandy zone, and groundwater flow is generally to the southeast, parallel to the surface topography.”

The flow direction is close to perpendicular to the topographic contours, and is not parallel to the surface topography. Please substitute “*drainage*” for “topography”. (ED)

Response—The last sentence of Section 1.2 will be revised as follows:

The groundwater table occurs in the sandy zone, and groundwater flow is generally to the southeast, parallel to the surface ~~topography~~ drainage.

4. Section 1.5, Groundwater Sampling Events, p. 5, first sentence:

At the end of the first sentence, a reference to the recent report documenting the findings for the first six monitoring events needs to be added. This report is also missing from the list of references located immediately in front of Appendix A. (ED)

Response—The report reference will be inserted at the end of the first sentence of Section 1.5. The following reference will be added to the reference page:

EA. 2004. Groundwater Monitoring Report for Six Sampling Events at the Old Navy Fuel Farm. March.

5. Section 3.1, Water Level Gauging Program, p. 8, 2nd paragraph:

“A tar-like substance was observed in the well protective casing and on the outside of the polyvinyl chloride riser of MW-NASB-208R, possibly resulting from the recent paving activities around this well.”

MEDEP strongly recommends that the Navy needs to thoroughly investigate the situation described above to determine if the paving is responsible. The quantity of the substance in the annulus between the two casings, including its length along the riser, should be determined. The above description would suggest that the well construction has been compromised, as the protective well casing protrudes about 2 feet above the ground surface according to Table 2. If compromised, the elevated DRO found at this well (505 µg/L) may

not be representative of in-situ contamination if the substance is entering the well. Other evidence of abnormality to consider regarding MW-NASB-208B include: (1) the well has the deepest well screen in the current monitoring network at the fuel farm, (2) the specific conductance of sampled water in September 2003 is very low (45 $\mu\text{mhos/cm}$) and resembles surface water runoff, and (3) the turbidity of purged water was 82 NTUs.

Interestingly, MW-NASB-208R is located about midway on a line that runs east-southeast from MW-NASB-098 to MW-NASB-245, both of which still have DRO detections (35 and 48 $\mu\text{g/L}$, respectively). Perhaps not coincidentally, this orientation is the same as that mapped for groundwater flow. (RR)

The Navy must also resolve the contradictory information regarding the MW-NASB-208R well construction. (See comment 8 below) (RR)

Response—The actual situation at this well was not accurately noted in the report. The tar-like substance was present on the exterior of the PVC well casing, and there was residue on the apron of the roadbox in which the well is located. This substance is at the ground surface, and was not present before paving activities. Therefore, it is a reasonable conclusion that this is the result of the recent paving activities. To clarify this issue, the sentence in Section 3.1, Water Level Gauging Program, Page 8, 2nd paragraph, 1st sentence, will be revised to clarify the surface completion of well MW-208AR. The sentence will be revised as follows:

A tar-like substance was observed inside the well protective casing the apron of the roadbox and on the outside of the polyvinyl chloride riser of MW-NASB-208AR, possibly resulting from the ~~recent~~ paving activities around this well.

6. Section 4.1.2, Groundwater Monitoring and Sampling Program, p. 11, 2nd bullet:

“Concentrations of TPH-DRO have increased at MW-NASG-208R for the last three events, although this well may not be representative of site groundwater conditions, as the well integrity may be compromised (Section 4.2).”

Please see the comment 5 above. (NR)

Response—Comment noted. Please see response to MEDEP comment Nos. 2 and 5. Well MW-NASB-208AR was decommissioned and replaced with a new well identified as MW-NASB-208BR in March 2004.

7. Section 4.1.2, Groundwater Monitoring and Sampling Program, p. 12, 2nd bullet:

“... and that downgradient concentrations of dissolved-phase TPH-DRO continue to decrease.”

Even if the DRO result for MW-NASB-208R can be discredited through further investigation of the casing integrity, the trend graphs in Appendix A do not support the above statement. While nine monitoring wells had concentrations that were below the detection limit (25 $\mu\text{g/L}$), three others (MW-NASB-098, MW-NASB-210, and MW-NASB-245) showed small

rises in concentration. A decline was not documented in any monitoring well in September 2003. The above statement must be modified. (Also see paragraph 2 of comment 5 above.) (ED)

Response—Please see the response to MEDEP comment No. 2. The text for bullet No. 5 in Section 4.1.2 will be revised as follows:

The groundwater data from this reporting period support the conclusion of the February 2002 BIOSCREEN Modeling of Total Petroleum Hydrocarbons at the ONFF (EA 2002) that the plumes (east and west plumes) have reached steady state and that further migration is not likely to occur. This is supported by the groundwater data presented in this report that indicate TPH-GRO concentrations are not detected southeast of Fitch Avenue, and that downgradient concentrations of dissolved-phase TPH-DROs continue to remain stable near the State MEG of 50 µg/L decrease.

8. Table 2, Groundwater Monitoring Well Detail Summary:

In this table, MW-NASB-208R is designated as a replacement well by the “R” after the well number. The table furthermore gives the ground elevation as 72.7 feet and the top of casing elevation as 74.55 feet. These figures imply a stickup of the well is 1.85 feet above ground. However, in the table at the beginning of Appendix C, the well is called MW-NASB-208 and the well finish is indicated as a flush mount (i.e., no stickup). The table indicates that the well is not locked. The Field Record of Well Purging and Sampling in Appendix C also calls the well MW-NASB-208R, and indicates a flush mount installation. This field sheet further indicates that the well yield was very low, and that it was pumped down and sampled the following day. In the 20 minutes that the well was pumped, the measured turbidity shows more fluctuation than normally encountered. The following statement appears in Section 3.1: “This substance on the polyvinyl chloride riser was noted on the field form.” The field form in Appendix C does not contain this note. However, the word “Dry” is crossed out, without any initially or dating. Clearly, there are a number of record-keeping issues and related explanations for this monitoring well that are needed. (RR)

Response—The well was mistakenly identified as MW-208R in this table and on other tables and figures in the draft report. The correct well identifier for this well location during the September 2003 sampling event is MW-NASB-208AR. All references to MW-NASB-208 will be changed to MW-NASB-208AR in the report text, tables, figures, and appendixes for the Final Report. Please see response to comment No. 5 for further information regarding this well location. During the sampling of well MW-NASB-208AR, the well was drawn down to the top of the pump (noted on the field form), at which point the purging was terminated. This was noted by mistake on the field form and that is why dry was crossed out. The notes below the crossed out “dry” are the explanation of what actually occurred at the well. The field team members have been reminded that if a mistake is made on a field form or logbook, the proper procedure is to line out the mistake with a single line, and sign and date the lined out mistake.

9. Table 3, Monitored Natural Attenuation Parameters:

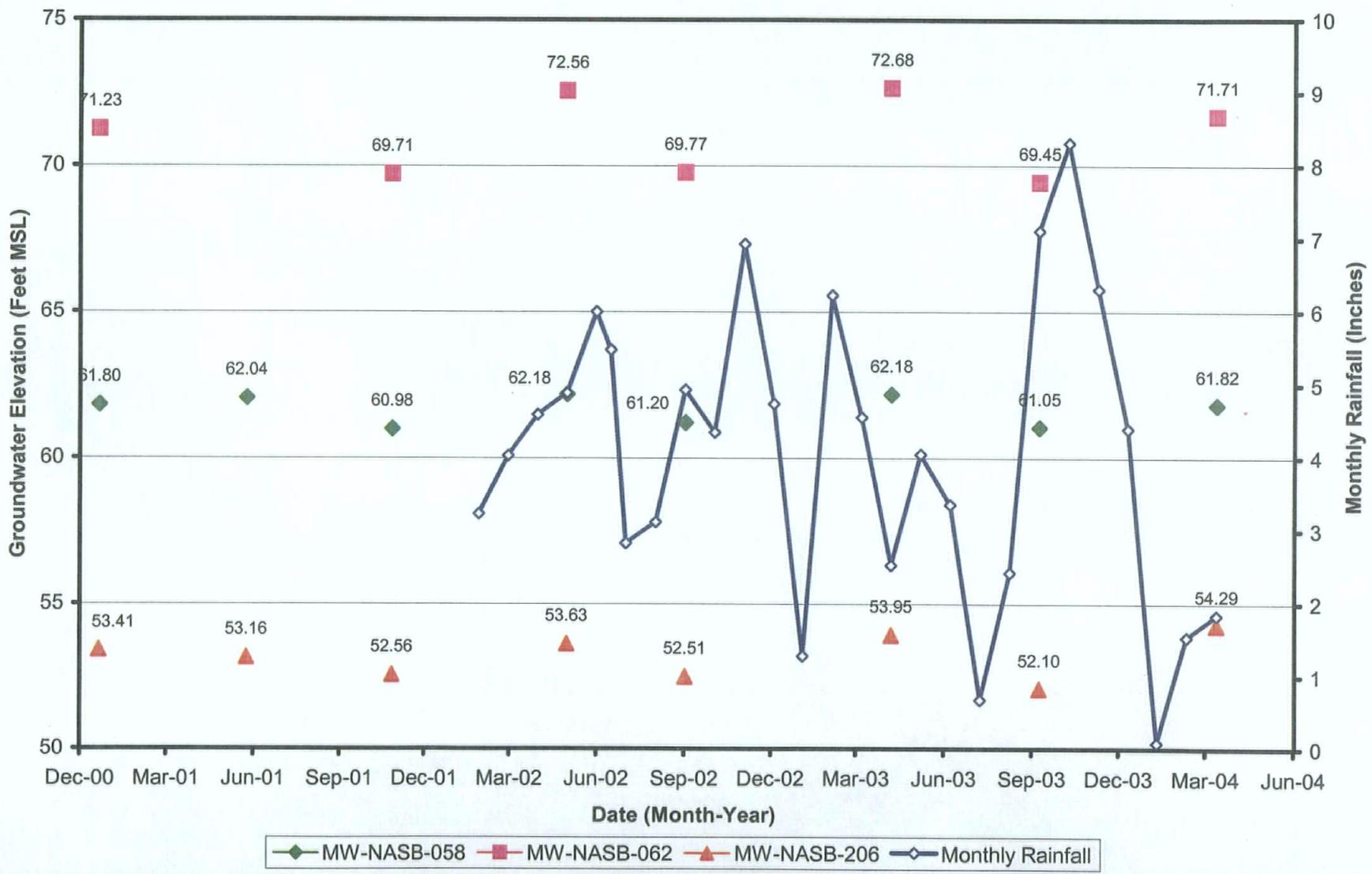
Two redox potential values are reported to the hundredth of a mV (1.39 mV and 1.51 mV). Please round these to the nearest tenth, unless documented justification can be presented that the field measurements are this accurate. (ED)

Response—The two reduction oxidation potential values reported to the hundredth of a mV (1.39 mV at MW-NASB-051 and 1.51 mV and MW-NASB-062) in Table 3 will be rounded to the nearest tenth (1.4 mV at MW-NASB-051 and 1.5 mV and MW-NASB-062) in the Final Report.

