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SITE ASSESSMENT REPORT ADDENDUM FOR SITE 9 RIGHT LENS NAS CECIL FIELD FL
11/15/2002
TETRA TECH NUS INC

Site Assessment Report Addendum
for
Site 9 Right (9RT) Lens

Base Realignment and Closure

Naval Air Station Cecil Field
Jacksonville, Florida

Southern Division
Naval Facilities Engineering Command

Contract Number N62467-94-D-0888

Contract Task Order 0121

November 2002

SITE ASSESSMENT REPORT
ADDENDUM
FOR
SITE 9RT LENS

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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PROFESSIONAL REVIEW CERTIFICATION

The Site Assessment Addenda contained in this report was prepared using sound hydrogeologic principles and judgment. The additional assessment data are based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the assessment described in this report. This Site Assessment Report Addendum was developed for the 9RT Lens site at Naval Air Station Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

Mervin W. Dale

Mervin Dale
Florida Professional Geologist
P.G. Number 0001917

11/15/02

Date

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ACRONYMS

9RT	Site 9 Right
AAL	Accura Analytical Laboratories, Inc.
AST	Aboveground Storage Tank
BTEX	Benzene, Toluene, Ethylbenzene, and Total Xylenes
bls	Below Land Surface
btoc	Below Top-of-Casing
COCs	Contaminants of Concern
ERI	Environmental Recovery, Inc.
ESA	Environmental Science Associates, Inc.
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	Flame Ionization Detector
FL-PRO	Florida Petroleum Range Organics
ft	Feet or Foot
ft/day	Feet per Day
GAG	Gasoline Analytical Group
GCTLs	Groundwater Cleanup Target Levels
IRA	Interim Remedial Action
J. A. Jones	J. A. Jones Environmental Services
K	Hydraulic Conductivity
KAG	Kerosene Analytical Group
µg/kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
msl	Mean Sea Level
NAS	Naval Air Station
Navy	United States Navy
OVA	Organic Vapor Analyzer
PAH	Polynuclear Aromatic Hydrocarbons
ppm	Parts per Million
PVC	Polyvinyl Chloride
SA	Site Assessment
SAR	Site Assessment Report
SARA	Site Assessment Report Addendum

ACRONYMS (Continued)

SCTL	Soil Cleanup Target Level
SOUTHNAVFACENGCOM	Southern Division, Naval Facilities Engineering Command
STL	Severn Trent Laboratories, Inc.
SVOCs	Semi-Volatile Organic Compounds
Sy	Specific Yield
T	Transmissivity
TOC	Top-of-Casing
TPHCWG	Total Petroleum Hydrocarbon Classification Work Group
TRPH	Total Recoverable Petroleum Hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
VOCs	Volatile Organic Compounds

EXECUTIVE SUMMARY

Tetra Tech NUS, Inc. (TtNUS) has completed additional Site Assessment (SA) activities at Site 9 Right (9RT) Lens, former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida. Previous to this investigation, J. A. Jones Environmental Services (J. A. Jones) submitted a SA Report (SAR) on behalf of Aggreko. However, following review by the Florida Department of Environmental Protection (FDEP), the United States Navy (Navy) received informal comments about the SAR and directed TtNUS to conduct additional assessment activities and submit a SAR Addendum (SARA) that would fulfill the requirements of a SAR as indicated by Chapter 62-770 of the Florida Administrative Code (FAC). This SARA is being submitted to the FDEP for approval.

Prior to SAR activities by J. A. Jones, the responsible party (Aggreko), contracted Environmental Recovery, Inc. (ERI) and Environmental Science Associates, Inc. (ESA) to conduct a source removal, which was reported by the responsible party (ESA and ERI, 1998). The report indicated that the excessively contaminated soil was delineated and removed for proper disposal. It also indicated that the results for four confirmatory samples sent to an FDEP-approved laboratory were below detection limits; therefore, the excavation was backfilled with clean soil. Free product was reportedly encountered on site during the soil removal, and the report indicated that product recovery was completed for the site. ERI also installed a temporary well in the source area and sampled the groundwater for fixed-based laboratory analyses. The results indicated that the at least two Groundwater Cleanup Target Levels (GCTLs) were exceeded. Aggreko recommended further assessment action to delineate the contaminated groundwater.

The SAR conducted by J. A. Jones (J. A. Jones, 1999) consisted of installation of three temporary monitoring wells, organic vapor analyzer (OVA) screening of the soil cuttings from each well installation, groundwater sampling of the three temporary monitoring wells, and determination of groundwater flow. J. A. Jones encountered no organic vapor readings from the soil survey, the results for the groundwater samples indicated that no GCTLs were exceeded, and a northerly groundwater flow direction was indicated in the report. Based on those results, J. A. Jones recommended no further action for the site. However, as previously indicated, TtNUS was tasked by the Navy to perform the additional tasks necessary to complete the SAR investigation for 9RT Lens.

TtNUS completed the following tasks:

- Existing literature was reviewed to identify potential petroleum hydrocarbon sources and receptors in the site vicinity located nearby surface water bodies, if any, and determine surface drainage features.
- Literature pertaining to previous environmental investigations at the site was reviewed to estimate the magnitude of potential contamination to environmental media.
- Hydraulic gradient at the site was determined to estimate migration direction of water-borne contaminants, and specific capacity testing was performed on the temporary wells to determine some hydrogeologic characteristics of the shallow aquifer.
- A soil vapor survey was performed by collecting soil samples at 1-foot (ft) vertical intervals from ground surface to the water table at five locations in and around the former source area to confirm the source removal findings.
- One soil sample was collected from each soil boring and analyzed for fixed-based laboratory analysis of the Gasoline Analytical Group (GAG)/Kerosene Analytical Group (KAG) contaminants of concern (COCs) in Chapter 62,770, FAC, and an additional soil sample was collected for analysis by the Total Petroleum Hydrocarbon Classification Work Group (TPHCWG).
- Groundwater samples were collected from three temporary shallow monitoring wells on site and submitted to a fixed-based laboratory for analysis of the GAG/KAG COCs listed in Chapter 62-770, FAC.

Excessively contaminated soil, as defined by Section 62-770.200, FAC, was not identified during field screening procedures. However, a targeted compound, specifically Total Recoverable Petroleum Hydrocarbons (TRPH), was reported at a value greater than its FDEP Soil Cleanup Target Level (SCTL) in a confirmatory soil sample analyzed by the fixed-based laboratory. Subsequent resampling from that same location and analysis by the TPHCWG method indicated that none of the TRPH subgroup SCTLs were exceeded.

The groundwater sample from the temporary shallow monitoring well located in the former source area was reported as only slightly exceeding the FDEP GCTL of 20 micrograms per liter (µg/L) for polynuclear aromatic hydrocarbon (PAH) analysis for both 1- and 2-methylnaphthalene. The analytical data for the upgradient and downgradient wells indicate that none of the GAG/KAG GCTLs were exceeded in those samples; therefore, the groundwater contamination appears to be delineated around the source well. Free product was not encountered in any of the soil borings or temporary monitoring wells on site. TtNUS

recommends replacing the source well and downgradient well with permanent wells and resampling them semi-annually for GAG/KAG compounds for one year.

1.0 INTRODUCTION

TtNUS was authorized by Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) to conduct additional SA activities at the 9RT Lens site at NAS Cecil Field, in Jacksonville, Florida. Available background information for the site is provided in the following sections.

1.1 SITE DESCRIPTION

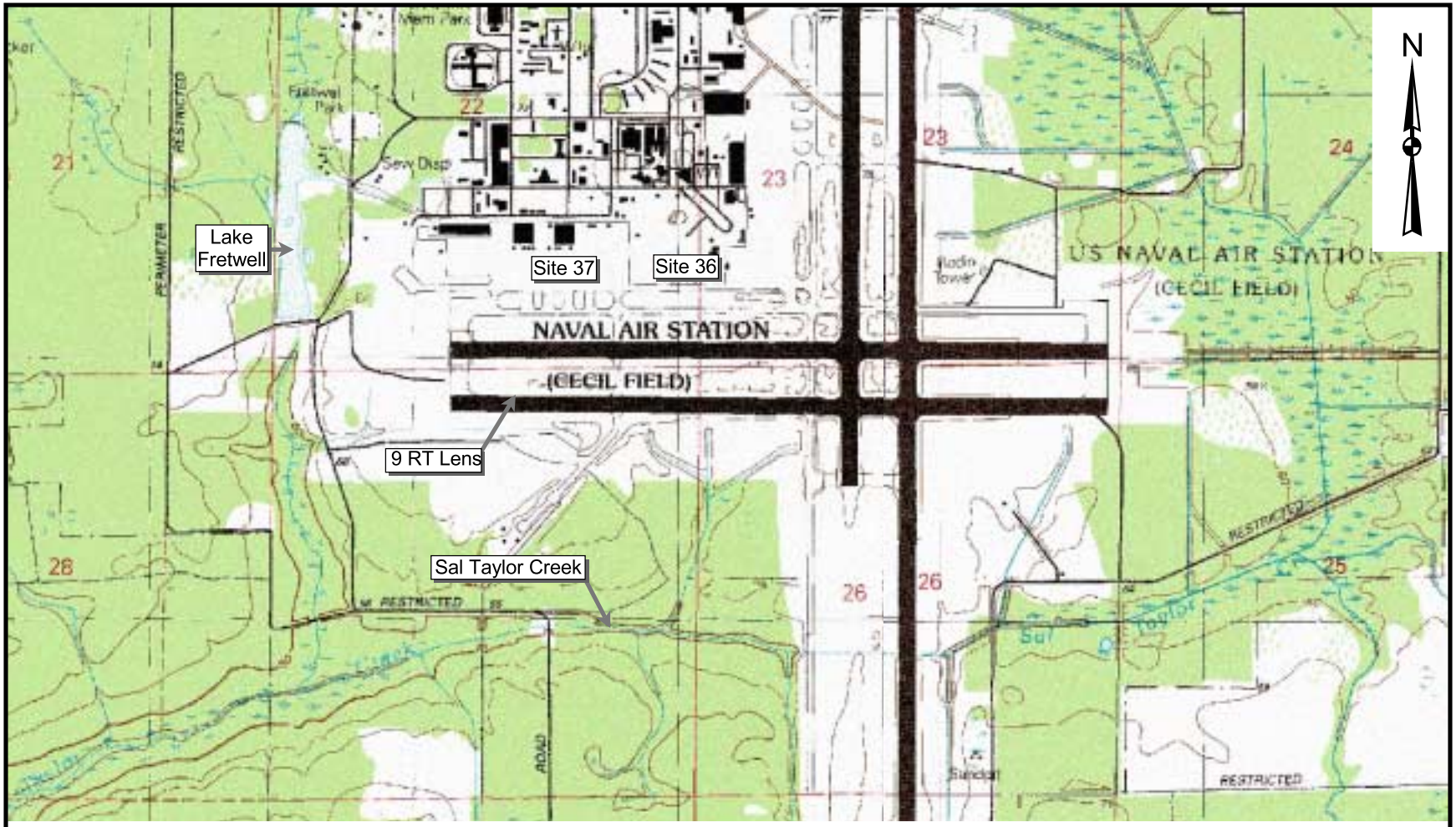
Site 9RT Lens is a landing light unit located adjacent to Runway 9 Right, thus the nomenclature Site 9RT Lens. The site is located near the northwest end of Runway 9 as depicted on Figure 1-1. Site 9RT Lens is bound by the runway to the south and the grassy median to the north. The area is designed with a consistent slope from the centerline of the runway north to the center of the grassy median previously mentioned. Stormwater runoff in the vicinity will pass from the runway, over the site, and onto the stormwater drain system. The stormwater drain runs from east to west down the approximate centerline of the grassy median. It is approximately 100 ft from the site to the stormwater drainage system. The site's structures consist of a portable landing light unit situated on a concrete pad measuring 20 ft in length and 20 ft in width. A subsurface utility vault, measuring approximately 8 ft in length and 8 ft in width and 7 ft in depth, exists adjacent to the landing light. Both the light unit and the utility vault are flush with grade, and a 24-inch steel manhole cover exists near the southeast corner of the utility vault.