Attachment A

**Water Level
and Rainfall Graph**

Groundwater Elevation at Selected Monitoring Wells

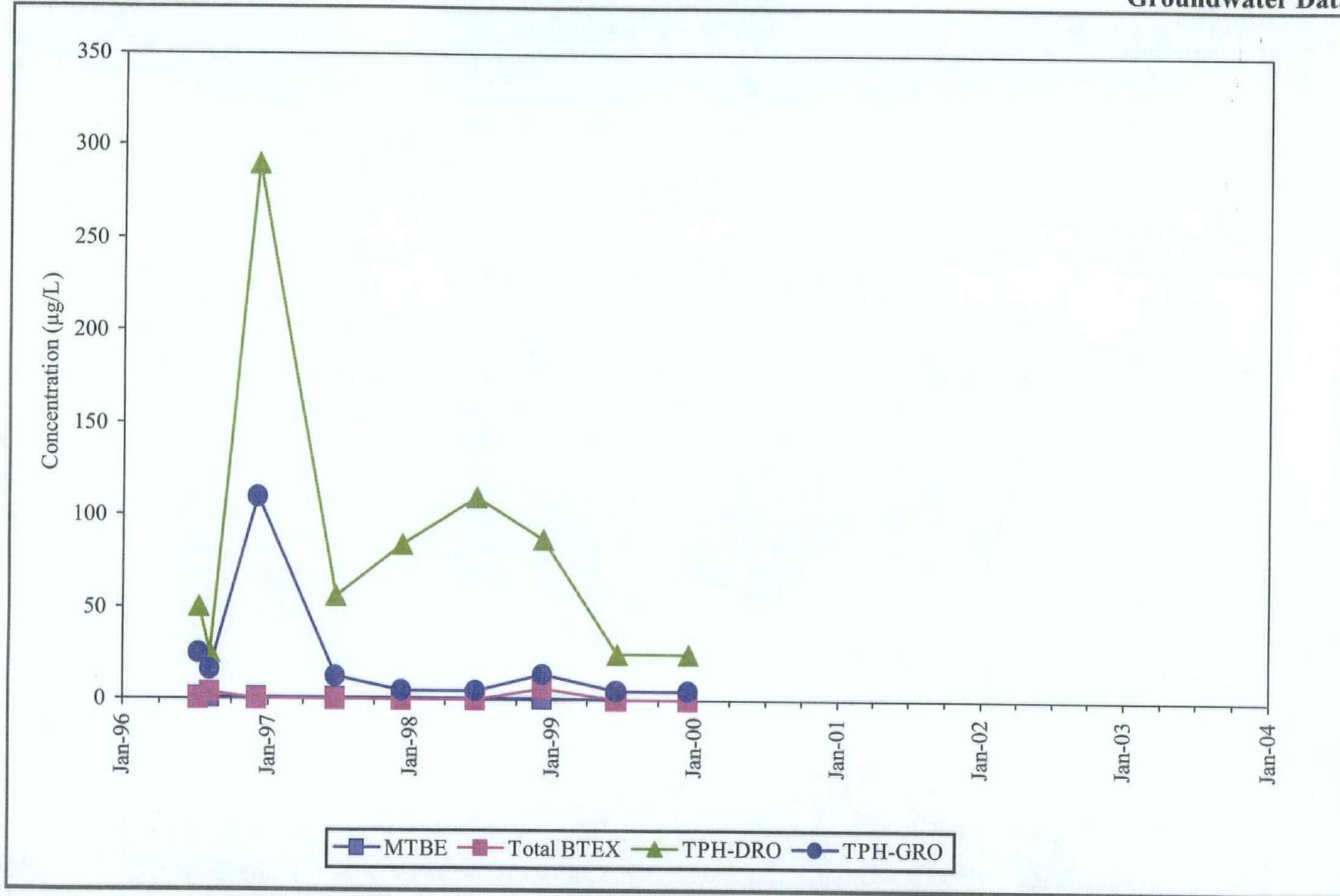


Appendix B

Trend Graphs

Sample Location:
MW-NASB-044

Old Navy Fuel Farm
Groundwater Data

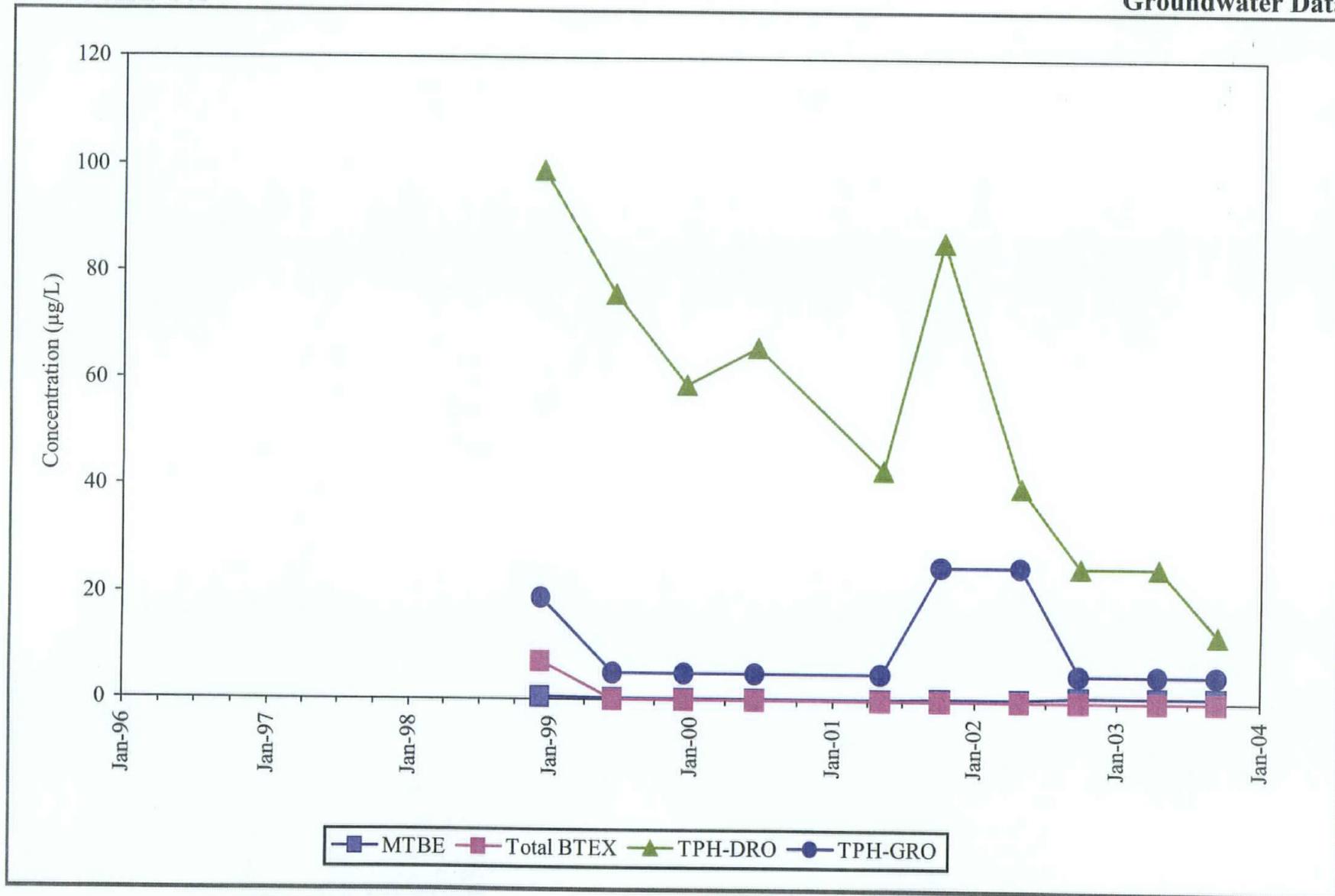


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 1 of 19

Sample Location:
MW-NASB-046

Old Navy Fuel Farm
Groundwater Data

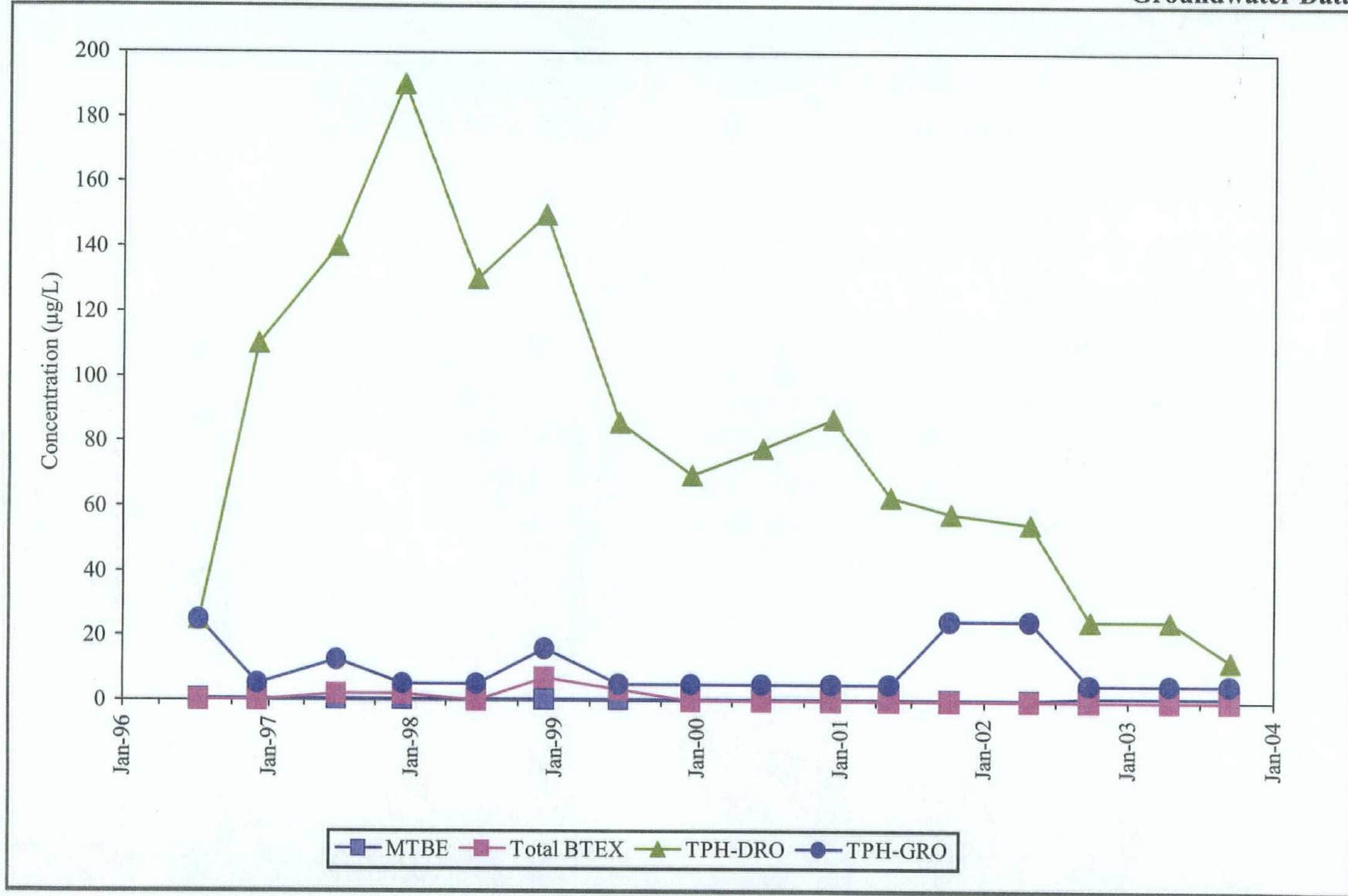


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 2 of 19

Sample Location:
MW-NASB-049

Old Navy Fuel Farm
Groundwater Data

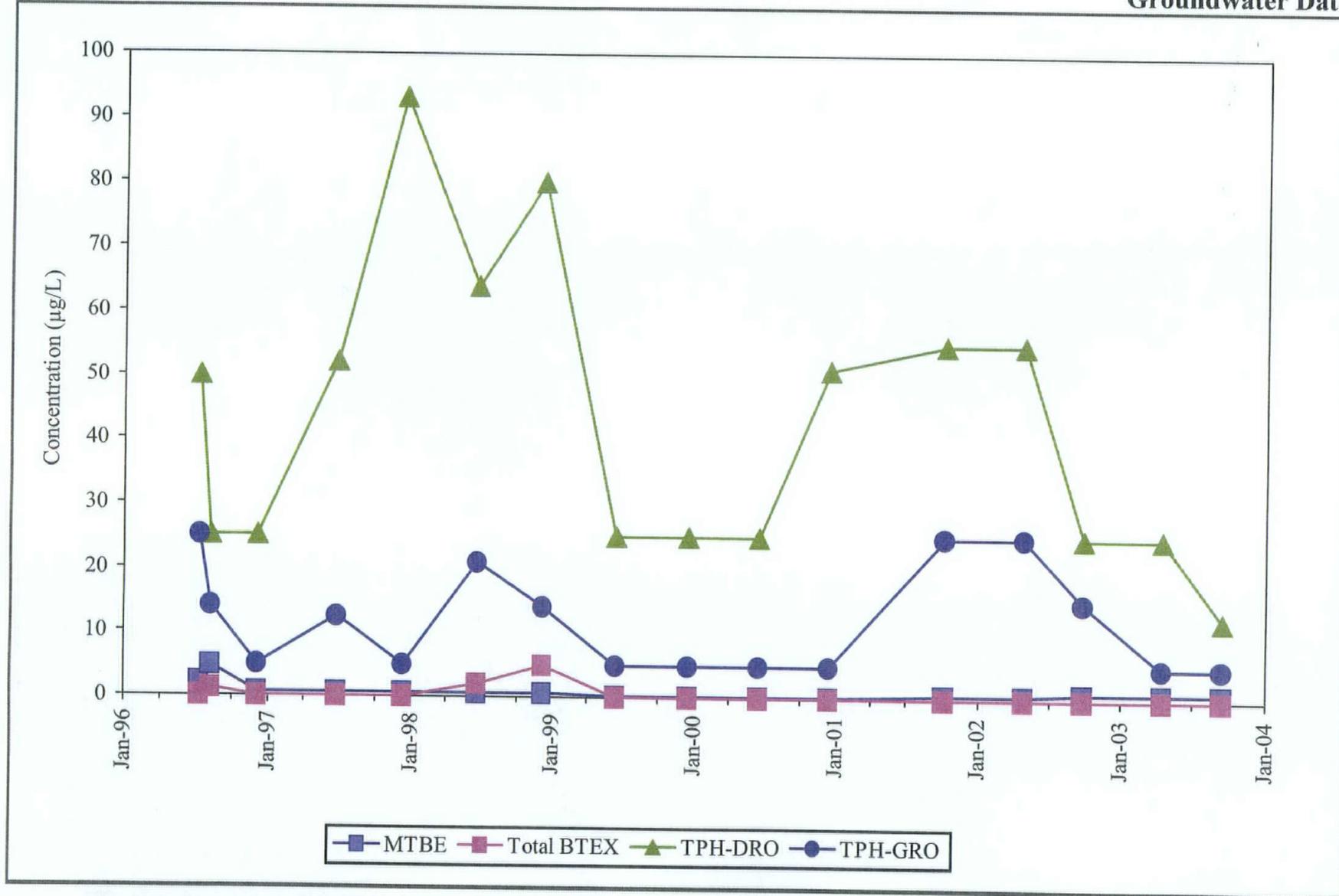


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 3 of 19

Sample Location:
MW-NASB-051

Old Navy Fuel Farm
Groundwater Data

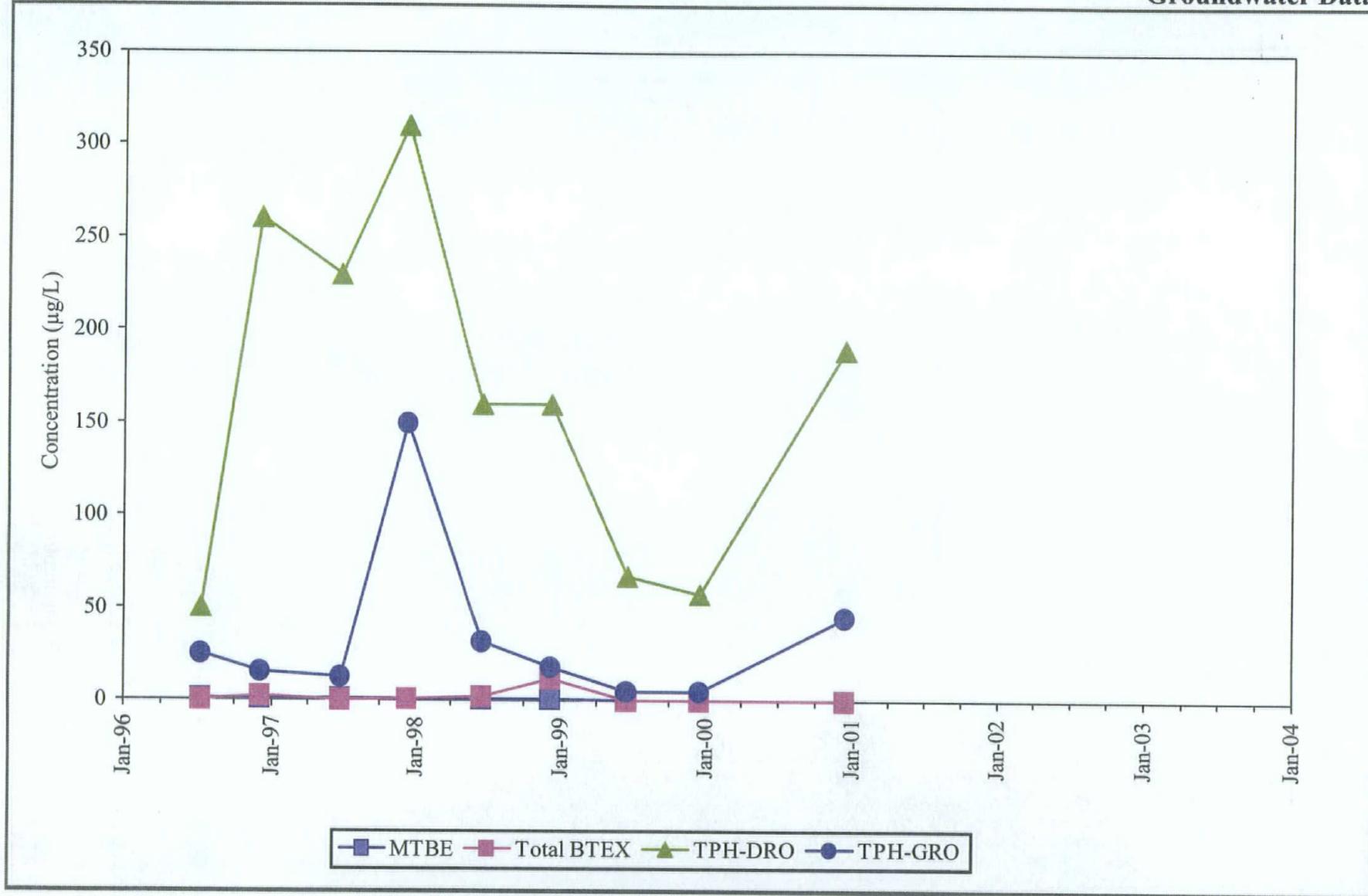


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 4 of 19

Sample Location:
MW-NASB-054

Old Navy Fuel Farm
Groundwater Data

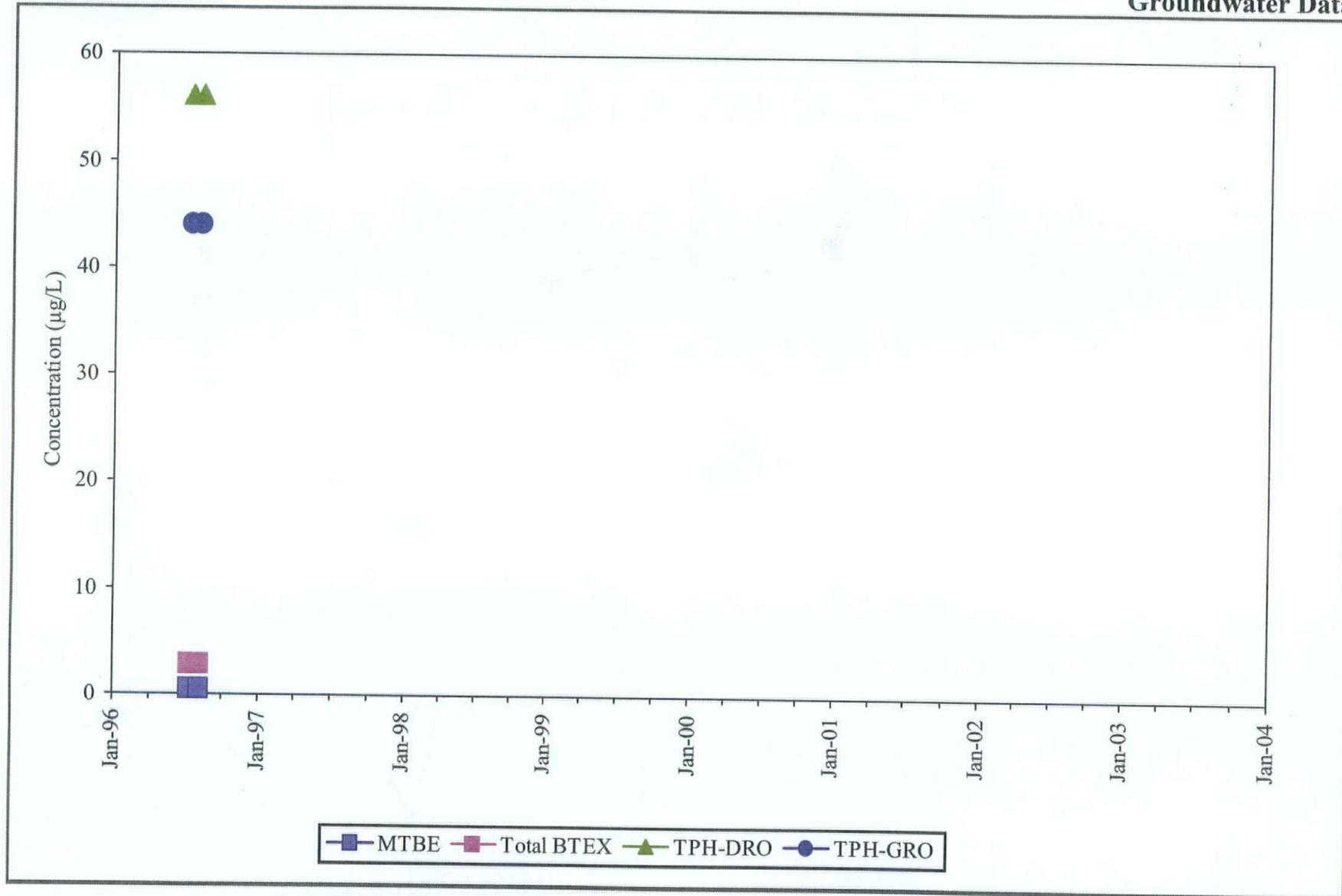


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 5 of 19

Sample Location:
MW-NASB-056

Old Navy Fuel Farm
Groundwater Data

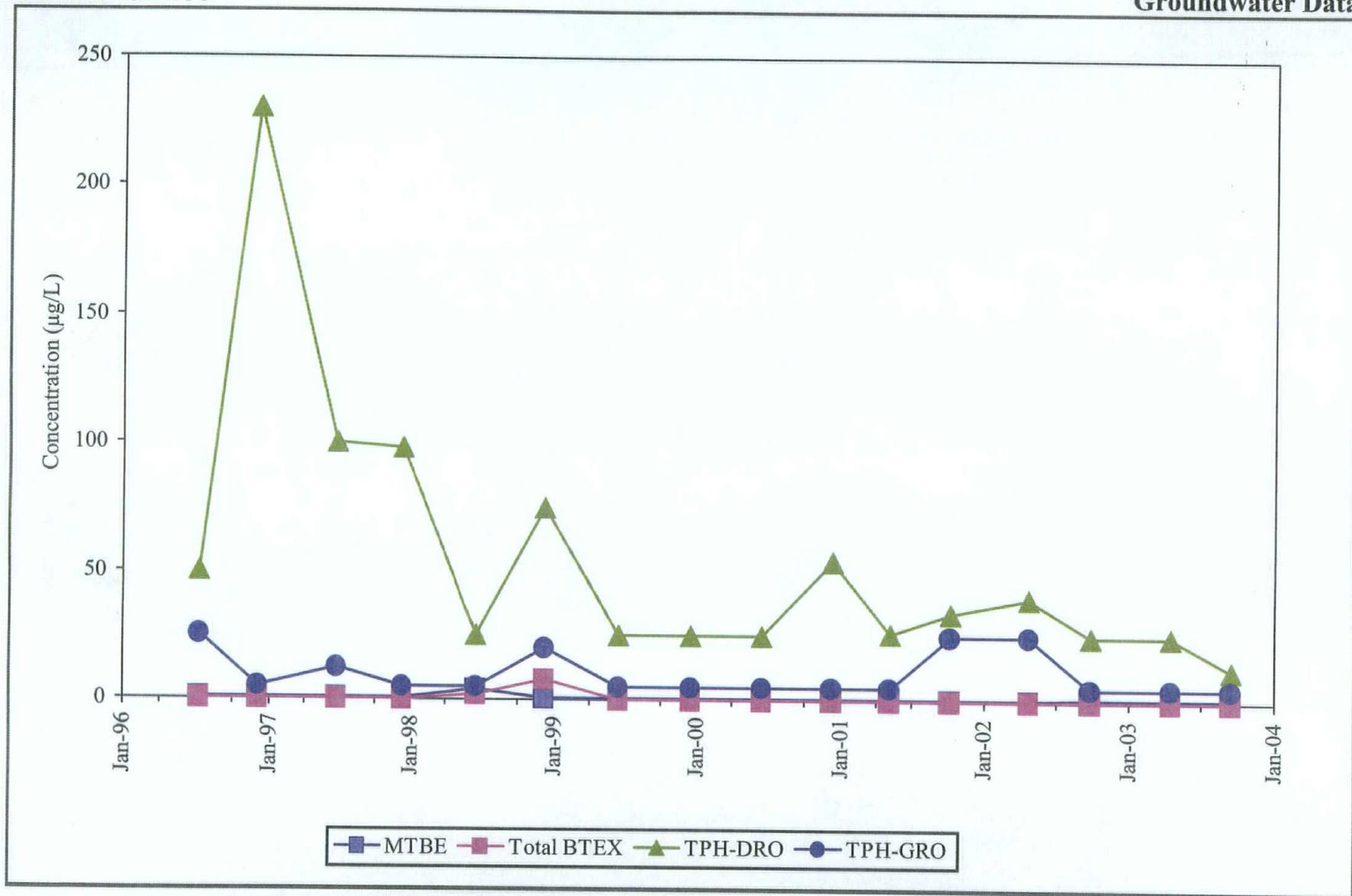


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 6 of 19

Sample Location:
MW-NASB-058

Old Navy Fuel Farm
Groundwater Data

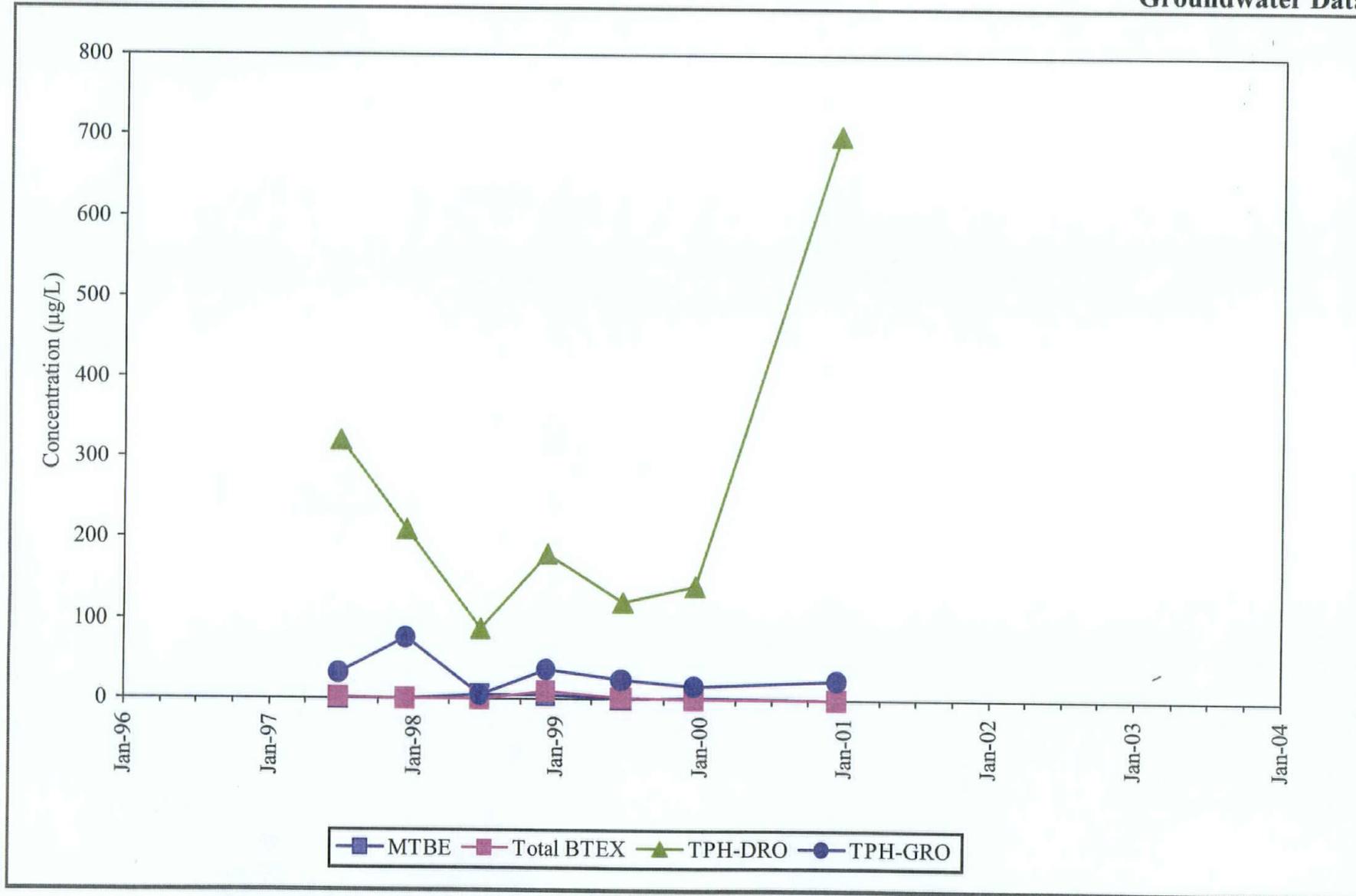


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 7 of 19

Sample Location:
MW-NASB-061R

Old Navy Fuel Farm
Groundwater Data

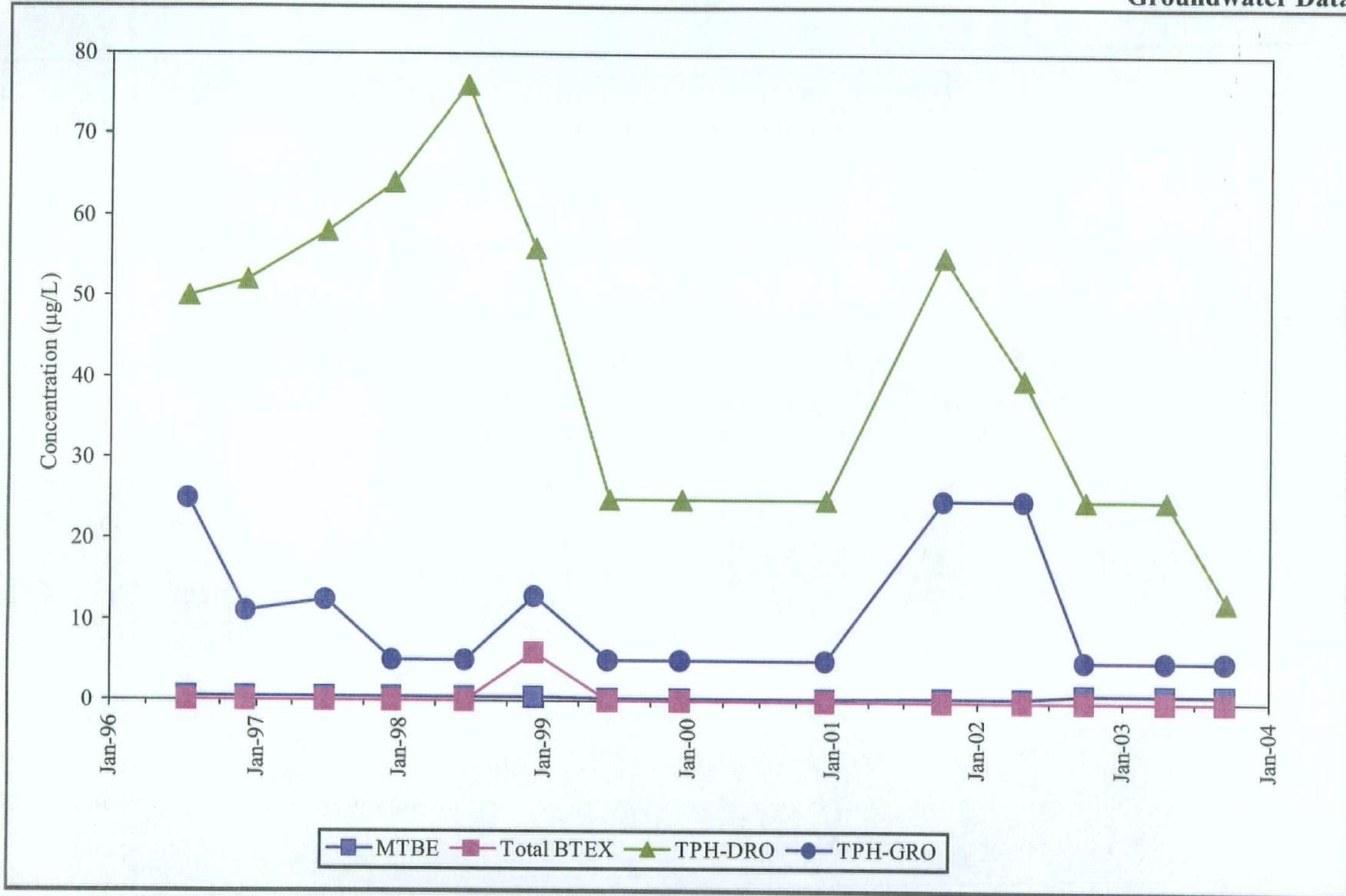


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 8 of 19

Sample Location:
MW-NASB-062

Old Navy Fuel Farm
Groundwater Data

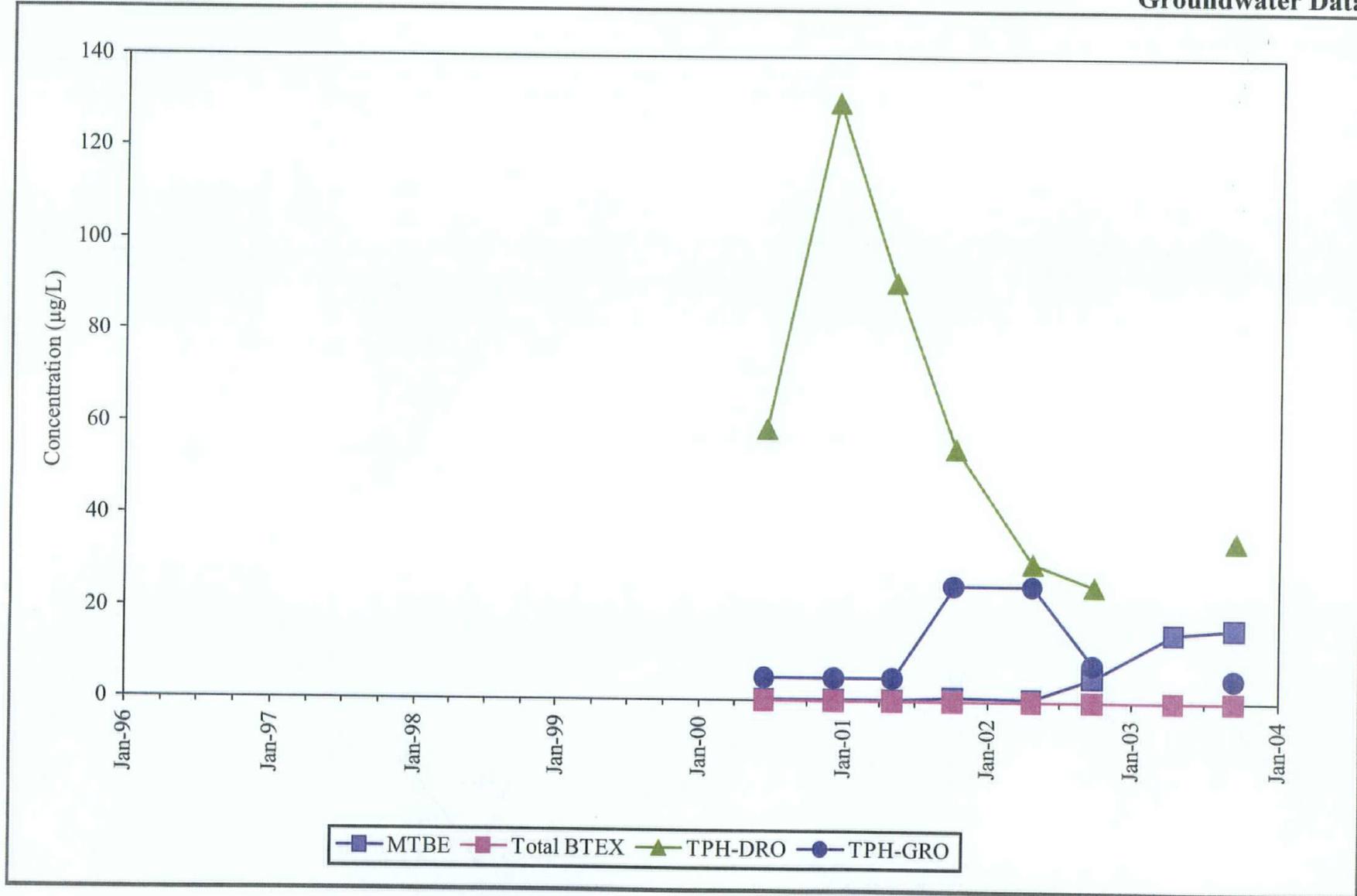


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 9 of 19

Sample Location:
MW-NASB-098

Old Navy Fuel Farm
Groundwater Data

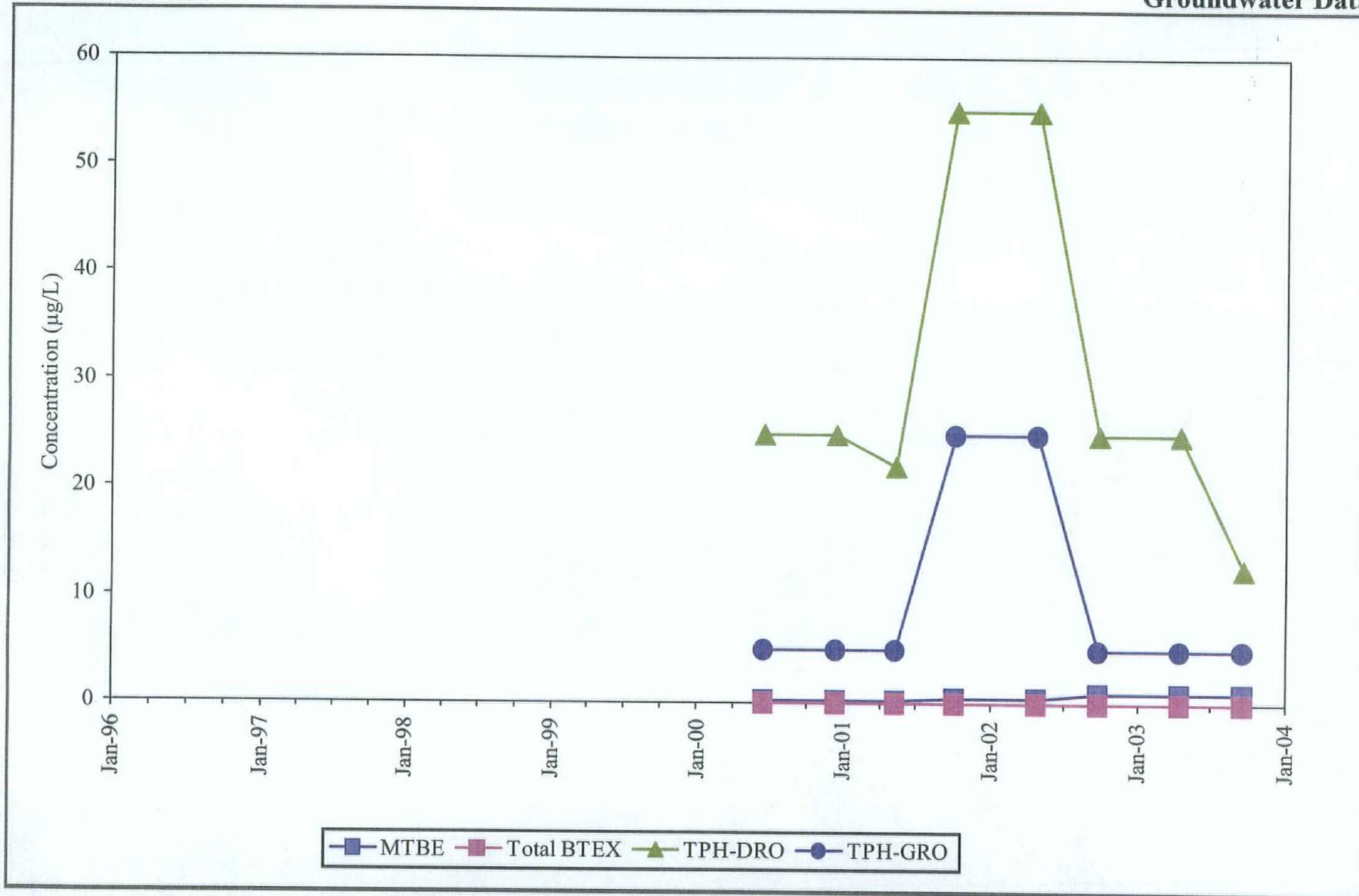


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 10 of 19

Sample Location:
MW-NASB-206

Old Navy Fuel Farm
Groundwater Data

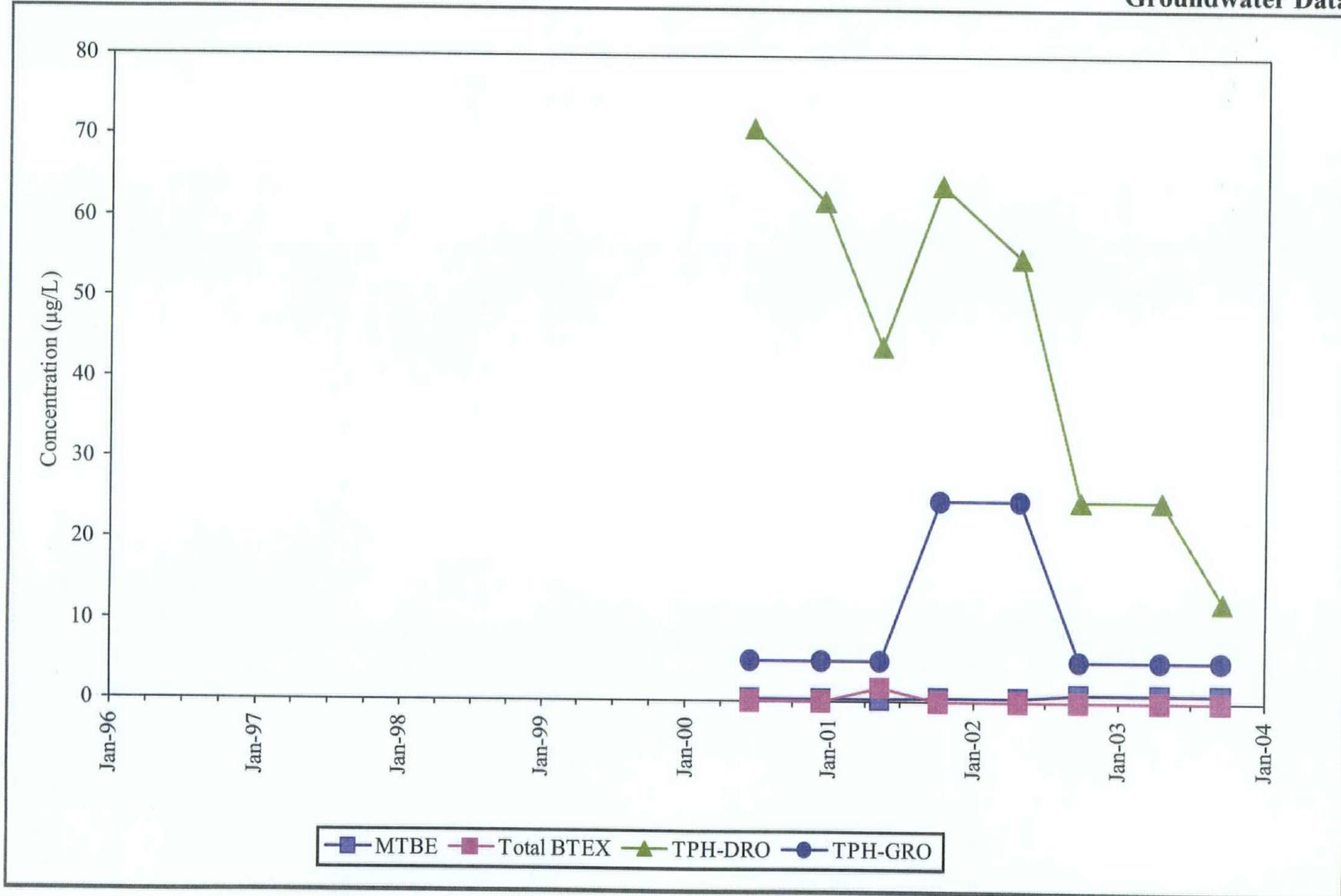


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 11 of 19

Sample Location:
MW-NASB-207

Old Navy Fuel Farm
Groundwater Data

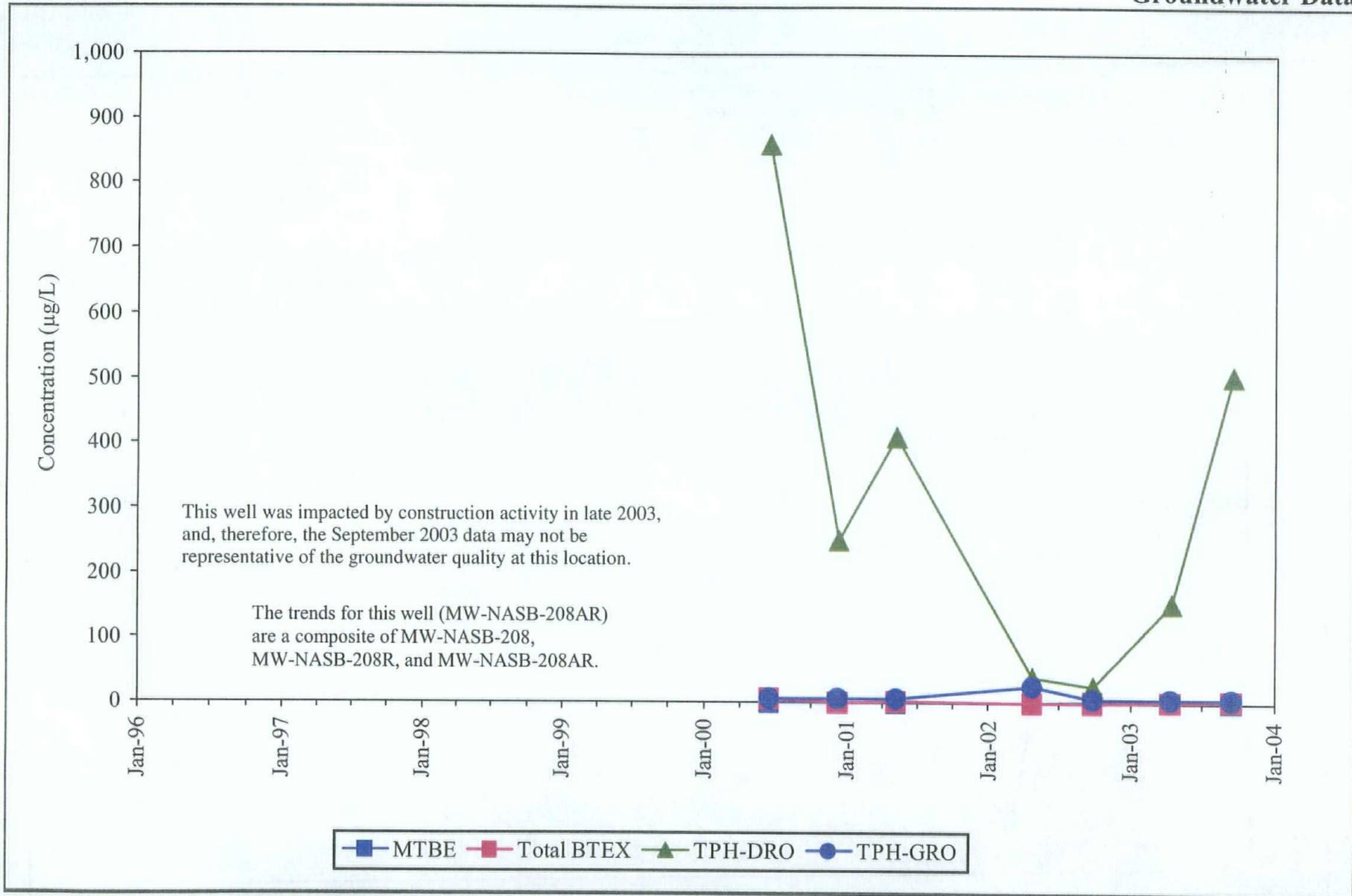


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 12 of 19

**Sample Location:
MW-NASB-208AR**

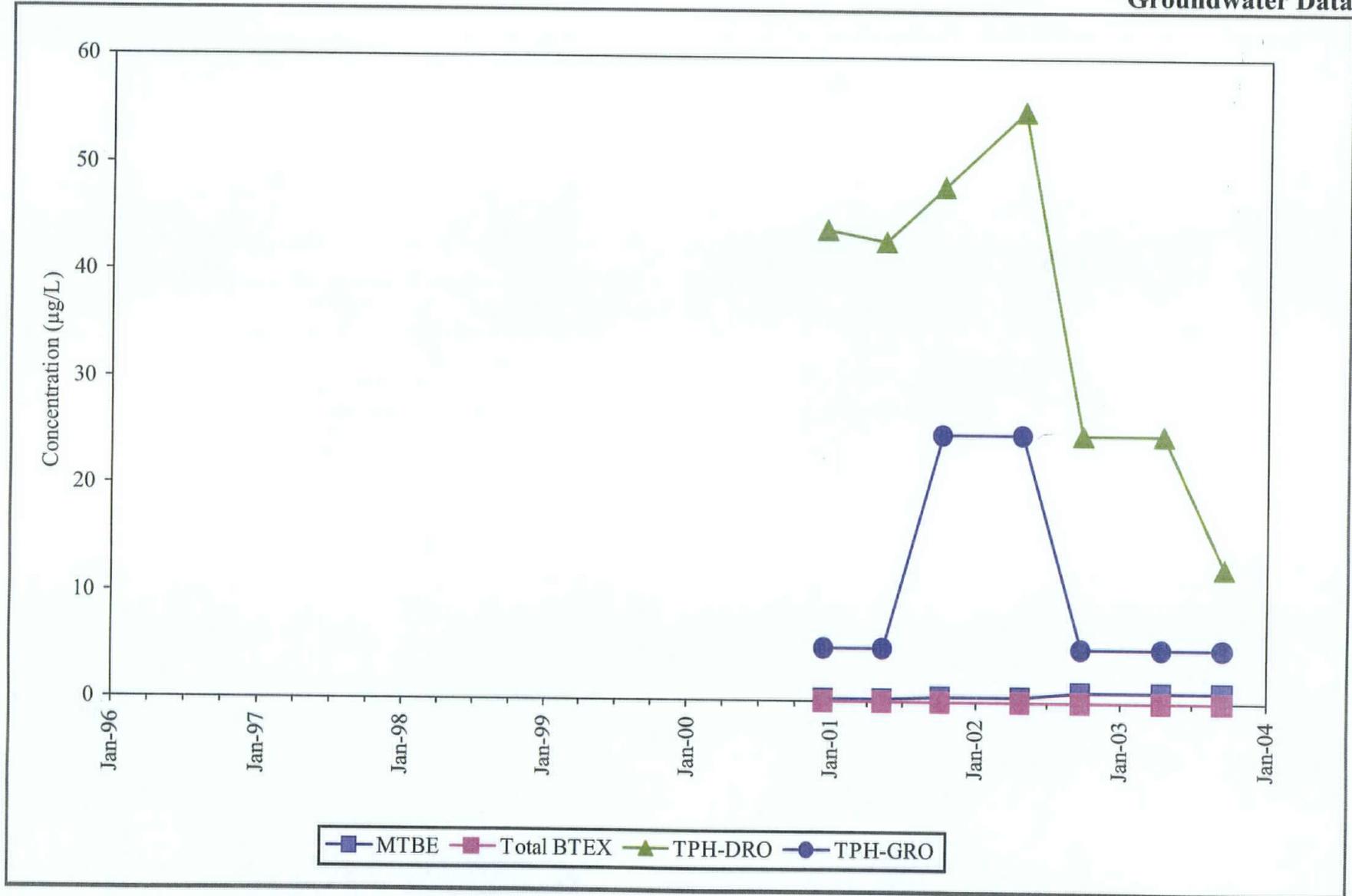
**Old Navy Fuel Farm
Groundwater Data**



	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Sample Location:
MW-NASB-209R