1.2 SURROUNDING PROPERTIES

There are no existing aboveground structures within approximately 1700 ft or three-tenths of a mile of the site. The third paragraph on Page 1 of Appendix A provides a description of the manmade surface and subsurface features that make up this site.

1.3 TOPOGRAPHIC SETTING

A portion of the Fiftone and Jacksonville Heights, Florida United States Geological Survey 7.5-minute quadrangles have been reproduced as Figure 1-1 to illustrate the subject site in relation to its topographic surroundings. The site area has a gentle slope with the high on the south side of the site and the low to the north of the site. The nearest surface water body is approximately 3000 ft south of the site. The surface water body is known as Sal Taylor Creek. Since this surface water feature is greater than 0.5 mile from the site, no sediment samples were collected for this additional SA.



2000 0 2000 Feet

Source: USGS Fiftone and Jacksonville Heights Florida 7.5 Minute Topographic Quadrangles, 1993.

DRAWN BY MJJ	DATE 28Oct02	SITE VICINITY AND TOPOGRAPHIC MAP 9RT LENS SITE ASSESSMENT REPORT ADDENDUM NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0486
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 1-1 REV 0

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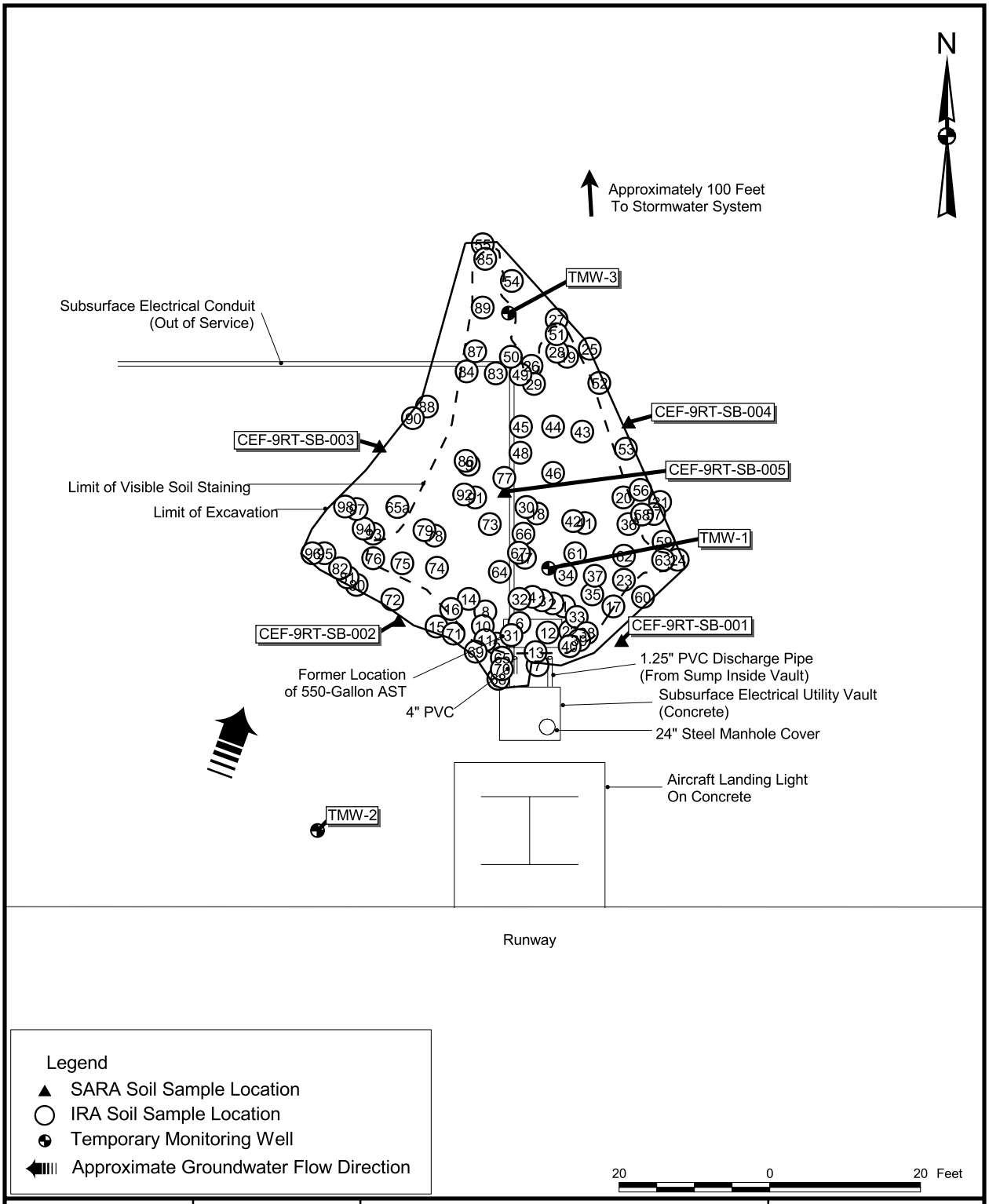
1.4 INVESTIGATIVE HISTORY

According to ESA and ERI (ESA and ERI, 1998), approximately 250 to 300 gallons of diesel fuel were reportedly spilled due to a loose fuel connection from a temporary aboveground storage tank (AST) to a temporary generator on site to power the landing light known as 9RT Lens. The exact date of the spill is not reported; however, soon thereafter in August 1998, Aggreko contracted both ESA and ERI to survey and delineate petroleum-impacted soils, conduct interim remedial actions as applicable, and report the work at the 9RT Lens site. ESA and ERI's 1998 report is included as Appendix A of this document. The report in Appendix A also indicates the temporary AST's capacity was approximately 550 gallons. The AST was on site only two days before the reported spill, and the report indicates that it was gone before the remedial actions of ESA and ERI took place.

The report presents both soil and groundwater results, which are summarized in the following paragraph. A visible line of soil staining at the site was reported, and the outline of that area can be seen on Figure 1-2. Following their investigation, ESA reported that the extent of soil contamination had been delineated by soil headspace analysis. The OVA-flame ionization detector (FID) soil-screening locations are shown on Figure 1-2. It appears that immediately following delineation, the visibly impacted soils were excavated to the water table, which was at approximately 2.5 ft below land surface (bls) at that time. Additionally, the OVA-FID soil screening data was used to further the excavation to the point where readings decreased to 10 parts per million (ppm) or less, while maintaining the bottom of the excavation at the water table. During the excavation, free product was encountered and recovered with about 3,000 gallons of petroleum-contact water. Following the excavation and free product removal, ESA reported that four confirmatory soil samples were collected with two coming from the sidewalls and two from the bottom of the excavation. The analytical results for those confirmatory soil samples indicated that excavation had successfully removed the excessively contaminated soil from the site. Page 4 of Appendix A provides an analytical summary of their confirmatory soil samples. The excavation was backfilled with clean fill and a groundwater sample was collected from the "apparent worse-case location." The analytical report on the groundwater sample was summarized in Table 3 of Appendix A. ESA's data indicate that the FDEP GCTLs for total xylenes, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and TRPH were exceeded in that groundwater sample. The remedial report (ESA and ERI, 1998) recommended additional assessment activities.

In August 1999, J. A. Jones submitted a SAR for Aggreko. The report is provided as Appendix B. The report states that the SAR was submitted in accordance with a request by the FDEP (dated January 1999). Briefly, J. A. Jones reported that the soil contamination was handled through a source removal and that no soil contamination exists at the site. Therefore, J. A. Jones only installed three temporary



DRAWN BY MJJ	DATE 28Oct02	SITE PLAN MAP 9RT LENS SITE ASSESSMENT REPORT ADDENDUM NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0486
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 1-2 / REV 0

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monitoring wells, sampled the groundwater, and determined the direction of groundwater flow. J. A. Jones' data indicated that groundwater flow was northerly, and no petroleum contaminants were detected above the FDEP GCTLs. J. A. Jones recommended no further action for the site.

However, follow-up comments on the J. A. Jones letter report by the FDEP indicated that the following items needed to be addressed:

1. "This (letter report) should be a SAR and follow format."
2. "Do not even know on the base where this is!"
3. "GWFD needs to be verified really N?"
4. Soil – Loc. 46, 94, 64. KAG.
5. Re-sample TMW-1.

Those comments are included with the J. A. Jones document in Appendix B. Based on those comments, TtNUS initiated additional SA activities to complete the SAR.

2.0 INVESTIGATIVE METHODOLOGY

2.1 QUALITY ASSURANCE

The field procedures described in this SAR were performed in general accordance with the FDEP Standard Operating Procedures described in the TtNUS Comprehensive Quality Assurance Plan Number 980038. Soil and groundwater samples collected during TtNUS' investigation for analyses by a fixed-based laboratory were shipped on ice and under chain-of-custody to either Accura Analytical Laboratories, Inc. (AAL) in Norcross, Georgia or Severn Trent Laboratories, Inc. (STL) in Pensacola, Florida. Based on the type of site and the analytical rationale given in previous investigations, TtNUS used the GAG/KAG analysis listed in Chapter 62-770, FAC, for determination of fixed-based sample results.

2.2 SOIL ASSESSMENT

2.2.1 Soil Organic Vapor Measurements

On January 7, 2002, five borings were completed for soil screening in and around the area where the petroleum-impacted soil was reported (ESA and ERI, 1998). Those five boring locations are shown on Figure 1-2. Prior to commencing soil-boring operations, TtNUS ascertained the approximate depth to water on site. The depth-to-water measured in the temporary well TMW-1 on that day was measured at 5.60 ft below top-of-casing (btoc). The field crew reported that TMW-1 is almost flush with the ground surface. Based on the depth-to-water measurement, soil samples were collected at 1-ft vertical intervals to a depth of 6 ft bls at each location using stainless steel hand auger for soil headspace analysis techniques. In general conformance with Chapter 62-770, FAC, samples were usually inspected for petroleum staining, and headspace readings were obtained on soil samples using a PhotoVac Micro-FID. Appendix C contains the soil boring logs for each location with the unfiltered OVA-FID results. The boring location numbers were as follows: CEF-9RT-SB-001, CEF-9RT-SB-002, CEF-9RT-SB-003, CEF-9RT-SB-004, and CEF-9RT-SB-005. For brevity in the text of this report, boring identification numbers may be shortened from CEF-9RT-SB-001 to SB-001, SB-002, etc.