Old Navy Fuel Farm
Groundwater Data

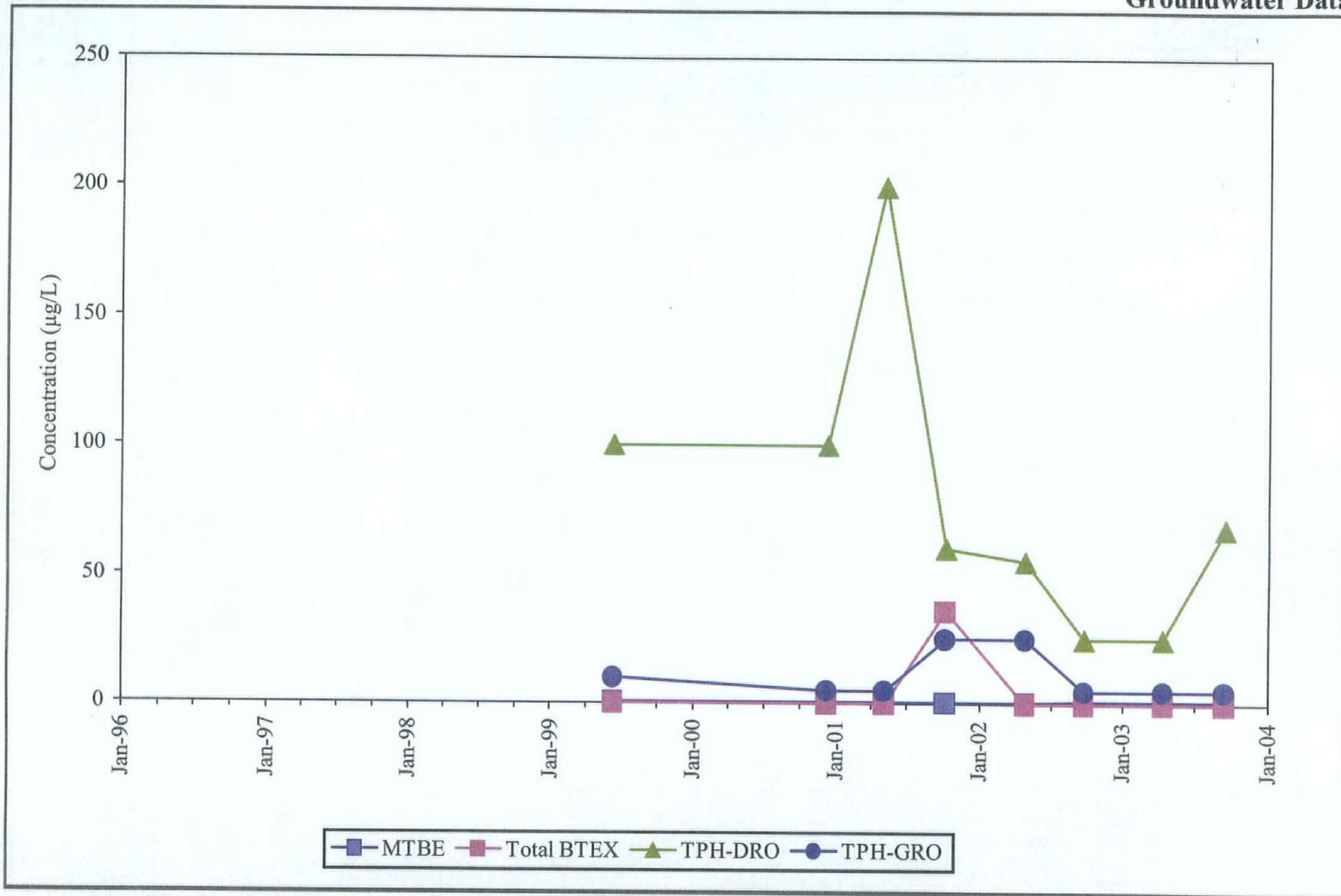


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 14 of 19

Sample Location:
MW-NASB-210

Old Navy Fuel Farm
Groundwater Data

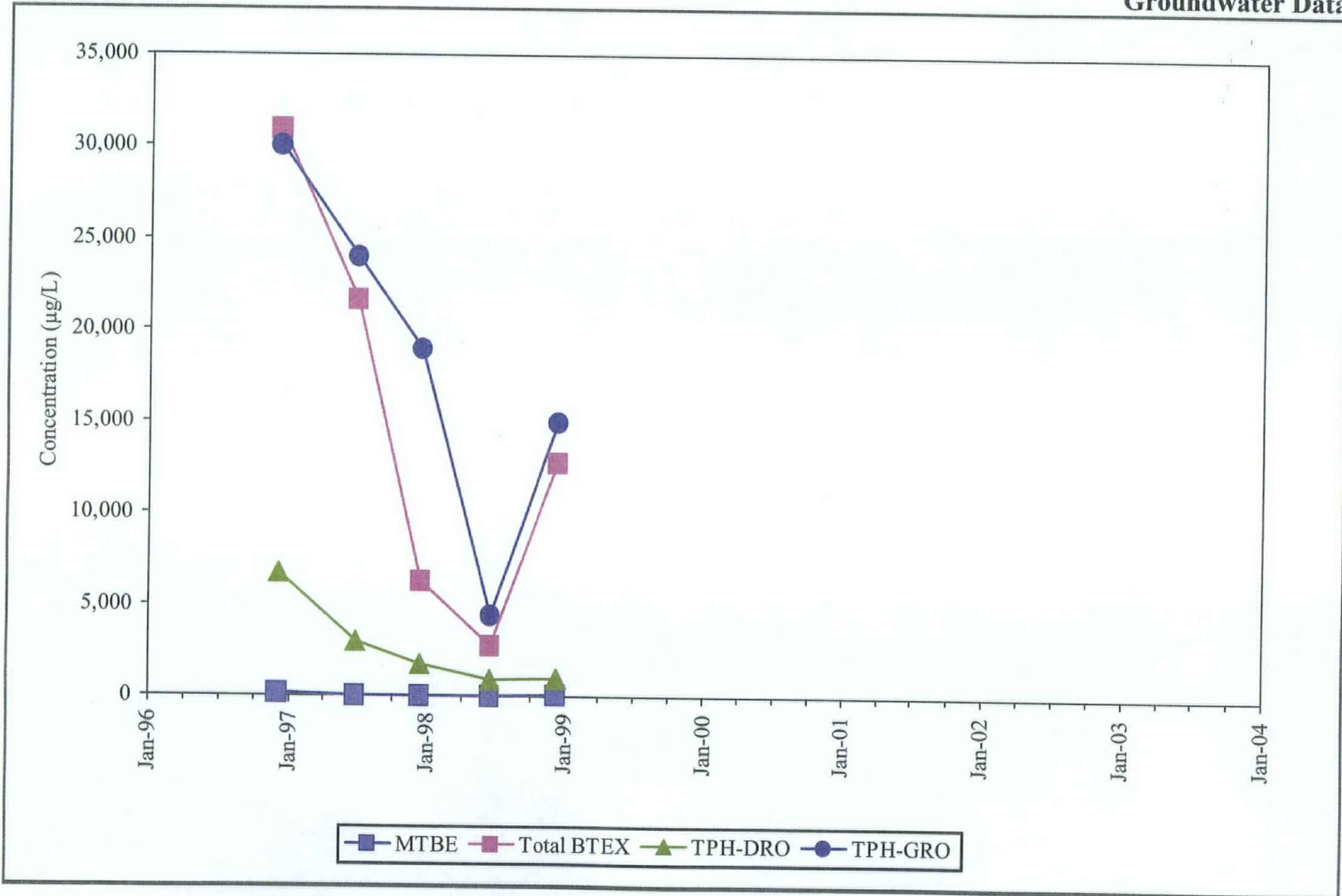


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 15 of 19

Sample Location:
MW-NASB-211

Old Navy Fuel Farm
Groundwater Data

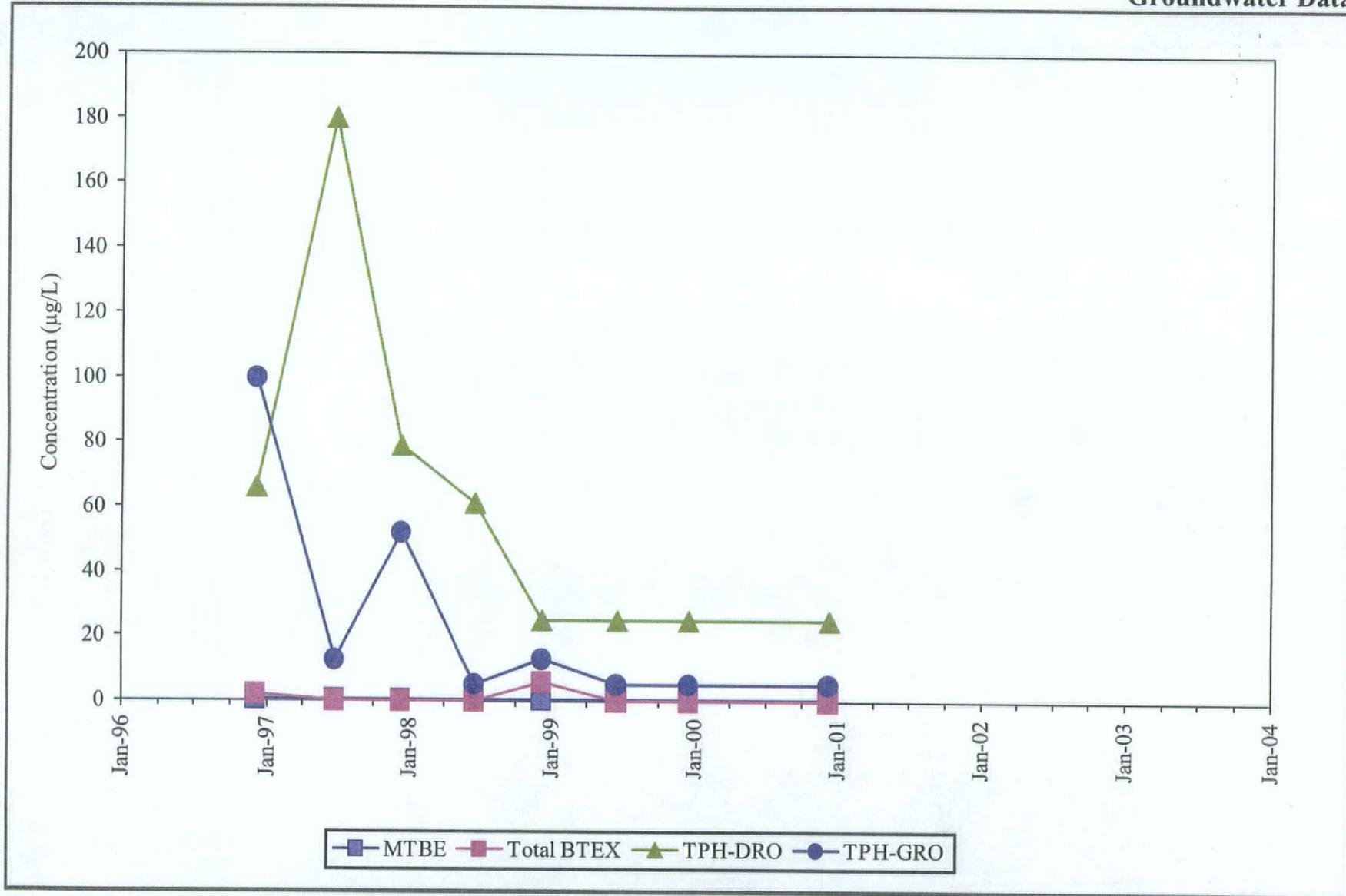


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 16 of 19

Sample Location:
MW-NASB-213

Old Navy Fuel Farm
Groundwater Data

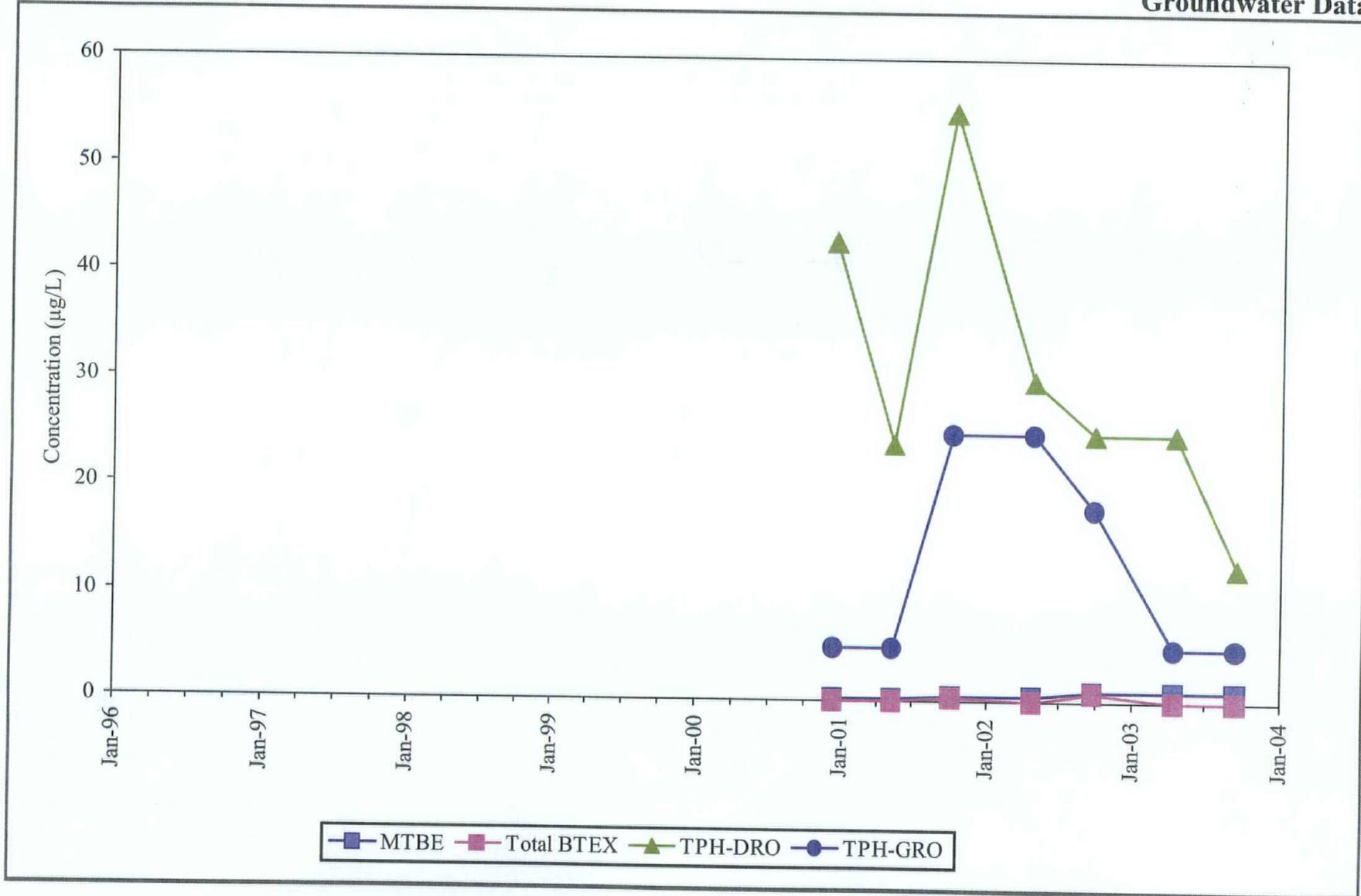


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 17 of 19

Sample Location:
MW-NASB-244

Old Navy Fuel Farm
Groundwater Data

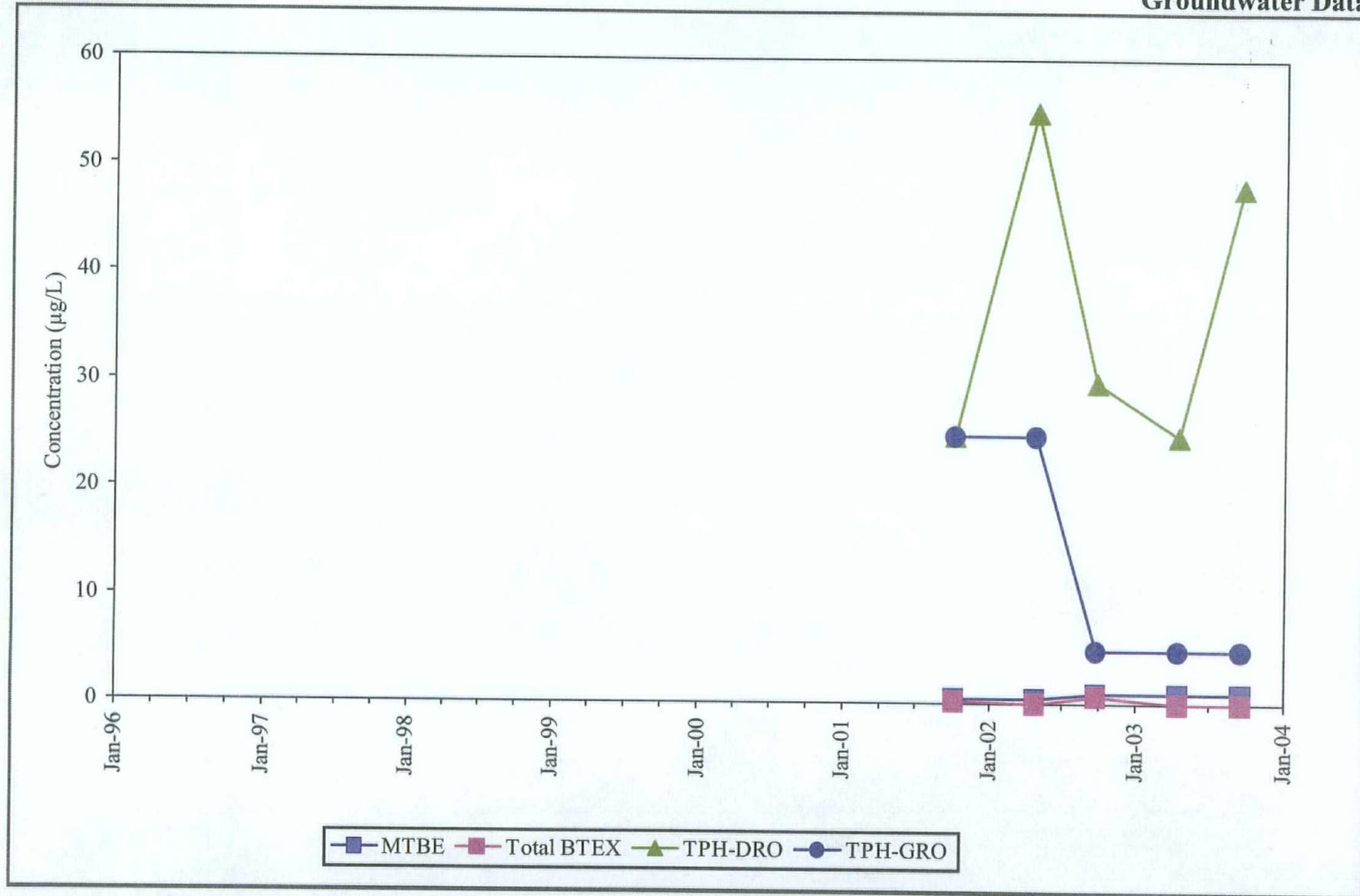


	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Figure 18 of 19

Sample Location:
MW-NASB-245

Old Navy Fuel Farm
Groundwater Data



	MTBE	Benzene	TPH-DRO	TPH-GRO
Clean-up Goal:	35 µg/L	5 µg/L	50 µg/L	50 µg/L

Appendix C
Analytical Data

STI BURL



environmental
laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

For Analytics Use Only Rev. 1, 10/1/02

Samples w r :

- 1) Shipped or hand-d lly r d
- 2) Temp blank °C _____
- 3) Received in good condition Y or N
- 4) pH checked by: _____
- 5) Labels checked by: _____

Project#: _____ Proj. Name: NASB ONFF

Company: ANALYTICS

Contact: Stephen Knollmeyer

Address: 195 COMMERCE WAY
PORTSMOUTH, NH 03801

Phone: 603-436-5111 PO# _____ Quote # _____

Matrix Key:

WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
F=Extract
X=Other

Container Key

P=plastic G=glass

Sampler (Signature): _____

Preservation _____

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO ₃	H ₂ SO ₄	HCl	Methanol	Other*	Container number/type		pH	Analytics Sample #
											Matrix			
MW Nasb - 210 ↓ 0017	9/16/03	09:50	Cl-, SO4, NO3, Alk*	X	X							1 P	50462 - 1	
	9/16/03	09:00	TOC by US EPA 415.1		X	X						1 G	↓	
MW Nasb - 098	9/17/03	09:25	Cl-, SO4, NO3, Alk*	X	X							1 P	50462 - 2	
MW Nasb - 098	9/16/03	10:50	TOC by US EPA 415.1		X	X						1 G	↓	
MW Nasb - 244 ↓	9/17/03	10:45	Cl-, SO4, NO3, Alk*	X	X							1 P	50462 - 3	
	9/16/03	12:45	TOC by US EPA 415.1		X	X						1 G	↓	
MW Nasb 058 ↓	9/17/03	11:00	Cl-, SO4, NO3, Alk*	X	X							1 P	50462 - 4	
	9/16/03	14:05	TOC by US EPA 415.1		X	X						1 G	↓	

FAX RESULTS? YES NO

Fax #: 603-430-2151

Turnaround Request _____

Standard Priority

Due Date _____ Due Date _____

Comments / Instructions:

Please reference Station ID number and AEL Lab number on report(s).