2.2.2 Soil Confirmatory Analyses

Also, on January 7, 2002, confirmatory soil samples were collected in the depth interval of 3.5 to 4 ft bls at the locations of SB-001 through SB-005. The field data indicated that that depth interval was above the capillary fringe. An effort was made to collect samples that were representative of the soil and to minimize influences from the groundwater. The samples were labeled similar to the boring location identification numbers. For example, the sample from SB-001 was labeled CEF-9RT-SU-001-04. The

"SU," which was substituted for "SB," is an abbreviation for subsurface sample, and the last two digits of the sample identification number represent the nearest whole number for the bottom of the interval that was sampled. A duplicate sample was collected at SB-005, nearly concurrent with soil sample CEF-9RT-SU-005-04, and it was labeled CEF-9RT-SU-DUP-01. The soil sample log sheets for this event are provided in Appendix D. The samples were sent to AAL and analyzed for the full suite of GAG/KAG constituents as specified by Chapter 62-770.600(4)(a), FAC.

Due to a laboratory error, the hold times for the TRPH samples were exceeded. The five locations were re-sampled on April 18, 2002. The samples were collected from approximately the same location and depth. The sample identification numbers were kept the same, except that a "B" was added to the end of each number. A duplicate sample was collected at SB-005, nearly concurrent with soil sample CEF-9RT-SU-005-04B, and it was labeled CEF-9RT-SU-DUP-01B. The soil sample log sheets for this second event are provided in Appendix E. The samples were sent to AAL and analyzed for TRPH by the Florida Petroleum Range Organics (FL-PRO) method.

Due to the results of the TRPH analytical results, one location (SB-003) was re-sampled for further analyses. This sample was collected from approximately the same location and depth at SB-003. The sample identification number was kept the same, except that a "C" was added to the end of the new sample identification number. The sample log sheet for this third event is provided in Appendix E. The sample was sent to STL and analyzed for TPHCWG.

2.3 GROUNDWATER ASSESSMENT

2.3.1 Groundwater Flow

Table 1 of Appendix B indicates the general construction of the temporary wells (TMW-1 through TMW-3). The top-of-casing (TOC) elevations of the three temporary wells were surveyed relative to the top of a 24-inch steel manhole cover, which was assigned an elevation of 75.00 ft above mean sea level (msl) based on local topographic map data. Figure 1-2 indicates the location of the manhole cover relative to the temporary wells. The survey data and calculations that were made to assign elevations to the TOC of each temporary well are provided in Appendix F.

Depth-to-water was measured from the TOC of the three temporary wells as marked on the north side of the top of the polyvinyl chloride (PVC) well casing. Water level measurements were noted with the time and recorded to the nearest 0.01 ft. These values were subtracted from the relative-survey TOC elevations to determine groundwater elevations at each point in order to construct a groundwater elevation contour map. Two rounds of synoptic groundwater level measurements were collected on January 7, 2002 and August 29, 2002.

2.3.2 Fixed-Based Laboratory Analyses

On January 7, 2002, three groundwater samples were collected and shipped to AAL for analysis of GAG/KAG constituents as specified in Chapter 62-770.600(4)(a), FAC. For the purposes of this investigation, the original groundwater well identification numbers assigned to the wells by J. A. Jones were expanded by adding "CEF-9RT-" as follows: CEF-9RT-TMW1, CEF-9RT-TMW2, and CEF-9RT-TMW3. For brevity in the text of this report, the wells may be referred to without the "CEF-9RT-" prefix. The sample identification numbers almost mimic the well identification numbers except for the addition of the letters "GW" after the letters "9RT". Duplicate samples were collected nearly concurrent with the samples from temporary well CEF-9RT-TMW1, and the duplicates were labeled CEF-9RT-GW-DU01. The groundwater sample log sheets and accompanying low flow purge sheets are provided in Appendix G.

2.3.3 Specific Capacity Testing (SPECAP)

Specific capacity testing (SPECAP) was performed on the three wells at the site. The objective of the SPECAP tests was to determine the productivity of yield per unit of drawdown of the aquifer in which the well is screened and to estimate hydraulic conductivity and transmissivity. Although there is published information (Halford, 1988) concerning hydraulic conductivity for NAS Cecil Field, SPECAP tests were conducted to provide site-specific information for 9RT Lens for comparison to the published values. To complete the SPECAP tests, a 1.66-inch outside diameter PVC electronic submersible pump (Whaler® brand) was used to pump the well while the data was collected with a Hermit 3000 electronic datalogger. The raw SPECAP data from the datalogger for each well are presented in Appendix H. The aquifer parameters were calculated from the SPECAP test data using a computer program that was developed by K. R. Bradbury and E. R. Rothschild (Bardbury and Rothschild, 1985).

3.0 RESULTS OF INVESTIGATION

3.1 SOIL QUALITY

3.1.1 OVA-FID Headspace Analyses

Since no evidence of visible petroleum staining was encountered, TtNUS reverted to OVA-FID headspace analysis to assess if excessively contaminated soil remained on site. OVA-FID headspace measurements obtained in the upper 6 ft at the five hand auger locations are presented in Table 3-1. Since no OVA-FID response above 0 ppm was documented, TtNUS resorted to fixed-based laboratory confirmatory soil samples at each location to confirm the claim by ESA and ERI (ESA and ERI, 1998) and J. A. Jones (J. A. Jones, 1999) that no contaminated soil remains on site.

3.1.2 Fixed-Based Confirmatory Results

The laboratory soil analytical results are summarized in Table 3-2. Except for total xylenes, no benzene, toluene, ethylbenzene, and total xylenes (BTEX) compounds were detected in the soil samples. Table 3-2 indicates that the highest concentration reported from any sample for total xylenes was estimated at 4.4 µg/kg (micrograms per kilogram), and the SCTL for that compound is 200 µg/kg. None of the PAHs (including 1- and 2-methylnaphthalene) were detected in the soil samples. TRPH was the only COC reported to exceed its respective SCTL in the five samples collected at this site. The SCTL is 340 milligrams per kilogram (mg/kg), and this level was exceeded in only one sample (CEF-9RT-SU-003-04B from soil boring SB-003) at a concentration of 3100 mg/kg. Figure 3-1 illustrates the TRPH concentrations for each sample/boring location. Since TRPH was the only COC exceeding the applicable SCTLs in the sample from SB-003, another sample was collected and analyzed from approximately the same location and depth for TPHCWG. The results shown on the last page of Table 3-2 indicate that the detection limit of 65 mg/kg was not surpassed for any of the TRPH classification subgroups. The TPHCWG results were below any of the applicable SCTLs, which range from 340 to 32000 mg/kg. The laboratory report for the first soil sample event is provided in Appendix I, the laboratory report for the TRPH re-sample event is provided in Appendix J, and the TPHCWG laboratory report is provided in Appendix K.

3.2 GROUNDWATER QUALITY

3.2.1 Groundwater Flow Results

The J. A. Jones report (Appendix B) states that the groundwater flow direction during that investigation was to the north. The groundwater measurements collected in January and August 2002 are indicated on

Table 3-1
Summary of Soil Screening Data

Site Assessment Report Addendum
9RT Lens
Naval Air Station Cecil Field
Jacksonville, Florida

Location	OVA-FID Concentration (ppm)			
	Depth Interval (ft bls)	Unfiltered	Filtered	Corrected
CEF-9RT-SB-001	0 to 1	0.0	NA	0.0
	1 to 2	0.0	NA	0.0
	2 to 3	0.0	NA	0.0
	3 to 4	0.0	NA	0.0
	4 to 5	0.0	NA	0.0
	5 to 6	0.0	NA	0.0
CEF-9RT-SB-002	0 to 1	0.0	NA	0.0
	1 to 2	0.0	NA	0.0
	2 to 3	0.0	NA	0.0
	3 to 4	0.0	NA	0.0
	4 to 5	0.0	NA	0.0
	5 to 6	0.0	NA	0.0
CEF-9RT-SB-003	0 to 1	0.0	NA	0.0
	1 to 2	0.0	NA	0.0
	2 to 3	0.0	NA	0.0
	3 to 4	0.0	NA	0.0
	4 to 5	0.0	NA	0.0
	5 to 6	0.0	NA	0.0
CEF-9RT-SB-004	0 to 1	0.0	NA	0.0
	1 to 2	0.0	NA	0.0
	2 to 3	0.0	NA	0.0
	3 to 4	0.0	NA	0.0
	4 to 5	0.0	NA	0.0
	5 to 6	0.0	NA	0.0
CEF-9RT-SB-005	0 to 1	0.0	NA	0.0
	1 to 2	0.0	NA	0.0
	2 to 3	0.0	NA	0.0
	3 to 4	0.0	NA	0.0
	4 to 5	0.0	NA	0.0
	5 to 6	0.0	NA	0.0

Notes:
Depth to water in temporary wells on site between 5.60 and 6.21 ft btoc.
Soil OVA-FID data collected on January 7, 2002.
NA = not analyzed

Table 3-2
Soil Sampling Analytical Results

Site Assessment Report Addendum
9RT Lens
Naval Air Station Cecil Field
Jacksonville, Florida
Page 1 of 3

Compounds	Soil Boring: CEF-9RT-SB-	SCTLs[1]	001	002	003	004	005	006
	Sample Identification: CEF-9RT-SU-		001-04	002-04	003-04	004-04	005-04	DUP-01
	Depth Interval Sampled bls		3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
	Date Sampled		01/07/02	01/07/02	01/07/02	01/07/02	01/07/02	01/07/02
Volatile Organic Compounds (VOCs) (µg/kg)								
Xylenes, Total		200	3.0 J	3.9 J	4.4 J	2.8 J	3.8 J	3.1 J
Semi-Volatile Organic Compounds (SVOCs) (µg/kg)		various	U*	U*	U*	U*	U*	U*
TRPH (mg/kg)								
TRPH		340	**	**	**	**	**	**

See notes at end of table.

Table 3-2
Soil Sampling Analytical Results

Site Assessment Report Addendum
9RT Lens
Naval Air Station Cecil Field
Jacksonville, Florida
Page 2 of 3

Compounds	Soil Boring: CEF-9RT-SB-	SCTLs[1]	1	2	3	4	5	6
	Sample Identification: CEF-9RT-SU-		001-04B	002-04B	003-04B	004-04B	005-05B	DUP-01B
	Depth Interval Sampled bls		3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
	Date Sampled		04/18/02	04/18/02	04/18/02	04/18/02	04/18/02	04/18/02
TRPH (mg/kg)								
TRPH		340	79	17 J	3100	68 U	52 J	16 J