Lev I II QC package with EA EDD

* Chloride by US EPA Method 325.2, Nitrate by US EPA Method 353.2, Sulfate by US EPA Method 375.4, Alkalinity by EPA Method 310.1

Received By: _____

Received By: _____

Received By: _____

Time: _____

Time: 16:31

Time: 09:30

Date: _____

Date: 9/17/03

Date: 09.08.03

Relinquished By Sampler: _____

Relinquished By: *Jayne Salah*

Relinquished By: _____

98/109



environmental
laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

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Sampl s were:

- 1) Shipped or hand-d livered
- 2) Temp blank °C _____
- 3) Received in good condition Y or N
- 4) pH checked by: _____
- 5) Labels checked by: _____

Project#: Proj. Name: NASB ONFF
Company: ANALYTICS
Contact: Stephen Knollmeyer
Address: 195 COMMERCE WAY
PORTSMOUTH, NH 03801
Phon : 603-436-5111 PO# Quote #

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
F=Extract
X=Other

Container Key
P=plastic G=glass

Sampler (Signature):

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4-C	HNO3	H2SO4	HCL	Methanol	Other*	Matrix	Container number/type		pH	Analytics Sample #
MW Nasb 209R	9/17/03	11:50	Cl-, SO4, NO3, Alk*	X	X							3	P		50462-5
			TOC by US EPA 415.1		X	X						1	G		
MW Nasb 207	9/17/03	14:10	Cl-, SO4, NO3, Alk*	X	X							1	P		50462-6
			TOC by US EPA 415.1		X	X						1	G		
MW XD 2	9/17/03	—	Cl-, SO4, NO3, Alk*	X	X							1	P		50462-7
			TOC by US EPA 415.1		X	X						1	G		
MW XD 1	9/17/03	—	Cl-, SO4, NO3, Alk*	X	X							1	P		50462-8
			TOC by US EPA 415.1		X	X						1	G		

FAX RESULTS? YES NO
Fax #: 603-430-2151
Turnaround Request
Standard Priority
Due Date _____ Due Date _____

Comments / Instructions:
Please reference Station ID number and AEL Lab number on report(s). Do ms/msD
Level II QC packag with EA EDD
* Chloride by US EPA Method 325.2, Nitrate by US EPA Method 353.2, Sulfate by US EPA Method 375.4, Alkalinity by EPA Method 310.1

Received By: _____
Received By: _____
Received By: *Jayne Sabon*
Time: _____
Time: 16:31
Time: 09:30
Date: _____
Date: 9/17/03
Date: 09-18-03
Relinquished By Sampler: _____
Relinquished By: _____
Relinquished By: _____

1001/001

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Portsmouth, NH 03801
Phone (603) 438-5111
Fax (603) 430-2151

STSL/EI

For Analytics Use Only Rev. 7, 10/1/02

Project#: Proj. Name: NASB ONFF

Company: ANALYTICS

Contact: Stephen Knollmayer

Address: 195 COMMERCE WAY

PORTSMOUTH, NH 03801

Phone: 603-438-5111 PO# Quote #

Sampler (Signature):

Matrix Key:

WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sediment
O=Oil
F=Filtrate
X=Other

Samples were:

- 1) Shipped or hand-delivered
- 2) Temp blank °C _____
- 3) Received in good condition Y or N
- 4) pH checked by: _____
- 5) Labels checked by: _____

Container Key

P=plastic G=glass

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Preservation										Container		pH	Analytics Sample #
				Unpres	ref C	NO3	NO2	NO	Method	Other	Matrix	Material type					
* MW NASB 209R	9/17/03	11:50	Cl-, SO4, NO3, Alk*	X	X										3	P	50462-5
			TOC by US EPA 415.1	X		X									1	G	54 9/18/03
MW NASB 207	9/17/03	14:10	Cl-, SO4, NO3, Alk*	X	X									1	P	50462-6	
↓	↓	↓	TOC by US EPA 415.1	X		X								1	G		
MW XD 2	9/17/03	—	Cl-, SO4, NO3, Alk*	X	X									1	P	50462-7	
			TOC by US EPA 415.1	X		X								1	G	54 9/18/03	
MW XD 1	9/17/03	—	Cl-, SO4, NO3, Alk*	X	X									1	P	50462-8	
↓	↓	↓	TOC by US EPA 415.1	X		X								1	G		

FAX RESULTS? YES NO

Fax #: 603-430-2151

Turnaround Request

Standard Priority
Due Date Due Date

Comments / Instructions:

Please reference Station ID number and AEL Lab number on report(s).

**** Do MS/MSD**

Level II QC package with EA EDD

* Chloride by US EPA Method 325.2, Nitrate by US EPA Method 353.2, Sulfate by US EPA Method 375.4,
Alkalinity by EPA Method 310.1

TOC samples for MW NASB 209R ; MW XD 2 (PLUS MS/MSD) WERE SHIPPED 9/15/03

As by AEL Document AEL COC

Received By: _____
Received By: _____
Received By: _____
Date: _____
Date: 9/17/03
Date: _____
Relinquished By: Stephen Knollmayer
Relinquished By: _____
Relinquished By: _____

101/108 0019

SEP-18-2003 11:08am FROM-ANALYTICS T-043 P.003/003 F-107

Chain Of Custody Form



environmental
laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

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Samples were:

- 1) Shipped or hand-delivered
- 2) Temp blank °C 5°C
- 3) Received in good condition Y or N
- 4) pH checked by: 15/9/18/03
- 5) Labels checked by: 19.18.03

Project#: 29600.35 Proj. Name: NASB Fuel Farm
 Company: EA Engineering
 Contact: AL EASTERDAY
 Address: 333 Turnpike Road
Southborough MA 01772
 Phone: 508 485-2982 PO# _____ Quote # _____
 Sampler (Signature): Bruce D Andersen

Matrix Key:
 WW=Wastewater
 SW=Surfacewater
 GW=Groundwater
 DW=Drinkingwater
 S=Soil/Sludge
 O=Oil
 E=Extract
 X=Other

Container Key

P=plastic G=glass

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO ₃	H ₂ SO ₄	HCL	Methanol	Other	Matrix	Container number/type	pH	Analytics Sample #	
														50463	52473-1
MW-NASB-210	9/16/03	0900	"See Comments"					✓	✓		GW	12	G/Pet		
MW-NASB-098	9/16/03	1050	"See Comments"					✓	✓		GW	12	G/Pet		
MW-QT-2	9/16/03		VOC 8260 + MTBE					✓			W	1	b	9	
MW-NASB-244	9/16/03	1245	"See comments"					✓	✓		GW	12	G/Pet	3	4
MW-NASB-058	9/16/03	1405	"See comments"					✓	✓		GW	12	G/Pet	4	5
MW-NASB-210	9/17/03	0950	Alk, SO ₄ , CL, NO ₃								GW	1	P	1	1
MW-NASB-098	9/17/03	0925	Alk, SO ₄ , CL, NO ₃								GW	1	P	2	2
MW-NASB-244	9/17/03	1045	Alk, SO ₄ , CL, NO ₃								GW	1	P	3	3
MW-NASB-098	9/17/03	1100	Alk, SO ₄ , CL, NO ₃								GW	1	P	4	4
MW-XD2	9/17/03	-	Alk, SO ₄ , CL, NO ₃								GW	1	P	7	6
MW-NASB-209R	9/17/03	1150	Alk, SO ₄ , CL, NO ₃ <small>MIS/MSD</small>								GW	3	P	5	7
MW-NASB-207	9/17/03	1410	See comment #2					✓	✓		GW	13	G/P	6	8

FAX RESULTS? YES NO
 Fax # _____
 Turnaround Request
 Standard Priority
 Due Date _____ Due Date _____

Comments / Instructions:
VOC 8260b + MTBE, GRO, DRO
Methane/E/E, TOC, Alk, SO₄, CL, NO₃
#2 - VOC 8260b + MTBE, GRO, DRO, TOC, methane, Ethane,
Ethane, Alk, SO₄, CL, NO₃
 my 9/18/03 pH of all DRO's = 1.5 upon receipt @ lab

Received By: Jayne Saleh
 Received By: Melinda White
 Received By: _____
 Relinquished By Sampler: Bruce D. Andersen
 Relinquished By: Jayne Saleh
 Relinquished By: _____

Date: 9/17/03 Time: 16:55
 Date: 9/18/03 Time: 18:12
 Date: _____ Time: _____

102/108



environmental laboratory LLC

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Fax (603) 430-2151

STUBI

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Project#: Proj. Name: NASB ONFF
Company: ANALYTICS
Contact: Stephen Knollmeyer
Address: 195 COMMERCE WAY
PORTSMOUTH, NH 03801
Phone: 603-436-5111 PO# Quote #

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
F=Extract
X=Other

Samples were :
1) Shipped or hand-delivered
2) Temp blank °C _____
3) Received in good condition Y or N
4) pH checked by: _____
5) Labels checked by: _____

Container Key
P=plastic G=glass

Sampler (Signature):

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO3	H2SO4	HCL	Methanol	Other	Container number/type		pH	Analytics Sample #
											Matrix			
MW-NASB-209R ↓	9-15-03 ↓	1520 ↓	Cl-, SO4, NO3, Alk* ** TOC by US EPA 415.1 **	X	X						3	P		50445-1
MW-XD2 ↓	- ↓	- ↓	Cl-, SO4, NO3, Alk* TOC by US EPA 415.1	X	X		X				1	P		50445-2

FAX RESULTS? YES NO
Fax #: 603-430-2151
Turnaround Request
Standard Priority
Due Date _____ Due Date _____

Comments / Instructions: ** RUN MS/MSD ON MW-NASB-209R
Please reference Station ID number and AEL Lab number on report(s).
Level II QC packag with EA EDD
* Chloride by US EPA Method 325.2, Nitrate by US EPA Method 353.2, Sulfate by US EPA Method 375.4,
Alkalinity by EPA Method 310.1

Received By: SLK 9/15/03
Received By: Anna Henry 9/16/03 0930
Time: _____
Date: 9/15/2003 16:50
Retinquired By Sampler: _____
Retinquired By: Steph. Knollmeyer
Retinquired By: _____

Chain Of Custody Form



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Samples were:

- 1) Shipped or hand-delivered
- 2) Temp blank °C 5°C
- 3) Received in good condition Y or N
- 4) pH checked by: *See Field COC
- 5) Labels checked by: _____

Project#: 2960035 Proj. Name: NASB Fuel Farm

Company: EA Engineering

Contact: AL EASTERDAY

Address: 333 Turnpike Road
Southborough MA

Phone: (508) 485-2982 PO# _____ Quote # _____

Sampler (Signature): Brian W. Quisenberry

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Upret	4-C	NO ₃	H ₂ SO ₄	HCL	Methanol	Other	Container number/type		pH	Analytics Sample #
											Matrix			
MW NASB-209R	9/15/03	1520	"See comments" ^{MS} / MSD					✓	✓		GW	36	G	
MW - X D 2	9/15/03	-	"See comments"					✓	✓		GW	12	G	
MW QT1	9/15/03	1520	VOCs 8260 h						✓		GW	1	G	

FAX RESULTS? YES NO

Fax # _____

Turnaround Request

Standard Priority
Due Date _____ Due Date _____

Comments / Instructions: VOC 82606 + MTBE, GRO, DRO
Methane, Ethene, Ethane, TOC

Received By: [Signature]
Time: 1615
Date: 9/17/03

Received By: [Signature]
Time: 18:12
Date: 9/17/03

Relinquished By Sampler: [Signature]
Relinquished By: [Signature]
Date: _____

Chain Of Custody Form



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Samples were:

- 1) Shipped or hand-delivered
- 2) Temp blank °C 5
- 3) Received in good condition or N
- 4) pH checked by: Amk 9.19.03
- 5) Labels checked by: K 9.19.03

Project#: 29600.35 Proj. Name: NASB Fuel Farm

Company: EA Engineering

Contact: Al Eastland

Address: 333

Southborough MA

Phone: (508) 485-2982 PO# Quote #

Sampler (Signature): Brian W. Anderson

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Preservation

Container Key
P=plastic G=glass

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO ₃	H ₂ SO ₄	HCl	Methanol	Other	Matrix	Container number/type		DRO pH	Analytics Sample #
MW-NASB-049	9-19-03	1100	"See comments"	✓				✓	✓		GW	1	G	1.5	50490-1
MW-QT4	9-19-03	0930	VOC 82606+MTBE					✓			W	1	G		2
MW-NASB-046	9-19-03	0930	"See comments"	✓			✓	✓			GW	13	G/P	1.5	2

FAX RESULTS? YES NO
 Fax # _____
 Turnaround Request
 Standard Priority
 Due Date _____ Due Date _____

Comments / Instructions: Analysis - VOC by 82606+MTBE, GRO, DRO, Methane Ethane, Ethene, AIC, TOC, SO₄, CL, NO₃.

Received By: Jayme Salah
 Received By: [Signature]
 Received By: [Signature]
 Relinquished By Sampler: Brian W. Anderson
 Relinquished By: Jayme Salah
 Relinquished By: [Signature]

Date: 9-19-03 Time: 1200
 Date: 9-19-03 Time: 1330
 Date: Time:

8/5/03



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Samples were:

- 1) Shipped or hand-delivered
- 2) Temp blank °C _____
- 3) Received in good condition Y or N _____
- 4) pH checked by: _____
- 5) Labels checked by: _____

Project#: Proj. Name: NASB ONFF

Company: ANALYTICS

Contact: Stephen Knollmeyer

Address: 195 COMMERCE WAY

PORTSMOUTH, NH 03801

Phone: 603-436-5111 PO# Quote #

Sampler (Signature): *Brian D. Auden*

Matrix Key:

WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
F=Extract
X=Other

Container Key

P=plastic G=glass

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO ₃	H ₂ SO ₄	HCL	Methanol	Other*	Matrix	Container number/type	pH	Analytics Sample #
MW-NASB-046	9-19-03	0930	Cl-, SO ₄ , NO ₃ , Alk*	X	X						GW	1 P		50480-1
MW-NASB-046	9-19-03	0930	TOC by US EPA 415.1		X	X					GW	1 G		↓
MW-NASB-049	9-19-03	1100	Cl-, SO ₄ , NO ₃ , Alk*	X	X						GW	1 P		50480-2
MW-NASB-049	9-19-03	1100	TOC by US EPA 415.1		X	X					GW	1 G		↓
			Cl-, SO ₄ , NO ₃ , Alk*	X	X							1 P		
			TOC by US EPA 415.1		X	X						1 G		
			Cl-, SO ₄ , NO ₃ , Alk*	X	X							1 P		
			TOC by US EPA 415.1		X	X						1 G		

FAX RESULTS? YES NO

Fax #: 603-430-2151

Turnaround Request

Standard

Priority

Due Date

Due Date

Comments / Instructions:

Please reference Station ID number and AEL Lab number on report(s).

Lev III QC package with EA EDD

* Chloride by US EPA Method 325.2, Nitrate by US EPA Method 353.2, Sulfate by US EPA Method 375.4, Alkalinity by EPA Method 310.1

Relinquished By Sampler:

Brian D. Auden

Relinquished By:

Stephene Salah

Relinquished By:

Received By:

Stephene Salah

Received By:

Stephene Salah

Received By:

Time: 12:00

Date: 9-19-03

Time: 12:00

Date: 9/19/03

Time: 12:00

Date: 9/19/03

09-20-03

1200

Chain Of Custody Form



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Samples were:

- 1) Shipped or hand-delivered
- 2) Temp blank °C 3
- 3) Received in good condition Y or N
- 4) pH checked by: MR
- 5) Labels checked by: MR 9/18/03

Project#: 29600.35 Proj. Name: NASB Fuel Farm

Company: EA Engineering

Contact: AL EASTERDAY

Address: 333 Turnpike Road
Southborough, MA

Phone: (508) 485-2987 Quote #

Sampler (Signature): Brian W. Auden

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key

P=plastic G=glass

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4-C	HNO ₃	H ₂ SO ₄	HCL	Methanol	Other	Matrix	Container number/type		DRO	pH	Analytics Sample #
MW-NASB-051	9-18-03	0810	"See Comments"	✓			✓	✓			GW	13	G/P	1		58480-1
MW-QT3	9-18-03	0810	VOC 82606 + MTBE					✓			W	1	G	+	9.19.03	2
MW-NASB-062	9-18-03	0940	"See Comments"	✓			✓	✓			GW	13	G/P	1		3
MW-NASB-208R	9-18-03	1015	"See Comments"	✓			✓	✓			GW	13	G/P	1		4
MW-NASB-245	9-18-03	1045	"See Comments"	✓			✓	✓			GW	13	G/P	1		5
MW-NASB-206	9-18-03	1230	"See Comments"	✓			✓	✓			GW	13	G/P	1		6
MW-QS1	9-18-03	1320	"See Comments"	✓			✓	✓			W	13	G/P	1		7

FAX RESULTS? YES NO

Fax # _____

Turnaround Request

Standard Priority

Due Date _____ Due Date _____

Comments / Instructions: Analysis - VOC by 82606 + MTBE, GRO, DRO
TOC, Methane, Ethane, Ethene, AIK, SO₄, CL, NO₃.

Received By: Jayne Salak

Time: 6:00

Date: 9-18-03

Relinquished By Sampler: Brian W. Auden

Relinquished By: Jayne Salak

Time: 18:30

Date: 9-18-03

Relinquished By: Jayne Salak

08/08

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Samples were:

- 1) Shipped r hand-delivered
- 2) Temp blank °C _____
- 3) Received in good condition Y or N
- 4) pH checked by: _____
- 5) Labels checked by: _____

Project#: Proj. Name: NASB ONFF
Company: ANALYTICS
Contact: Stephen Knollmeyer
Address: 195 COMMERCE WAY
PORTSMOUTH, NH 03801
Phone: 603-436-5111 PO# Quote #

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
F=Extract
X=Other

Container Key

P=plastic G=glass

Sampler (Signature): *Bruce J. Andrus*

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO ₃	H ₂ SO ₄	HCL	Methanol	Other*	Container number/type		pH	Analytics Sample #
											Matrix			
MW-NASB-206	9-18-03	1230	Cl-, SO4,NO3,Aik*	X	X						GW	1 P		50480-5
MW-NASB-206	9-18-03	1230	TOC by US EPA 415.1		X	X					GW	1 G		
MW-QS1	9-18-03	1320	Cl-, SO4,NO3,Aik*	X	X						W	1 P		50480-6
MW-QS1	9-18-03	1320	TOC by US EPA 415.1		X	X					W	1 G		
			Cl-, SO4,NO3,Aik*	X	X							1 P		50480-7
			TOC by US EPA 415.1		X	X						1 G		
			Cl-, SO4,NO3,Aik*	X	X							1 P		
			TOC by US EPA 415.1		X	X						1 G		

Received By: *Jayne Solah* 9/19/03
Received By: *Andrea Hamley* 0930
Received By:

Time: 1600
Date: 9-18-03
Time: 16:00
Date: 9-18-03

Relinquished By Sampler: *Bruce J. Andrus*
Relinquished By: *Jayne Solah*
Relinquished By:

FAX RESULTS? YES NO
Fax #: 603-430-2151

Comments / Instructions:
Please reference Station ID number and AEL Lab number on report(s).

Turnaround Request
Standard Priority
Due Date Due Date

Level III QC package with EA EDD
* Chlorid by US EPA Method 325.2, Nitrate by US EPA Method 353.2, Sulfate by US EPA Method 375.4,
Alkalinity by EPA Method 310.1



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Samples were:

- 1) Shipped or hand-delivered
- 2) Temp blank °C _____
- 3) Received in good condition Y or N
- 4) pH checked by: _____
- 5) Labels checked by: _____

Project#: Proj. Name: NASB ONFF
 Company: ANALYTICS
 Contact: Stephen Knollmeyer
 Address: 195 COMMERCE WAY
 PORTSMOUTH, NH 03801
 Phone: 603-436-5111 PO# Quote #

Matrix Key:
 WW=Wastewater
 SW=Surfacewater
 GW=Groundwater
 DW=Drinkingwater
 S=Soil/Sludge
 O=Oil
 F=Extract
 X=Other

Container Key

P=plastic G=glass

Sampler (Signature): *Brian D. Anderson*

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO ₃	H ₂ SO ₄	HCL	Methanol	Other*	Matrix	Container number/type		pH	Analytics Sample #
MW-NASB-051	9-18-03	0810	Cl-, SO4,NO3,Aik*	X	X						GW	1	P		50480-1
MW-NASB-051	9-18-03	0810	TOC by US EPA 415.1		X		X				GW	1	G		
MW-NASB-062	9-18-03	0940	Cl-, SO4,NO3,Aik*	X	X						GW	1	P		50480-2
MW-NASB-062	9-18-03	0940	TOC by US EPA 415.1		X		X				GW	1	G		
MW-NASB-208R	9-18-03	1015	Cl-, SO4,NO3,Aik*	X	X						GW	1	P		50480-3
MW-NASB-208R	9-18-03	1015	TOC by US EPA 415.1		X		X				GW	1	G		
MW-NASB-245	9-18-03	1045	Cl-, SO4,NO3,Aik*	X	X						GW	1	P		50480-4
MW-NASB-245	9-18-03	1045	TOC by US EPA 415.1		X		X				GW	1	G		

FAX RESULTS? YES NO
 Fax #: 603-430-2151

Turnaround Request

Standard Priority
 Due Date Due Date

Comments / Instructions:

Please reference Station ID number and AEL Lab number on report(s).