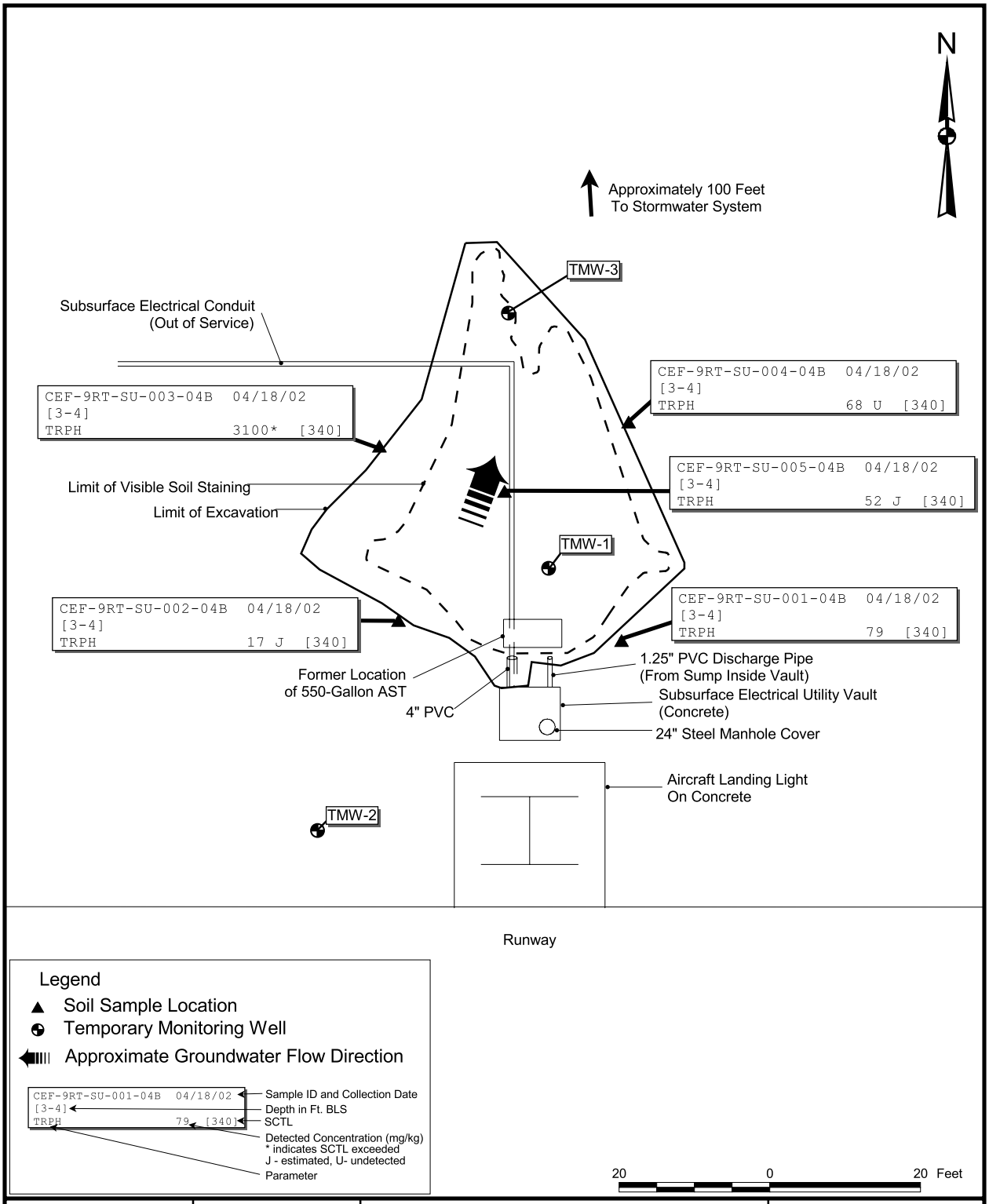
See notes at end of table.

Table 3-2
Soil Sampling Analytical Results

Site Assessment Report Addendum
9RT Lens
Naval Air Station Cecil Field
Jacksonville, Florida
Page 3 of 3

Compounds	Soil Boring: CEF-9RT-SB-	SCTLs[1]	003
	Sample Identification: CEF-9RT-SU-		003-04C
	Depth Interval Sampled bls		3 to 4
	Date Sampled		05/30/02
TPHCWG (mg/kg)			
>/= C6-C8 Aliphatics		6300	65 U
> C8-C10 Aliphatics		630	65 U
>C10-C12 Aliphatics		1300	65 U
>C12-C16 Aliphatics		2300	65 U
>C16-C21 Aliphatics		32000!	65 U
>C21-C35 Aliphatics		32000!	65 U
>C5-C7 Aromatics		260	65 U
>C7-C8 Aromatics		380	65 U
>C8-C10 Aromatics		340	65 U
>C10-C12 Aromatics		690	65 U
>C12-C16 Aromatics		1200	65 U
>C16-C21 Aromatics		1300	65 U
>C21-C35 Aromatics		2200	65 U

Notes:
[1]Based on Chapter 62-777, FAC, Leachability to Groundwater Criteria.
*Reporting limit = 33 µg/kg
**Samples collected, but analyzed after holding time was exceeded. See Page 2 for results of resampling.
!This criteria is for the range C16 to C35.
U = not detected (Number shown next to qualifier is reporting limit.)
J = estimated concentration



DRAWN BY MJJ	DATE 28Oct02	SOIL TRPH CONCENTRATION MAP 9RT LENS SITE ASSESSMENT REPORT ADDENDUM NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0486
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 3-1 / REV 0

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Table 3-3 with the calculated groundwater elevations. Figure 3-2 illustrates the groundwater flow data and direction for the January 2002 event, and Figure 3-3 shows similar data and direction information for the August 2002 event. In both cases, the groundwater flow direction continues to be to the north.

Considering the established direction of groundwater flow, monitoring well TMW2 is considered the site's only upgradient well. Since monitoring well TMW1 is located close to and slightly downgradient of the former AST location, it is considered the source well for the site. Monitoring well TMW3 appears to be near the toe of the former soil contamination area (Figure 1-2), so it is considered the site's downgradient monitoring well. An oil-water interface probe was used during the first groundwater measurement event, and no free product was measured in the three temporary wells at 9RT Lens at that time.

3.2.2 Fixed-Based Laboratory Results

TtNUS personnel collected groundwater samples from temporary monitoring wells TMW1 through TMW3 on January 7, 2002. The laboratory reported that no VOCs, PAHs, or TRPH were detected in the upgradient well (TMW2) or the downgradient well (TMW3). The estimated concentrations of lead reported for TMW2 and TMW3 were approximately an order of magnitude lower than the respective GCTL.

Regarding the source well (TMW1), the following observations were made:

- Of the VOC compounds analyzed, only ethylbenzene was detected and that concentration was below the applicable GCTL of 30 µg/L.
- Similarly, the TRPH concentrations reported for the three wells did not exceed the applicable GCTL of 5 milligrams per liter (mg/L).
- Likewise, the total lead concentrations for the three wells did not exceed the applicable GCTL of 0.015 mg/L.
- However, the reported concentrations for 1- and 2-methylnaphthalene both exceeded the applicable GCTL of 20 µg/L at 21 and 27 µg/L, respectively, in source well TMW1.