Level II QC package with EA EDD

* Chloride by US EPA Method 325.2, Nitrate by US EPA Method 353.2, Sulfate by US EPA Method 375.4,
 Alkalinity by EPA Method 310.1

Received By: *Jayne Salala*

Time: 16:00

Date: 9-18-03

Relinquished By Sampler: *Brian D. Anderson*

Relinquished By: *Jayne Salala*

Relinquished By:

Received By: *Jayne Salala* 9/19/03
 Received By: *Amelia Ferry* 9/23/03
 Received By:

Time: 16:00

Date: 9/18/03

97/99

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
 Project Number: 29600.35
 Field Sample ID: MW-NASB-046

Lab Sample ID: 50490-3
 Matrix: Aqueous
 Percent Solid: N/A
 Dilution Factor: 1.0
 Collection Date: 09/19/03
 Lab Receipt Date: 09/19/03
 Extraction Date: 09/23/03
 Analysis Date: 09/25/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
U	µg/L	25
Surrogate Standard Recovery		
	m-Terphenyl	97 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-049

Lab Sample ID: 50490-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Extraction Date: 09/23/03
Analysis Date: 09/25/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
U	µg/L	25

Surrogate Standard Recovery

m-Terphenyl 104 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-051

Lab Sample ID: 50480-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Extraction Date: 09/23/03
Analysis Date: 09/25/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
U	µg/L	25
Surrogate Standard Recovery		
	m-Terphenyl	89 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-058

Lab Sample ID: 50462-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Extraction Date: 09/18/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
U	µg/L	25
Surrogate Standard Recovery		
	m-Terphenyl	92 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Authorized signature *M. J. Hall*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-062

Lab Sample ID: 50480-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Extraction Date: 09/23/03
Analysis Date: 09/25/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
U	µg/L	25
Surrogate Standard Recovery		
	m-Terphenyl	104 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Authorized signature *Melina A. Kelly*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-098

Lab Sample ID: 50462-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Extraction Date: 09/18/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
35	µg/L	25
Surrogate Standard Recovery		
m-Terphenyl	106 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-206

Lab Sample ID: 50480-6
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Extraction Date: 09/23/03
Analysis Date: 09/25/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
U	µg/L	25
Surrogate Standard Recovery		
	m-Terphenyl	71 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-207

Lab Sample ID: 50462-6
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/17/03
Lab Receipt Date: 09/17/03
Extraction Date: 09/18/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
U	µg/L	25
Surrogate Standard Recovery		
m-Terphenyl		94 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-XD1

Lab Sample ID: 50462-8
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/17/03
Lab Receipt Date: 09/17/03
Extraction Date: 09/18/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
U	µg/L	25
Surrogate Standard Recovery		
	m-Terphenyl	97 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Authorized signature *Melissa A Hall*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-208R

Lab Sample ID: 50480-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Extraction Date: 09/23/03
Analysis Date: 09/25/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
505	µg/L	25
Surrogate Standard Recovery		
m-Terphenyl 102 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough-Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 1, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 2960035
Field Sample ID: MW-NASB-209R

Lab Sample ID: 50445-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Extraction Date: 09/16/03
Analysis Date: 09/17/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
U	µg/L	25

Surrogate Standard Recovery

m-Terphenyl 86 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Melissa A. Kelli

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 1, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 2960035
Field Sample ID: MW-XD2

Lab Sample ID: 50445-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.1
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Extraction Date: 09/16/03
Analysis Date: 09/18/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
U	µg/L	25

Surrogate Standard Recovery

m-Terphenyl 63 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-210

Lab Sample ID: 50462-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Extraction Date: 09/18/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
68	µg/L	25
Surrogate Standard Recovery		
m-Terphenyl 100 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Authorized signature Melinda A. Hall

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-244

Lab Sample ID: 50462-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Extraction Date: 09/18/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
U	µg/L	25
Surrogate Standard Recovery		
	m-Terphenyl	99% %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:



Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-245

Lab Sample ID: 50480-5
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Extraction Date: 09/23/03
Analysis Date: 09/25/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
48	µg/L	25
Surrogate Standard Recovery		
m-Terphenyl 88 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM

Project Number: 29600.35

Field Sample ID: MW-QS1

Lab Sample ID: 50480-7

Matrix: Aqueous

Percent Solid: N/A

Dilution Factor: 1.0

Collection Date: 09/18/03

Lab Receipt Date: 09/18/03

Extraction Date: 09/23/03

Analysis Date: 09/25/03

ANALYTICAL RESULTS DIESEL RANGE ORGANICS		
Result	Units	Quantitation Limit
36	µg/L	25
Surrogate Standard Recovery		
m-Terphenyl 100 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analyzed according to "Maine HETL Method 4.1.25, September 6, 1995".

COMMENTS:



Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Client Sample ID: MW-NASB-046

Lab Sample ID: 50490-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Analysis Date: 09/27/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	92 %	
	Bromofluorobenzene	88 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Melinda K. Tall*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Client Sample ID: MW-NASB-049

Lab Sample ID: 50490-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Analysis Date: 09/27/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	107 %	
	Bromofluorobenzene	101 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature



Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Client Sample ID: MW-NASB-051

Lab Sample ID: 50480-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/27/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	103 %	
	Bromofluorobenzene	96 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature Melina A. Hoch

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Client Sample ID: MW-NASB-058

Lab Sample ID: 50462-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	100 %	
	Bromofluorobenzene	93 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Melina A. Hall*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Client Sample ID: MW-NASB-062

Lab Sample ID: 50480-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/26/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	95 %	
	Bromofluorobenzene	92 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Michael R. Hall*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Client Sample ID: MW-NASB-098

Lab Sample ID: 50462-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	103 %	
	Bromofluorobenzene	97 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature Melina A. Della

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Client Sample ID: MW-NASB-206

Lab Sample ID: 50480-6
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/27/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	110 %	
	Bromofluorobenzene	99 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Melina A. Kelly*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Client Sample ID: MW-NASB-207

Lab Sample ID: 50462-6
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/17/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	95 %	
	Bromofluorobenzene	88 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Melina A. Kelly*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
 Project Number: 29600.35
 Client Sample ID: MW-XD1

Lab Sample ID: 50462-8
 Matrix: Aqueous
 Percent Solid: N/A
 Dilution Factor: 1
 Collection Date: 09/17/03
 Lab Receipt Date: 09/17/03
 Analysis Date: 09/19/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	99 %	
	Bromofluorobenzene	93 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature 

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Client Sample ID: MW-NASB-208R

Lab Sample ID: 50480-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/26/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10

Surrogate Standard Recovery

Trifluorotoluene 94 %
Bromofluorobenzene 90 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Melina P. Kelly*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 1, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 2960035
Client Sample ID: MW-NASB-209R

Lab Sample ID: 50445-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	114 %	
	Bromofluorobenzene	104 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *M. J. McCall*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 1, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 2960035
Client Sample ID: MW-XD2

Lab Sample ID: 50445-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	108 %	
	Bromofluorobenzene	99 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Mylene A. Hilli*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Client Sample ID: MW-NASB-210

Lab Sample ID: 50462-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	108 %	
	Bromofluorobenzene	101 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Melina C. Hill*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Client Sample ID: MW-NASB-244

Lab Sample ID: 50462-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	105 %	
	Bromofluorobenzene	98 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature



Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Client Sample ID: MW-NASB-245

Lab Sample ID: 50480-5
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/27/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS			
Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	101 %	
	Bromofluorobenzene	89 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Melina A. Kelle*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
 Project Number: 29600.35
 Client Sample ID: MW-QS1

Lab Sample ID: 50480-7
 Matrix: Aqueous
 Percent Solid: N/A
 Dilution Factor: 1
 Collection Date: 09/18/03
 Lab Receipt Date: 09/18/03
 Analysis Date: 09/27/03

ANALYTICAL RESULTS GASOLINE RANGE ORGANICS

Compound	Result	Units	Quantitation Limit
GRO	U	µg/L	10
Surrogate Standard Recovery			
	Trifluorotoluene	108 %	
	Bromofluorobenzene	98 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analyzed according to: "Maine HETL Method 4.2.17, September 6, 1995."

COMMENTS:

Authorized signature *Melina A. Hall*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm

Project Number: 29600.35

Field Sample ID: MW-NASB-046

Lab Sample ID: 50490-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	96 %	d4-1,2-Dichloroethane	93 %	d8-Toluene	98 %
		Bromofluorobenzene	93 %		
U=Undetected		J=Estimated		E=Exceeds Calibration Range	
				B=Detected in Blank	

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:



Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-049

Lab Sample ID: 50490-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS					
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	94 %	d4-1,2-Dichloroethane	90 %	d8-Toluene	99 %
		Bromofluorobenzene	92 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

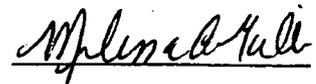
CLIENT SAMPLE ID
Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-051

Lab Sample ID: 50480-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS							
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L		
Benzene	2	U	1,3-Dichloropropane	2	U		
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U		
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U		
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U		
Bromoform	2	U	1,1-Dichloropropene	2	U		
Bromomethane	2	U	Ethylbenzene	2	U		
n-butylbenzene	2	U	Hexachlorobutadiene	2	U		
sec-butylbenzene	2	U	Isopropylbenzene	2	U		
tert-butylbenzene	2	U	p-isopropyltoluene	2	U		
Carbon Tetrachloride	2	U	Methylene Chloride	5	U		
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U		
Chloroethane	2	U	Naphthalene	2	U		
Chloroform	2	U	n-Propylbenzene	2	U		
Chloromethane	2	U	Styrene	2	U		
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U		
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U		
Dibromochloromethane	2	U	Tetrachloroethene	2	U		
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U		
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U		
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U		
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U		
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U		
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U		
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U		
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U		
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U		
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U		
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U		
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U		
1,2-Dichloropropane	2	U	m,p-Xylene	2	U		
Acetone	10	U	Diethyl ether	2	U		
Carbon Disulfide	2	U	2-Hexanone	10	U		
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U		
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U		
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U		
t-Amyl methyl ether (TAME)	2	U					
Surrogate Standard Recovery							
Dibromofluoromethane	94 %	d4-1,2-Dichloroethane	90 %	d8-Toluene	98 %	Bromofluorobenzene	92 %
U=Undetected		J=Estimated		E=Exceeds Calibration Range		B=Detected in Blank	

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:



Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-058

Lab Sample ID: 50462-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS VOLATILE ORGANICS							
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L		
Benzene	2	U	1,3-Dichloropropane	2	U		
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U		
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U		
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U		
Bromoform	2	U	1,1-Dichloropropene	2	U		
Bromomethane	2	U	Ethylbenzene	2	U		
n-butylbenzene	2	U	Hexachlorobutadiene	2	U		
sec-butylbenzene	2	U	Isopropylbenzene	2	U		
tert-butylbenzene	2	U	p-isopropyltoluene	2	U		
Carbon Tetrachloride	2	U	Methylene Chloride	5	U		
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U		
Chloroethane	2	U	Naphthalene	2	U		
Chloroform	2	U	n-Propylbenzene	2	U		
Chloromethane	2	U	Styrene	2	U		
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U		
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U		
Dibromochloromethane	2	U	Tetrachloroethene	2	U		
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U		
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U		
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U		
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U		
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U		
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U		
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U		
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U		
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U		
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U		
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U		
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U		
1,2-Dichloropropane	2	U	m,p-Xylene	2	U		
Acetone	10	U	Diethyl ether	2	U		
Carbon Disulfide	2	U	2-Hexanone	10	U		
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U		
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U		
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U		
t-Amyl methyl ether (TAME)	2	U					
Surrogate Standard Recovery							
Dibromofluoromethane	98 %	d4-1,2-Dichloroethane	96 %	d8-Toluene	99 %	Bromofluorobenzene	94 %
U=Undetected		J=Estimated		E=Exceeds Calibration Range		B=Detected in Blank	

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:



Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 26, 2003
SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-062

Lab Sample ID: 50480-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS							
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L		
Benzene	2	U	1,3-Dichloropropane	2	U		
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U		
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U		
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U		
Bromoform	2	U	1,1-Dichloropropene	2	U		
Bromomethane	2	U	Ethylbenzene	2	U		
n-butylbenzene	2	U	Hexachlorobutadiene	2	U		
sec-butylbenzene	2	U	Isopropylbenzene	2	U		
tert-butylbenzene	2	U	p-isopropyltoluene	2	U		
Carbon Tetrachloride	2	U	Methylene Chloride	5	U		
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U		
Chloroethane	2	U	Naphthalene	2	U		
Chloroform	2	U	n-Propylbenzene	2	U		
Chloromethane	2	U	Styrene	2	U		
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U		
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U		
Dibromochloromethane	2	U	Tetrachloroethene	2	U		
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U		
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U		
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U		
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U		
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U		
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U		
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U		
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U		
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U		
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U		
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U		
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U		
1,2-Dichloropropane	2	U	m,p-Xylene	2	U		
Acetone	10	U	Diethyl ether	2	U		
Carbon Disulfide	2	U	2-Hexanone	10	U		
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U		
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U		
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U		
t-Amyl methyl ether (TAME)	2	U					
Surrogate Standard Recovery							
Dibromofluoromethane	95 %	d4-1,2-Dichloroethane	91 %	d8-Toluene	98 %	Bromofluorobenzene	92 %
U=Undetected		J=Estimated		E=Exceeds Calibration Range		B=Detected in Blank	

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:



Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-098

Lab Sample ID: 50462-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS VOLATILE ORGANICS							
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L		
Benzene	2	U	1,3-Dichloropropane	2	U		
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U		
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U		
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U		
Bromoform	2	U	1,1-Dichloropropene	2	U		
Bromomethane	2	U	Ethylbenzene	2	U		
n-butylbenzene	2	U	Hexachlorobutadiene	2	U		
sec-butylbenzene	2	U	Isopropylbenzene	2	U		
tert-butylbenzene	2	U	p-isopropyltoluene	2	U		
Carbon Tetrachloride	2	U	Methylene Chloride	5	U		
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	16		
Chloroethane	2	U	Naphthalene	2	U		
Chloroform	2	U	n-Propylbenzene	2	U		
Chloromethane	2	U	Styrene	2	U		
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U		
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U		
Dibromochloromethane	2	U	Tetrachloroethene	2	U		
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U		
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U		
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U		
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U		
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U		
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U		
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U		
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U		
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U		
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U		
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U		
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U		
1,2-Dichloropropane	2	U	m,p-Xylene	2	U		
Acetone	10	U	Diethyl ether	2	U		
Carbon Disulfide	2	U	2-Hexanone	10	U		
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U		
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U		
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U		
t-Amyl methyl ether (TAME)	2	U					
Surrogate Standard Recovery							
Dibromofluoromethane	98 %	d4-1,2-Dichloroethane	96 %	d8-Toluene	99 %	Bromofluorobenzene	95 %
U=Undetected		J=Estimated		E=Exceeds Calibration Range		B=Detected in Blank	

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Melina A. Hall

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-206

Lab Sample ID: 50480-6
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	95 %	d4-1,2-Dichloroethane	93 %	d8-Toluene	99 %
		Bromofluorobenzene	90 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:



Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-207

Lab Sample ID: 50462-6
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/17/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	93 %	d4-1,2-Dichloroethane	92 %	d8-Toluene	99 %
		Bromofluorobenzene	96 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature *Melina A. Hall*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-XD1

Lab Sample ID: 50462-8
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/17/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS VOLATILE ORGANICS							
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L		
Benzene	2	U	1,3-Dichloropropane	2	U		
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U		
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U		
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U		
Bromoform	2	U	1,1-Dichloropropene	2	U		
Bromomethane	2	U	Ethylbenzene	2	U		
n-butylbenzene	2	U	Hexachlorobutadiene	2	U		
sec-butylbenzene	2	U	Isopropylbenzene	2	U		
tert-butylbenzene	2	U	p-isopropyltoluene	2	U		
Carbon Tetrachloride	2	U	Methylene Chloride	5	U		
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U		
Chloroethane	2	U	Naphthalene	2	U		
Chloroform	2	U	n-Propylbenzene	2	U		
Chloromethane	2	U	Styrene	2	U		
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U		
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U		
Dibromochloromethane	2	U	Tetrachloroethene	2	U		
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U		
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U		
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U		
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U		
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U		
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U		
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U		
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U		
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U		
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U		
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U		
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U		
1,2-Dichloropropane	2	U	m,p-Xylene	2	U		
Acetone	10	U	Diethyl ether	2	U		
Carbon Disulfide	2	U	2-Hexanone	10	U		
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U		
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U		
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U		
t-Amyl methyl ether (TAME)	2	U					
Surrogate Standard Recovery							
Dibromofluoromethane	97 %	d4-1,2-Dichloroethane	99 %	d8-Toluene	100 %	Bromofluorobenzene	94 %
U=Undetected		J=Estimated		E=Exceeds Calibration Range		B=Detected in Blank	

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature 

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-208R

Lab Sample ID: 50480-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS							
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L		
Benzene	2	U	1,3-Dichloropropane	2	U		
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U		
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U		
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U		
Bromoform	2	U	1,1-Dichloropropene	2	U		
Bromomethane	2	U	Ethylbenzene	2	U		
n-butylbenzene	2	U	Hexachlorobutadiene	2	U		
sec-butylbenzene	2	U	Isopropylbenzene	2	U		
tert-butylbenzene	2	U	p-isopropyltoluene	2	U		
Carbon Tetrachloride	2	U	Methylene Chloride	5	U		
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U		
Chloroethane	2	U	Naphthalene	2	U		
Chloroform	2	U	n-Propylbenzene	2	U		
Chloromethane	2	U	Styrene	2	U		
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U		
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U		
Dibromochloromethane	2	U	Tetrachloroethene	2	U		
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	4		
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U		
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U		
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U		
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U		
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U		
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U		
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U		
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U		
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U		
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U		
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U		
1,2-Dichloropropane	2	U	m,p-Xylene	2	U		
Acetone	10	43	Diethyl ether	2	U		
Carbon Disulfide	2	U	2-Hexanone	10	U		
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U		
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U		
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U		
t-Amyl methyl ether (TAME)	2	U					
Surrogate Standard Recovery							
Dibromofluoromethane	94 %	d4-1,2-Dichloroethane	92 %	d8-Toluene	98 %	Bromofluorobenzene	91 %
U=Undetected		J=Estimated		E=Exceeds Calibration Range		B=Detected in Blank	

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature 

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 2960035
Field Sample ID: MW-NASB-209R

Lab Sample ID: 50445-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	97 %	d4-1,2-Dichloroethane	95 %	d8-Toluene	99 %
		Bromofluorobenzene	96 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 2960035
Field Sample ID: MW-XD2

Lab Sample ID: 50445-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoforn	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	96 %	d4-1,2-Dichloroethane	96 %	d8-Toluene	100 %
		Bromofluorobenzene	94 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature *Melanie A. Tall*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-210

Lab Sample ID: 50462-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS VOLATILE ORGANICS					
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	95 %	d4-1,2-Dichloroethane	94 %	d8-Toluene	98 %
		Bromofluorobenzene	95 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature *Melina A. Hult*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-244

Lab Sample ID: 50462-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	97 %	d4-1,2-Dichloroethane	95 %	d8-Toluene	100 %
		Bromofluorobenzene	94 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature 

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-245

Lab Sample ID: 50480-5
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	93 %	d4-1,2-Dichloroethane	91 %	d8-Toluene	99 %
		Bromofluorobenzene	92 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature *Melina A Hall*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 2960035
Field Sample ID: MW QT 1

Lab Sample ID: 50445-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS VOLATILE ORGANICS					
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	95 %	d4-1,2-Dichloroethane	93 %	d8-Toluene	99 %
		Bromofluorobenzene	96 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature 

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-QT-2

Lab Sample ID: 50462-9
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/19/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	95 %	d4-1,2-Dichloroethane	94 %	d8-Toluene	100 %
		Bromofluorobenzene	95 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature 

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-QT3

Lab Sample ID: 50480-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			

Surrogate Standard Recovery

Dibromofluoromethane	93 %	d4-1,2-Dichloroethane	88 %	d8-Toluene	96 %	Bromofluorobenzene	94 %
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U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature 

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-QT4

Lab Sample ID: 50490-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS					
COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	95 %	d4-1,2-Dichloroethane	89 %	d8-Toluene	97 %
		Bromofluorobenzene	94 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:

Authorized signature 

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 26, 2003

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-QS1

Lab Sample ID: 50480-7
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1.0
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/L	Result µg/L	COMPOUND	Quantitation Limit µg/L	Result µg/L
Benzene	2	U	1,3-Dichloropropane	2	U
Bromobenzene	2	U	cis-1,3-Dichloropropene	2	U
Bromochloromethane	2	U	trans-1,3-Dichloropropene	2	U
Bromodichloromethane	2	U	2,2-Dichloropropane	2	U
Bromoform	2	U	1,1-Dichloropropene	2	U
Bromomethane	2	U	Ethylbenzene	2	U
n-butylbenzene	2	U	Hexachlorobutadiene	2	U
sec-butylbenzene	2	U	Isopropylbenzene	2	U
tert-butylbenzene	2	U	p-isopropyltoluene	2	U
Carbon Tetrachloride	2	U	Methylene Chloride	5	U
Chlorobenzene	2	U	Methyl-tert-butyl ether (MTBE)	2	U
Chloroethane	2	U	Naphthalene	2	U
Chloroform	2	U	n-Propylbenzene	2	U
Chloromethane	2	U	Styrene	2	U
2-Chlorotoluene	2	U	1,1,1,2-Tetrachloroethane	2	U
4-Chlorotoluene	2	U	1,1,2,2-Tetrachloroethane	2	U
Dibromochloromethane	2	U	Tetrachloroethene	2	U
1,2-Dibromo-3-chloropropane	2	U	Toluene	2	U
1,2-Dibromoethane	2	U	1,2,3-Trichlorobenzene	2	U
Dibromomethane	2	U	1,2,4-Trichlorobenzene	2	U
1,2-Dichlorobenzene	2	U	1,1,1-Trichloroethane	2	U
1,3-Dichlorobenzene	2	U	1,1,2-Trichloroethane	2	U
1,4-Dichlorobenzene	2	U	Trichloroethene	2	U
Dichlorodifluoromethane	2	U	Trichlorofluoromethane	2	U
1,1-Dichloroethane	2	U	1,2,3-Trichloropropane	2	U
1,2-Dichloroethane	2	U	1,2,4-Trimethylbenzene	2	U
1,1-Dichloroethene	2	U	1,3,5-Trimethylbenzene	2	U
cis-1,2-Dichloroethene	2	U	Vinyl Chloride	2	U
trans-1,2-Dichloroethene	2	U	o-Xylene	2	U
1,2-Dichloropropane	2	U	m,p-Xylene	2	U
Acetone	10	U	Diethyl ether	2	U
Carbon Disulfide	2	U	2-Hexanone	10	U
Tetrahydrofuran	5	U	Methyl isobutyl ketone	10	U
Methyl ethyl ketone	10	U	Di-isopropyl ether (DIPE)	2	U
t-Butyl alcohol (TBA)	20	U	Ethyl t-butyl ether (ETBE)	2	U
t-Amyl methyl ether (TAME)	2	U			
Surrogate Standard Recovery					
Dibromofluoromethane	96 %	d4-1,2-Dichloroethane	91 %	d8-Toluene	97 %
		Bromofluorobenzene	92 %		
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS:



WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-046

Lab Name: STL BURLINGTON

Contract:

SDG No.: 96021

Lab Code: STLVT

Case No.:

Lab Sample ID: 542247

Matrix: WATER

Client: ANAENV

Date Received: 09/20/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO ₃)	09/25/03	BLKAL0925A	mg/L	1	1.0	119	
325.2	Chloride	10/02/03	BLKCL1002A	mg/L	1	1.0	3.1	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.014	
354.1	Nitrite Nitrogen	09/20/03	BLKNI0920A	mg/L	1	0.0050	0.0050	U
375.4	Sulfate	09/26/03	BLKSU0926A	mg/L	10	50.0	30.6	
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	3.8	
NITRATE	Nitrate Nitrogen	09/26/03		mg/L	1	0.010	0.014	

0003

WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-049

Lab Name: STL BURLINGTON

Contract:

SDG No.: 96021

Lab Code: STLVT

Case No.:

Lab Sample ID: 542248

Matrix: WATER

Client: ANAENV

Date Received: 09/20/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/25/03	BLKAL0925A	mg/L	1	1.0	122	
325.2	Chloride	10/02/03	BLKCL1002A	mg/L	1	1.0	6.6	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.032	
354.1	Nitrite Nitrogen	09/20/03	BLKNI0920A	mg/L	1	0.0050	0.0050	U
375.4	Sulfate	09/26/03	BLKSU0926A	mg/L	10	50.0	5.0	U
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	10.2	
NITRATE	Nitrate Nitrogen	09/26/03		mg/L	1	0.010	0.032	

0004

WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-058

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541877

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/25/03	BLKAL0925A	mg/L	1	1.0	26.2	
325.2	Chloride	09/19/03	BLKCL0919A	mg/L	1	1.0	4.3	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.13	
354.1	Nitrite Nitrogen	09/18/03	BLKNI0918A	mg/L	1	0.0050	0.0050	U
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	19.0	
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	1.5	
NITRATE	Nitrate Nitrogen	10/01/03		mg/L	1	0.010	0.13	

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WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-098

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541875

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/25/03	BLKAL0925A	mg/L	1	1.0	25.6	
325.2	Chloride	09/19/03	BLKCL0919A	mg/L	1	1.0	12.2	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.011	
354.1	Nitrite Nitrogen	09/18/03	BLKNI0918A	mg/L	1	0.0050	0.0050	U
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	7.7	
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	4.0	
NITRATE	Nitrate Nitrogen	10/01/03		mg/L	1	0.010	0.011	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-207

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541879

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO ₃)	09/25/03	BLKAL0925A	mg/L	1	1.0	184	
325.2	Chloride	09/19/03	BLKCL0919A	mg/L	1	1.0	12.2	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.024	
354.1	Nitrite Nitrogen	09/18/03	BLKNI0918A	mg/L	1	0.0050	0.0050	U
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	6.2	
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	2.8	
NITRATE	Nitrate Nitrogen	10/01/03		mg/L	1	0.010	0.024	

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WET CHEMISTRY

Sample Report Summary

Client Sampl No.

MW-XD1

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541881

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/25/03	BLKAL0925A	mg/L	1	1.0	357	
325.2	Chloride	09/19/03	BLKCL0919A	mg/L	1	1.0	12.2	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.030	
354.1	Nitrite Nitrogen	09/18/03	BLKNI0918A	mg/L	1	0.0050	0.0050	U
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	6.3	
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	2.0	
NITRATE	Nitrate Nitrogen	10/01/03		mg/L	1	0.010	0.030	

0013

WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-208R

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95991

Lab Code: STLVT

Case No.:

Lab Sample ID: 542024

Matrix: WATER

Client: ANAENV

Date Received: 09/19/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/29/03	BLKAL0929A	mg/L	1	1.0	23.5	
325.2	Chloride	10/02/03	BLKCL1002A	mg/L	1	1.0	10.1	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.033	
354.1	Nitrite Nitrogen	09/19/03	BLKNI0919A	mg/L	1	0.0050	0.0062	
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	10	50.0	50.0	U
415.1	Organic Carbon, Total	10/03/03	BLKTO1003A	mg/L	5	5.0	20.5	
NITRATE	Nitrate Nitrogen	09/26/03		mg/L	1	0.010	0.027	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-209R

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95909

Lab Code: STLVT

Case No.:

Lab Sample ID: 541468

Matrix: WATER

Client: ANAENV

Date Received: 09/16/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
353.2	Nitrate/Nitrite Nitrogen	09/17/03	BLKNN0917A	mg/L	1	0.010	0.010	U
354.1	Nitrite Nitrogen	09/16/03	BLKNI0916A	mg/L	1	0.0050	0.0050	U
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	4.9	
NITRATE	Nitrate Nitrogen	09/30/03		mg/L	1	0.010	0.010	U

0003

WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-209R

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541878

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/25/03	BLKAL0925A	mg/L	1	1.0	71.2	
325.2	Chloride	09/19/03	BLKCL0919B	mg/L	10	10.0	123	
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	5.0	U

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WET CHEMISTRY

Duplicate Sample R port Summary

Client Sample No.

MW-NASB-209RREP

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541878DP

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Sample Result		Duplicate Sample Result		RPD*
					Conc.	Qual.	Conc.	Qual.	
310.1	Alkalinity (as CaCO ₃)	09/25/03	BLKAL0925A	mg/L	71.2		70.8		1
325.2	Chloride	09/19/03	BLKCL0919B	mg/L	123		124		1
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	5.0	U	5.0	U	0

* Control Limit for RPD is +/- 20%, unless otherwise specified.

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WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-XD2

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541880

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO ₃)	09/25/03	BLKAL0925A	mg/L	1	1.0	65.2	
325.2	Chloride	09/19/03	BLKCL0919B	mg/L	10	10.0	120	
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	5.0	U

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WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-XD2

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95909

Lab Code: STLVT

Case No.:

Lab Sample ID: 541469

Matrix: WATER

Client: ANAENV

Date Received: 09/16/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
353.2	Nitrate/Nitrite Nitrogen	09/17/03	BLKNN0917A	mg/L	1	0.010	0.011	
354.1	Nitrite Nitrogen	09/16/03	BLKNI0916A	mg/L	1	0.0050	0.0050	U
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	4.3	
NITRATE	Nitrate Nitrogen	09/30/03		mg/L	1	0.010	0.011	

0004

WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-210

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541874

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Meth d	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/25/03	BLKAL0925A	mg/L	1	1.0	46.9	
325.2	Chloride	09/19/03	BLKCL0919A	mg/L	1	1.0	6.9	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.12	
354.1	Nitrite Nitrogen	09/18/03	BLKNI0918A	mg/L	1	0.0050	0.0050	U
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	5.0	U
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	11.5	
NITRATE	Nitrate Nitrogen	10/01/03		mg/L	1	0.010	0.12	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

MW-NASB-244

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95964

Lab Code: STLVT

Case No.:

Lab Sample ID: 541876

Matrix: WATER

Client: ANAENV

Date Received: 09/18/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/25/03	BLKAL0925A	mg/L	1	1.0	9.4	
325.2	Chloride	09/19/03	BLKCL0919A	mg/L	1	1.0	11.7	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.053	
354.1	Nitrite Nitrogen	09/18/03	BLKNI0918A	mg/L	1	0.0050	0.0050	U
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	5.1	
415.1	Organic Carbon, Total	10/02/03	BLKTO1002A	mg/L	1	1.0	9.7	
NITRATE	Nitrate Nitrogen	10/01/03		mg/L	1	0.010	0.053	

WET CHEMISTRY

Sample Report Summary

Client Sampl No.

MW-NASB-245

Lab Name: STL BURLINGTON

Contract:

SDG No.: 95991

Lab Code: STLVT

Case No.:

Lab Sample ID: 542025

Matrix: WATER

Client: ANAENV

Date Received: 09/19/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
310.1	Alkalinity (as CaCO3)	09/29/03	BLKAL0929A	mg/L	1	1.0	180	
325.2	Chloride	10/02/03	BLKCL1002B	mg/L	5	5.0	53.9	
353.2	Nitrate/Nitrite Nitrogen	09/26/03	BLKNN0926A	mg/L	1	0.010	0.010	U
354.1	Nitrite Nitrogen	09/19/03	BLKNI0919A	mg/L	1	0.0050	0.0056	
375.4	Sulfate	09/25/03	BLKSU0925A	mg/L	1	5.0	5.0	U
415.1	Organic Carbon, Total	10/03/03	BLKTO1003A	mg/L	5	5.0	24.5	
NITRATE	Nitrate Nitrogen	09/26/03		mg/L	1	0.010	0.010	U

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 29, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-046
SDG Number: 50490

Lab Sample ID: 50490-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U

Surrogate Standard Recovery

Acetylene 84 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature



Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-049
SDG Number: 50490

Lab Sample ID: 50490-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	1580 E
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U

Surrogate Standard Recovery

Acetylene 84 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

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Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 6, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-049
SDG Number: 50490

Lab Sample ID: 50490-1 DL
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 10
Collection Date: 09/19/03
Lab Receipt Date: 09/19/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	500	1090
Ethene	000-12-0	150	U
Ethane	74-84-0	150	U

Surrogate Standard Recovery

Acetylene 106 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

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Melina A. Hall

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 29, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-051
SDG Number: 50480

Lab Sample ID: 50480-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U

Surrogate Standard Recovery

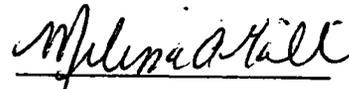
Acetylene 104 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

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Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-058
SDG Number: 50462

Lab Sample ID: 50462-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
	Acetylene	104	%
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

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Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 29, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-062
SDG Number: 50480

Lab Sample ID: 50480-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U

Surrogate Standard Recovery

Acetylene 108 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

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Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-098
SDG Number: 50462

Lab Sample ID: 50462-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	127
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
	Acetylene	107	%
<p>U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank</p>			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature *M. J. ...*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
 Project Number: 29600.35
 Field Sample ID: MW-NASB-206
 SDG Number: 50480

Lab Sample ID: 50480-6
 Matrix: Aqueous
 Percent Solid: N/A
 Dilution Factor: 1
 Collection Date: 09/18/03
 Lab Receipt Date: 09/18/03
 Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
	Acetylene	97	%
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

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Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-207
SDG Number: 50462

Lab Sample ID: 50462-6
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/17/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U

Surrogate Standard Recovery

Acetylene 91 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

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Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-XD1
SDG Number: 50462

Lab Sample ID: 50462-8
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/17/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
		Acetylene	86 %
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

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Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-208R
SDG Number: 50480

Lab Sample ID: 50480-4
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	4920 E
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
		Acetylene	91 %
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature *Melissa A. Kelli*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-208R
SDG Number: 50480

Lab Sample ID: 50480-4 DL
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 50
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	2500	433
Ethene	000-12-0	750	U
Ethane	74-84-0	750	U
Surrogate Standard Recovery			
		Acetylene	115 %
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature *Melina Astall*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 2960035
Field Sample ID: MW-NASB-209R
SDG Number: 50445

Lab Sample ID: 50445-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Analysis Date: 09/18/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
Acetylene		107	%
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature Melina A. Hall

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 2960035
Field Sample ID: MW-XD2
SDG Number: 50445

Lab Sample ID: 50445-2
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/15/03
Lab Receipt Date: 09/16/03
Analysis Date: 09/18/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
	Acetylene	99	%
<p>U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank</p>			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature

Melissa A. Hall

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

September 22, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-210
SDG Number: 50462

Lab Sample ID: 50462-1
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
		Acetylene	116 %
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature Melina A. Kull

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-244
SDG Number: 50462

Lab Sample ID: 50462-3
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

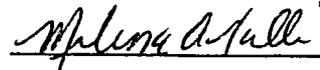
ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	321 E
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
	Acetylene	102	%
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature



Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

September 22, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB Fuel Farm
Project Number: 29600.35
Field Sample ID: MW-NASB-244
SDG Number: 50462

Lab Sample ID: 50462-3 DL
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 2
Collection Date: 09/16/03
Lab Receipt Date: 09/17/03
Analysis Date: 09/20/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	100	368
Ethene	000-12-0	30	U
Ethane	74-84-0	30	U
Surrogate Standard Recovery			
		Acetylene	100 %
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature *Melina A. Hall*

Mr. Al Easterday
 EA Engineering, Science, and Technology
 Southborough Tech. Park 333 Turnpike Road
 Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-245
SDG Number: 50480

Lab Sample ID: 50480-5
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	5000 E
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U
Surrogate Standard Recovery			
	Acetylene	67	%
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature *Melina A. Hall*

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 3, 2003

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-NASB-245
SDG Number: 50480

Lab Sample ID: 50480-5 DL
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 50
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	2500	4020
Ethene	000-12-0	750	U
Ethane	74-84-0	750	U
Surrogate Standard Recovery			
	Acetylene	109	%
U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank			

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature

Melina D. Hull

Mr. Al Easterday
EA Engineering, Science, and Technology
Southborough Tech. Park 333 Turnpike Road
Southborough MA 01772

October 3, 2003
SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NASB FUEL FARM
Project Number: 29600.35
Field Sample ID: MW-QS1
SDG Number: 50480

Lab Sample ID: 50480-7
Matrix: Aqueous
Percent Solid: N/A
Dilution Factor: 1
Collection Date: 09/18/03
Lab Receipt Date: 09/18/03
Analysis Date: 09/23/03

ANALYTICAL RESULTS METHANE, ETHENE, ETHANE

Compound	CAS Number	Detection Limit µg/L	Result µg/L
Methane	74-82-8	50	U
Ethene	000-12-0	15	U
Ethane	74-84-0	15	U

Surrogate Standard Recovery

Acetylene 97 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

COMMENTS:

Authorized signature

Melina Attali

Appendix D

Field Record of Well Gauging, Purging, and Sampling Forms



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035 Well ID: MW-NASB-046

Field Personnel: CDS BDA Weather: Overcast 51°

Purge Date / Time: 9-19-03 0835 Purge Method: Low Flow

Well Lock Status: Good Well Condition: Good

Stick Up / Down: up Well Diameter: 2"

Ambient Air VOC's (ppm) ND Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND Well Depth (ft):

Depth to Water (ft): 6.28 Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temper- ature (C)	Conduc- tivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	0840	6.17	200	14.46	311	7.65	116	6.09	634
1	0845	6.76	200	13.31	309	4.30	118	6.04	109
2	0850	6.68	200	14.04	315	1.45	128	5.99	175
3	0855	6.71	200	16.51	333	1.20	120	6.02	76
4	0900	6.72	200	17.10	338	1.33	139	6.02	26
5	0905	6.72	200	17.38	339	1.18	144	6.02	16
6	0910	6.74	200	17.70	339	1.25	145	6.03	13
7	0915	6.74	200	17.93	340	1.28	145	6.03	12
8	0920	6.74	200	18.03	340	1.29	145	6.03	10
9	0925	6.74	200	18.16	341	1.29	146	6.03	9
10	0930	6.74	200	18.32	342	1.30	146	6.03	8
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-19-03

Sampling Time (Start / End) 0930

Sample Parameters: VOE+BE/AR/D/RO/TOC/ALK/Cl/Seq

Field Bottle ID's: MW-NASB-046 103

Sample Bottle ID's:

Sample Personnel: CDS/BDA

Comments:

Fe: 0.0ug/L

Mn: 0.0ug/L



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035

Well ID: MW-NASB-049

Field Personnel: CPS BDA

Weather: Overcast 50°

Purge Date / Time: 9-19-03 0750

Purge Method: Low Flow

Well Lock Status: Good

Well Condition: Good

Stick Up / Down: up

Well Diameter: 2"

Ambient Air VOC's (ppm) ND

Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND

Well Depth (ft): —

Depth to Water (ft): 8.56

Well Volume / 3 Volumes: —

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temperature (C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	0755	7.99	200	13.81	279	5.02	31	6.28	50
1	0800	8.39	200	14.01	272	1.98	22	6.12	35
2	0805	8.57	200	15.74	258	1.46	18	6.01	27
3	0810	8.81	200	17.82	209	1.50	24	5.80	17
4	0815	9.33	200	17.81	214	1.46	23	5.80	12
5	0820	9.80	200	17.52	225	1.29	19	5.87	10
6	0825	10.15	200	17.83	244	1.20	16	5.95	10
7	0830	10.30	- well low	low	@ Pump Intake				
8	0835	CPS	- Let	Rockoff	+ Sample				
9	0840	CPS							
10									
11	9-19-03								
12	1100								
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-19-03

Comments:

Sampling Time (Start / End) 1100

Sample Parameters: VOC + 1 BE / 6 RD / 1 NO / TOC / ALK / CL

Field Bottle ID's:

NO₃ / SO₄

Sample Bottle ID's:

Fe: 2.7 mg/l

Sample Personnel: CPS BDA

Mn: 0.0



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035

Well ID: MW-NASB-051

Field Personnel: CDS / BDA

Weather: Sunny 60°

Purge Date / Time: 9-18-03 0850

Purge Method: Low Flow

Well Lock Status: Good

Well Condition: Good

Stick Up / Down: up

Well Diameter: 2"

Ambient Air VOC's (ppm) ND

Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND

Well Depth (ft):

Depth to Water (ft): 11.03

Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temperature (C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	0850	11.00	200	11.65	76	3.24	128	5.96	65
1	0855	11.13	200	12.34	76	1.62	119	5.88	90
2	0900	11.14	200	14.34	80	1.21	119	5.92	39
3	0905	11.15	200	14.76	81	1.75	125	5.94	29
4	0910	11.16	200	14.96	81	1.92	128	5.94	24
5	0915	11.17	200	14.93	81	1.99	131	5.92	23
6	0920	11.18	200	15.01	81	1.95	132	5.91	21
7	0925	11.18	200	14.93	80	1.88	134	5.90	19
8	0930	11.18	200	15.15	80	1.89	137	5.90	18
9	0935	11.18	200	15.14	81	1.85	138	5.90	18
10	0940	11.18	200	15.18	81	1.80	139	5.90	18
11	0945	CDS							
12	0950	CDS							
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-18-03

Comments:

Sampling Time (Start / End) 0940 0950

Sample Parameters: VOC+TBE/ARO/DRO/TOC/Alk

Field Bottle ID's: MW-NASB-051

C1/NO₂/NO₃

Sample Bottle ID's:

Fe: 0.0 mg/l

Sample Personnel:

Mn: 0.0



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035 Well ID: MW-N05B-058
 Field Personnel: CDS BDA Weather: Rain 70°
 Purge Date / Time: 9-16-03 1310 Purge Method: Low Flow
 Well Lock Status: Good Well Condition: Good
 Stick Up / Down: up Well Diameter: 2"
 Ambient Air VOC's (ppm) ND Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND Well Depth (ft):
 Depth to Water (ft): 6.88 Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temperature (C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	1310	7.05	350	13.08	69	2.30	136	4.60	133
1	1315	7.12	350	14.25	69	0.51	72	5.48	43
2	1320	7.18	350	14.95	69	0.72	53	5.54	26
3	1325	7.18	350	16.56	87	0.75	27	5.67	58
4	1330	7.18	350	16.72	88	0.79	28	5.66	34
5	1335	7.18	350	16.80	90	1.07	34	5.67	11
6	1340	7.18	350	16.91	90	1.34	42	5.66	6
7	1345	7.18	350	16.90	90	1.48	50	5.66	3
8	1350	7.18	350	17.03	90	1.64	59	5.66	3
9	1355	7.18	350	17.09	90	1.79	70	5.66	2
10	1400	7.18	350	17.11	90	1.84	74	5.66	2
11	1405	7.18	350	17.09	90	1.90	77	5.66	2
12	1410								
13									
14	9-17-03								
15	1005		350						
16	1100		350						
17									
18									
19									
20									
21									
22									
23									
24									
25									

Duff
Col

Sampling Date: 9-16-03 Comments:
 Sampling Time (Start / End) 1405
 Sample Parameters: VOC/TOC/6RO/DRO/MNH
 Field Bottle ID's: MW-N05B-058
 Sample Bottle ID's: CDS
 Sample Personnel: CDS BDA Fe: 0.04 mg/d 0.4
 Mn: 0



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035

Well ID: MW-NASB-051 02 CD3

Field Personnel: CNS / BDA

Weather: Partly Sunny 60°

Purge Date / Time: 9-18-03 0730

Purge Method: Low Flow

Well Lock Status: Good

Well Condition: Good

Stick Up / Down: up

Well Diameter: 2"

Ambient Air VOC's (ppm) ND

Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND

Well Depth (ft):

Depth to Water (ft): 7.21

Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temper- ature (C)	Conduc- tivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	0735	7.35	250	13.09	113	7.14	78	7.01	61
1	0740	7.41	250	12.67	98	1.53	95	6.29	24
2	0745	7.44	250	14.05	77	0.91	113	5.90	22
3	0750	7.45	250	15.36	70	0.70	128	5.72	17
4	0755	7.45	250	15.58	69	0.63	133	5.70	14
5	0800	7.45	250	15.73	68	0.57	141	5.67	6
6	0805	7.45	250	15.82	68	0.54	147	5.67	4
7	0810	7.45	250	15.92	68	0.57	151	5.66	4
8									
9									
10									
11									
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14									
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22									
23									
24									
25									

Sampling Date: 9-18-03

Comments:

Sampling Time (Start / End) 0810 0820

Sample Parameters: VOC/MTBE/TOC/GRG/DRG/ALK/CL/NO3/

Field Bottle ID's: MW-NASB-051 504

Sample Bottle ID's:

Fe: 0.0 mg/L

Sample Personnel:

Mn: 0.0



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035 Well ID: MW-NASTB-098
 Field Personnel: CDS BDA Weather: Heavy Rain 65°
 Purge Date / Time: 9-16-03 0950 Purge Method: Low Flow
 Well Lock Status: Good Well Condition: Good
 Stick Up / Down: up Well Diameter: 2"
 Ambient Air VOC's (ppm) ND Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND Well Depth (ft):
 Depth to Water (ft): 8.78 Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temperature (C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	0950	8.81	400	15.42	193	4.15	7.5	6.40	123
1	0955	8.85	400	15.40	176	0.55	-3.0	6.22	71
2	1000	8.88	400	15.86	157	0.34	-16.9	6.17	42
3	1005	8.88	400	15.86	155	0.29	-20.4	6.13	33
4	1010	8.88	400	15.88	144	0.26	-20.1	6.09	26
5	1015	8.88	400	15.90	138	0.24	-17.2	6.05	20
6	1020	8.87	400	15.85	134	0.22	-12.9	6.00	17
7	1025	8.86	400	15.88	131	0.20	-9.5	5.98	15
8	1030	8.85	400	15.85	128	0.20	-6.5	5.95	12
9	1035	8.85	400	15.84	129	0.18	-4.4	5.95	12
10	1040	8.84	400	15.84	125	0.18	-0.1	5.92	10
11	1045	8.84	400	15.80	124	0.19	1.8	5.90	9
12	1050	8.83	400	15.85	123	0.18	2.7	5.89	9
13									
14									
15	9-17-03		Lab Shipped in coolers Bottles 16 sample						
16	0820		400	} collect 400ml/well for 1:05 min } Pump @ 400ml/min for 1:05 min					
17	0925		400						
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-16-03 1050

Comments:

Sampling Time (Start / End)

Sample Parameters: VOC TOC GRO DRO meth

Field Bottle ID's: MW-NASTB-098

Sample Bottle ID's:

Fe: 3mg/L

Sample Personnel: CDS BDA

Mn: 0



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035 Well ID: MW-NASB-206

Field Personnel: CDS / BDA Weather: Sunny 70°

Purge Date / Time: 9-18-03 1150 Purge Method: low flow

Well Lock Status: Good Well Condition: Good

Stick Up / Down: up Well Diameter: 24

Ambient Air VOC's (ppm) ND Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND Well Depth (ft):

Depth to Water (ft): 6.62 Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temper- ature (C)	Conduc- tivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	1155	6.15	200	17.64	201	4.69	130	6.26	48
1	1200	6.96	200	18.22	194	1.67	136	6.08	37
2	1205	7.05	200	19.93	187	1.07	148	6.01	22
3	1210	7.06	200	20.58	185	1.16	152	6.03	16
4	1215	7.16	200	21.36	184	1.36	150	6.06	11
5	1220	7.23	200	21.61	187	1.39	157	6.05	9
6	1225	7.29	200	21.84	183	1.39	158	6.04	8
7	1230	7.33	200	22.35	187	1.35	157	6.05	8
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-18-03

Comments:

Sampling Time (Start / End) 1230 1245

Sample Parameters: VOCs/MTBE/GRO/DRO/TOC/ALU/NO3

Field Bottle ID's: MW-NASB-206 504/CL

Sample Bottle ID's: Be.M

Fe: 0.0

Sample Personnel: CDS / BDA

Mn: 0.0



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035

Well ID: MW-NASB-207

Field Personnel: CDS/BDA

Weather: Sunny 80°

Purge Date / Time: 9-17-03 1335

Purge Method:

Well Lock Status: Good

Well Condition: Good

Stick Up / Down: up

Well Diameter: 2"

Ambient Air VOC's (ppm) ND

Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND

Well Depth (ft):

Depth to Water (ft): 7.48

Well Volume / 3 Volumes: ✓

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temper- ature (C)	Conduc- tivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	1335	7.33	200	16.02	375	4.43	92	6.25	94
1	1340	8.07	200	16.15	373	1.04	134	6.17	55
2	1345	8.10	200	17.41	334	0.75	163	6.03	29
3	1350	8.18	200	18.42	331	0.95	174	6.04	16
4	1355	8.23	200	19.11	339	1.08	180	6.08	12
5	1400	8.26	200	19.45	346	1.06	185	6.10	8
6	1405	8.26	200	19.80	356	0.93	194	6.09	6
7	1410	8.26	200	19.80	357	0.91	197	6.09	5
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-17-03

Comments:

Sampling Time (Start / End) 1410 / 1430

Dup: MW-XD 1

Sample Parameters: VOC+MBE/TOC/GRO/DRO/AUK/SC₂/

Field Bottle ID's: MW-NASB-207

203/CL

Sample Bottle ID's:

Fe: 0.0

Sample Personnel:

Mn: 0.0



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035 Well ID: MW-NASB-208R AR

Field Personnel: CHS BDA Weather: Sunny 80° CHS

Purge Date / Time: 9-17-03 1300 Purge Method: 12 MW 2004

Well Lock Status: NA Well Condition: Good

Stick Up / Down: down Well Diameter: 2"

Ambient Air VOC's (ppm) ND Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND Well Depth (ft): —

Depth to Water (ft): 6.62 Well Volume / 3 Volumes: —

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temper- ature (C)	Conduc- tivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	1300	6.62	200	19.28	45	2.18	8.4	5.49	151
1	1305	7.04	200	20.32	55	1.46	13.2	5.37	19
2	1310	7.10	200	21.43	66	0.83	9.4	5.38	78
3	1315	7.32	200	22.68	45	0.99	-14.7	5.46	82
4	1320	7.32							
5									
6									
7									
8									
9									
10									
11	9-18-03								
12	1015								
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-18-03

Comments:

Sampling Time (Start / End) 1015 1030

Sample Parameters: TOC / GVO / DRO / VOC + MTBE / ALK

Field Bottle ID's: MW-NASB-208R NO₃/SO₄/CL

Sample Bottle ID's:

Fe: 2.5 mg/l

Sample Personnel: CHS BDA

Mn: 0.0 mg/l



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035
 Field Personnel: CDS/BDA
 Purge Date / Time: 9-15-03 1440

Well ID: MW-209R
 Weather: Overcast 75° Humid
 Purge Method: Low Flow

Well Lock Status: NA
 Stick Up / Down: Down

Well Condition: Good
 Well Diameter: 2"

Ambient Air VOC's (ppm) ND

Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND

Well Depth (ft):

Depth to Water (ft): 6.50 ^{cm} 6.27

Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temperature (C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	1445	6.30	200	17.80	480	1.25	56.5	5.91	40.1
1	1450	6.33	200	18.08	478	0.92	67.0	5.86	30.4
2	1455	6.30	200	18.85	490	0.70	72.9	5.91	13.3
3	1500	6.28	200	19.23	497	0.72	67.4	5.92	11.2
4	1505	6.27	200	20.59	521	0.91	69.3	6.02	12.6
5	1510	6.32	200	20.47	508	0.69	68.7	5.97	9.6
6	1515	6.33	200	20.49	518	0.56	63.4	5.99	8.5
7	1520	6.30	200	20.52	523	0.57	66.2	6.00	8.5
8									
9									
10	9-17-03								
11	1110		200						
12	1150		200						
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-15-03

Comments:

Sampling Time (Start / End) 1520 / 1625

MW-209R

Sample Parameters: VOC, MTBE, GVO/DVO/TOC/mom/Sulfide CDS

Field Bottle ID's: MW-209R

MW-XD2

Sample Bottle ID's:

Fe: 2 mg/L

Sample Personnel: CDS

Mn: 0.4/L

MS/MSD
 DUP



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035 Well ID: MW-NASB-210

Field Personnel: CDS BDA Weather: Rain 62°

Purge Date / Time: 9-16-03 0715 Purge Method: low flow

Well Lock Status: Good Well Condition: Good

Stick Up / Down: up Well Diameter: 2"

Ambient Air VOC's (ppm) ND Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND Well Depth (ft):

Depth to Water (ft): 8.81 Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temperature (C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)	
Start	0720	8.87	400	17.35	99	0.913	146.7	6.12	190.2	
1	0725	8.82	200	19.35	105	0.77	119.9	6.17	121.4	
2	0730	8.84	200	19.69	105	0.70	121.1	6.18	89.3	
3	0735	8.84	200	20.14	105	0.64	123.4	6.17	61.6	
4	0740	8.84	200	20.40	105	0.72	125.4	6.17	47.1	
5	0745	8.84	200	20.53	106	0.70	125.4	6.17	43.3	
6	0750	8.84	300	19.59	103	0.98	124.4	6.15	103.4	
7	0755	8.84	300	20.28	107	0.56	123.2	6.13	83.0	
8	0800	8.84	200	20.37	107	0.60	123.3	6.14	64.3	
9	0805	8.84	200	20.49	107	0.65	124.3	6.16	49.4	
10	0810	8.84	200	20.64	107	0.68	125.2	6.16	39.9	
11	0815	8.84	200	20.67	108	0.69	125.7	6.16	36.1	
12	0820	8.84	200	20.66	108	0.69	125.3	6.15	39.2	
13	0825	8.84	200	20.86	108	0.69	124.9	6.15	33.6	
14	0830	8.84	200	20.81	108	0.69	124.0	6.15	32.3	
15	0835	8.84	200	20.76	109	0.71	125.0	6.15	31.9	
16	0840	8.84	200	20.71	109	0.72	125.1	6.15	31.4	
17	0845	8.84	200	20.80	109	0.72	125.6	6.14	28.8	
18	0850	8.84	200	20.75	108	0.72	125.7	6.14	28.0	
19	0855	8.84	200	20.57	108	0.73	125.3	6.14	28.1	
20	0900	8.84	200	20.78	109	0.73	125.8	6.14	28.0	
21										
22	9-17-03		Lab Shipped Inconnect Bottles				Resample			
23	0810		200	} collect air/soil/cl/NO ₃						
24	0900		200	} Pump @ 200 ml/min for 1.40 min						
25										

Pump
start

Sampling Date: 9-16-03

Sampling Time (Start / End) 0900

Sample Parameters: VOC TOC ARO DRO with

Field Bottle ID's: MW-NASB-210

Sample Bottle ID's:

Sample Personnel: CDS BDA

Comments:

collect air/soil/cl/NO₃ on
9-17-03

Fe: 0 mg/L

Mn: 0 mg/L



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035

Well ID: MW-NASB-244

Field Personnel: CDS / BDA

Weather: RAW 70°

Purge Date / Time: 9-16-03 1215

Purge Method: Low Flow

Well Lock Status: Good

Well Condition: Good

Stick Up / Down: ~~up~~ down

Well Diameter: 2"

Ambient Air VOC's (ppm) ND

Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND

Well Depth (ft):

Depth to Water (ft): 5.64

Well Volume / 3 Volumes:

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temper- ature (C)	Conduc- tivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start	1215	5.64	300	16.60	104	7.20	19.2	5.60	84
1	1220	5.73	300	15.61	97	1.20	6.6	5.41	43
2	1225	5.72	300	16.61	87	0.50	7.7	5.29	13
3	1230	5.72	300	17.48	85	0.46	5.7	5.28	9
4	1235	5.72	300	17.97	88	0.45	0.6	5.30	10
5	1240	5.71	300	18.00	86	0.41	0.3	5.29	8
6	1245	5.71	300	18.18	88	0.41	0.4	5.30	8
7									
8									
9	9-17-03								
10	1015		300						
11	1045		300						
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-16-03

Comments:

Sampling Time (Start / End) 1245

Sample Parameters: VOC/TOC/GRO/DRO/meth

Field Bottle ID's: MW-NASB-244

Sample Bottle ID's:

Fe: 2 mg/L

Sample Personnel: CDS BDA

Mn: 0



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035

Well ID: MW-NASB-245

Field Personnel: CDS/BDA

Weather:

Purge Date / Time: 9-17-03 1450

Purge Method:

Well Lock Status: NA

Well Condition: Good

Stick Up / Down: down

Well Diameter: 24

Ambient Air VOC's (ppm) ND

Well Mouth VOC's (ppm) ND

Depth to Liquid (ft): ND

Well Depth (ft): /

Depth to Water (ft): 6.62

Well Volume / 3 Volumes: /

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temperature (C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)	
Start	1450	5.85	100	17.94	533	4.71	-65	5.55	57	
1	1455	7.34	100	17.32	512	1.19	-63	5.36	38	
2	1500	8.40	100	18.26	501	0.79	-55	5.31	29	
3	1502	water level @ top of Pump								
4		- Pump @ Bottom of well								
5		- let Recharge and then Sample								
6										
7										
8										
9										
10	9-18-03		well Recharge							
11	1045		Sample well							
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Sampling Date: 9-18-03

Comments:

Sampling Time (Start / End) 1045 1100

Sample Parameters: VOC's + BE / GRO / DRO / TOC / ALI / NO₃ / SCL

Field Bottle ID's: MW-NASB-245 Fe Mn Cl

Sample Bottle ID's:

Fe: 0.0 mg/L

Sample Personnel: CDS BDA

Mn: 0.0 mg/L



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2960035 ONPF Well ID: MW-QT1/MW-QT2/MW-QT3/

Field Personnel: CDS BDA Weather: / MW-QT4

Purge Date / Time: NA Purge Method: Trip Blank

Well Lock Status: / Well Condition: /

Stick Up / Down: / Well Diameter: /

Ambient Air VOC's (ppm) / Well Mouth VOC's (ppm) /

Depth to Liquid (ft): / Well Depth (ft): /

Depth to Water (ft): / Well Volume / 3 Volumes: /

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temperature (C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start									
1			Trip	Blank					
2									
3		MW-QT1		}	VOC + METALS				
4		MW-QT2							
5		MW-QT3							
6		MW-QT4							
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: NA

Sampling Time (Start / End) NA

Sample Parameters: VOC

Field Bottle ID's: MW QT

Sample Bottle ID's:

Sample Personnel: LRB

Comments:

Fe: /

Mn: /



FIELD RECORD OF WELL PURGING AND SAMPLING

Project Name / Number: 2460035

Well ID: MW-QS1

Field Personnel: CDS/BDA

Weather: /

Purge Date / Time: 9-18-03 1320

Purge Method: GSB

Well Lock Status: /

Well Condition: /

Stick Up / Down: /

Well Diameter: /

Ambient Air VOC's (ppm) /

Well Mouth VOC's (ppm) /

Depth to Liquid (ft): /

Well Depth (ft): /

Depth to Water (ft): /

Well Volume / 3 Volumes: /

Interval	Time (min)	Depth to Water (ft)	Purge Rate (ml/min)	Temper- ature (C)	Conduc- tivity (umhos/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Turbidity (NTU)
Start									
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Sampling Date: 9-18-03

Comments:

Sampling Time (Start / End) 1320

Sample Parameters: VOC/MBE/GRO/DRO/TOC/OLIV/d

Field Bottle ID's:

NO₃/604

Sample Bottle ID's:

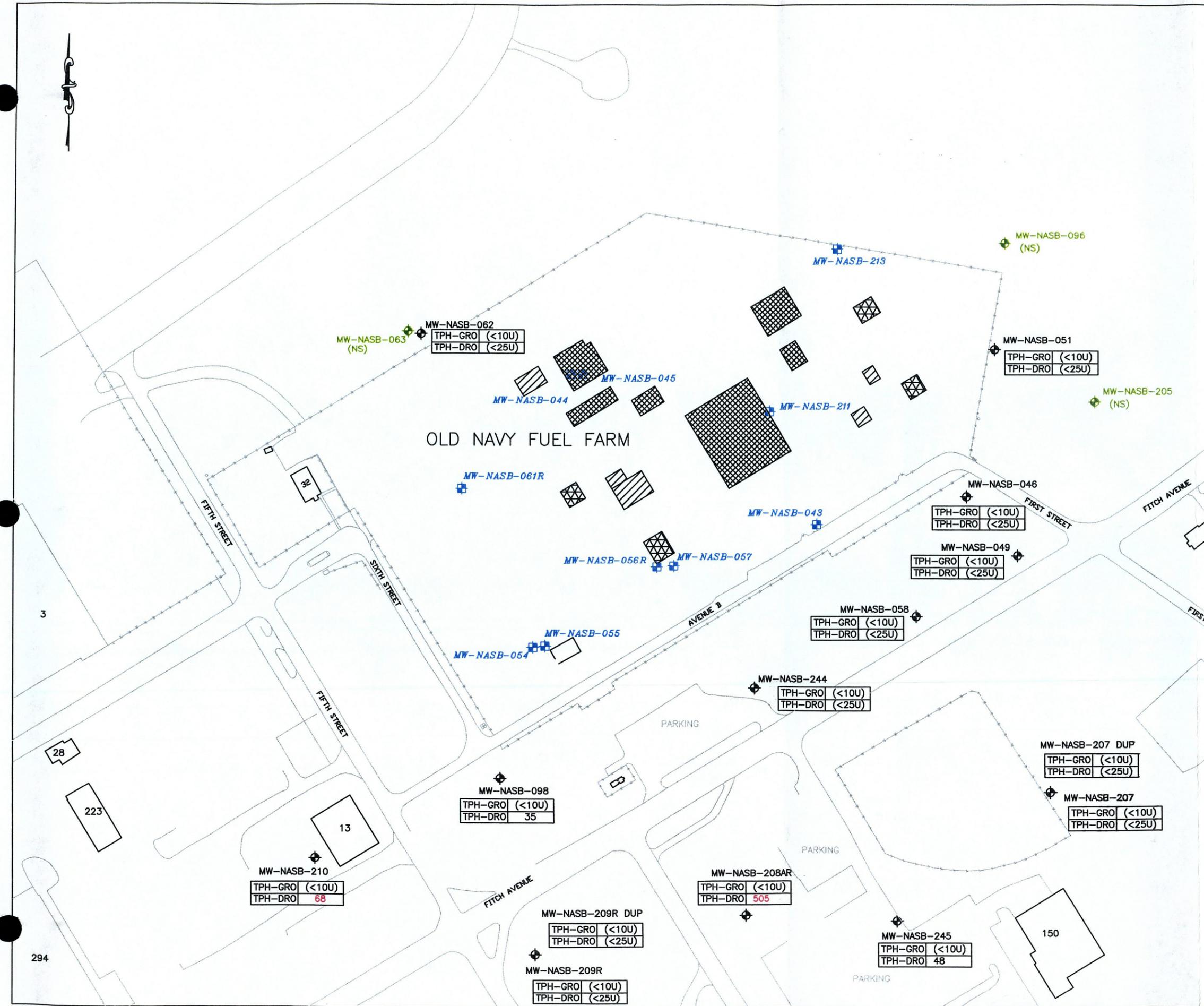
Fe: /

Sample Personnel: BDA

Mn: /

Appendix E

Tag Map



LEGEND

- MW-NASB-058 MONITORING WELL LOCATION
- MW-NASB-211 DECOMMISSIONED MONITORING WELL LOCATION
- MW-NASB-703 MONITORING WELL NOT IN SAMPLING PROGRAM
- MW-NASB-245 DISSOLVED-PHASE TPH-GRO AND TPH-DRO CONCENTRATIONS (ug/L)

TPH-GRO	(<10U)
TPH-DRO	48

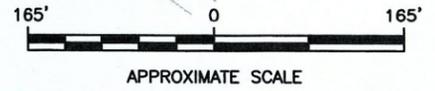
U=NOT DETECTED. SAMPLE QUANTITATION LIMIT SHOWN AS <U
 TPH-GRO=TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE ORGANICS
 TPH-DRO=TOTAL PETROLEUM HYDROCARBONS DIESEL RANGE ORGANICS

RED SHADED VALUES EXCEED THE STATE MEG. CHAIN LINK FENCE

APPROXIMATE LOCATIONS OF EXCAVATION AREAS BY FOSTER WHEELER, JANUARY 2000

- EXTENT OF EXCAVATION (6' DEEP)
- EXTENT OF EXCAVATION (8' DEEP)
- EXTENT OF EXCAVATION (10' DEEP)

NOTE: EXCAVATION AREAS TAKEN FROM THE FINAL REPORT FOR REMEDIATION OF THE OLD NAVY FUEL FARM, DRAFT FINAL REPORT BY FOSTER WHEELER ENVIRONMENTAL CORP., JANUARY 2000.



DWG. FILE No. F:\FEDERAL\000\NAVY\2960035\CAD\F08A\SEPT2003\SEPT03_TAGMAP.DWG

FIGURE E-1
 DISSOLVED-PHASE TPH-GRO AND TPH-DRO DETECTED IN GROUNDWATER SAMPLES COLLECTED DURING SEPTEMBER 2003
 OLD NAVY FUEL FARM, NAS BRUNSWICK, MAINE

DESIGN	SY	DATE	22 DECEMBER 03
DRAWN	SAP	SCALE	AS SHOWN
CHECKED	CS	PROJECT NO.	29600.35
PROJECT MANAGER	AE	SHEET NO.	-