The analytical results are summarized in Table 3-4, and the laboratory report is provided in Appendix I. Figure 3-4 shows the reported 1- and 2-methylnaphthalene concentration data for each well.

3.2.3 SPECAP Results

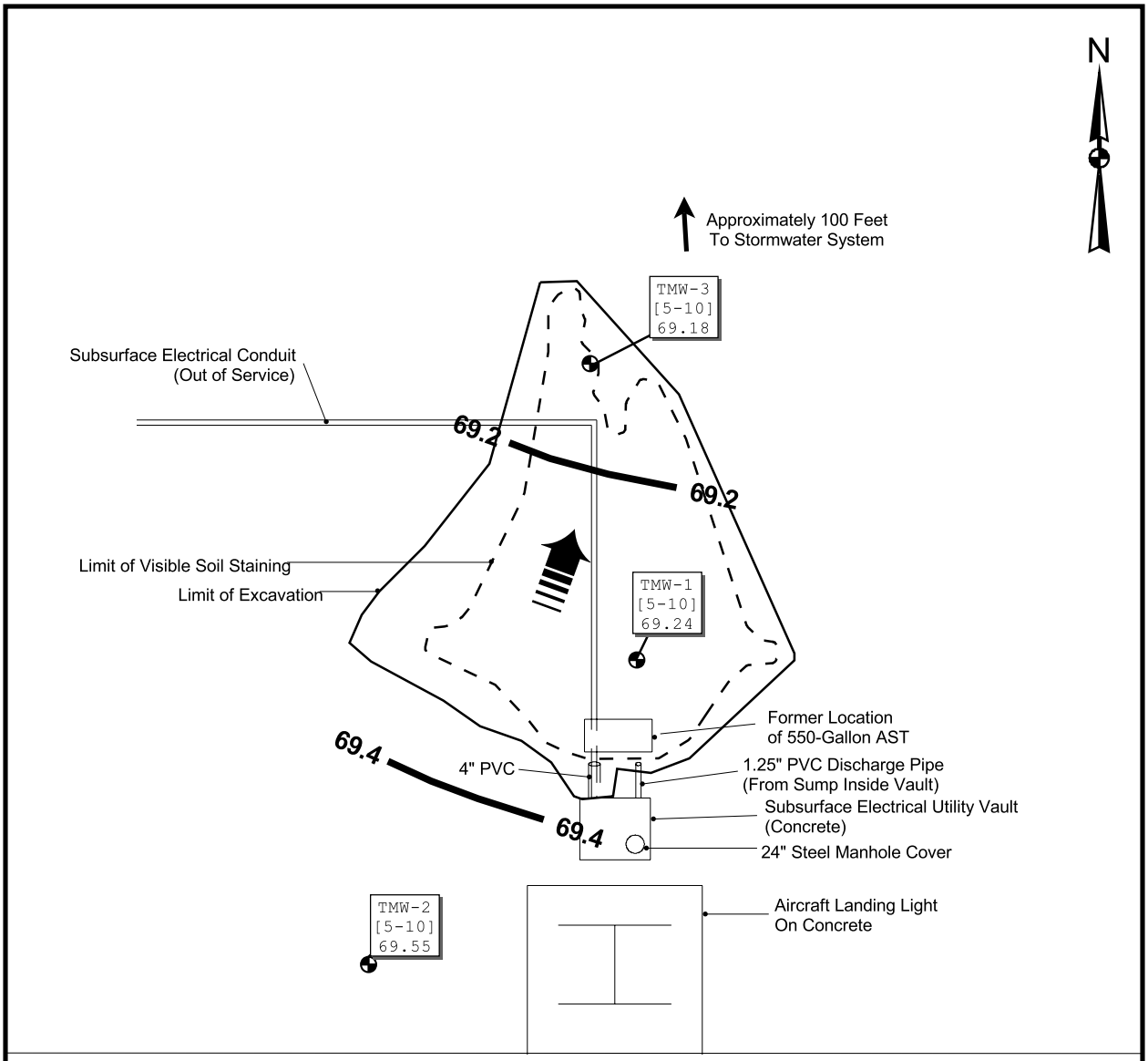
On January 9, 2002, SPECAP testing of two shallow wells (TMW2 and TMW3) was conducted. These wells were selected because they were the only wells available on site other than source well TMW1.

Table 3-3
Groundwater Elevation Data

Site Assessment Report Addendeum
9RT Lens
Naval Air Station Cecil Field
Jacksonville, Florida

Monitoring Well Identification	Well Depth (ft, btoc)	TOC Elevation (ft, msl)	January 7, 2002		August 29, 2002	
			Depth to Water (ft, btoc)	Water-Level Elevation (ft, msl)	Depth to Water (ft, btoc)	Water-Level Elevation (ft, msl)
CEF-9RT-TMW1	9.80	74.84	5.60	69.24	3.73	71.11
CEF-9RT-TMW2	10.34	75.76	6.21	69.55	4.38	71.38
CEF-9RT-TMW3	10.40	75.11	5.93	69.18	4.24	70.87

Notes:
NM = not measured



Legend

- Temporary Monitoring Well
- TMW-1 [5-10] 69.24 — Monitoring Well Designation; Screen Interval, Ft BLS; Groundwater Elevation taken on 01/07/02, Ft MSL
- Approximate Groundwater Flow Direction
- Groundwater Contours (Dashed where inferred), Ft MSL

20 0 20 Feet

DRAWN BY MJJ	DATE 28Oct02	GROUNDWATER FLOW MAP (01/07/02) 9RT LENS SITE ASSESSMENT REPORT ADDENDUM NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0486
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 3-2 / REV 0

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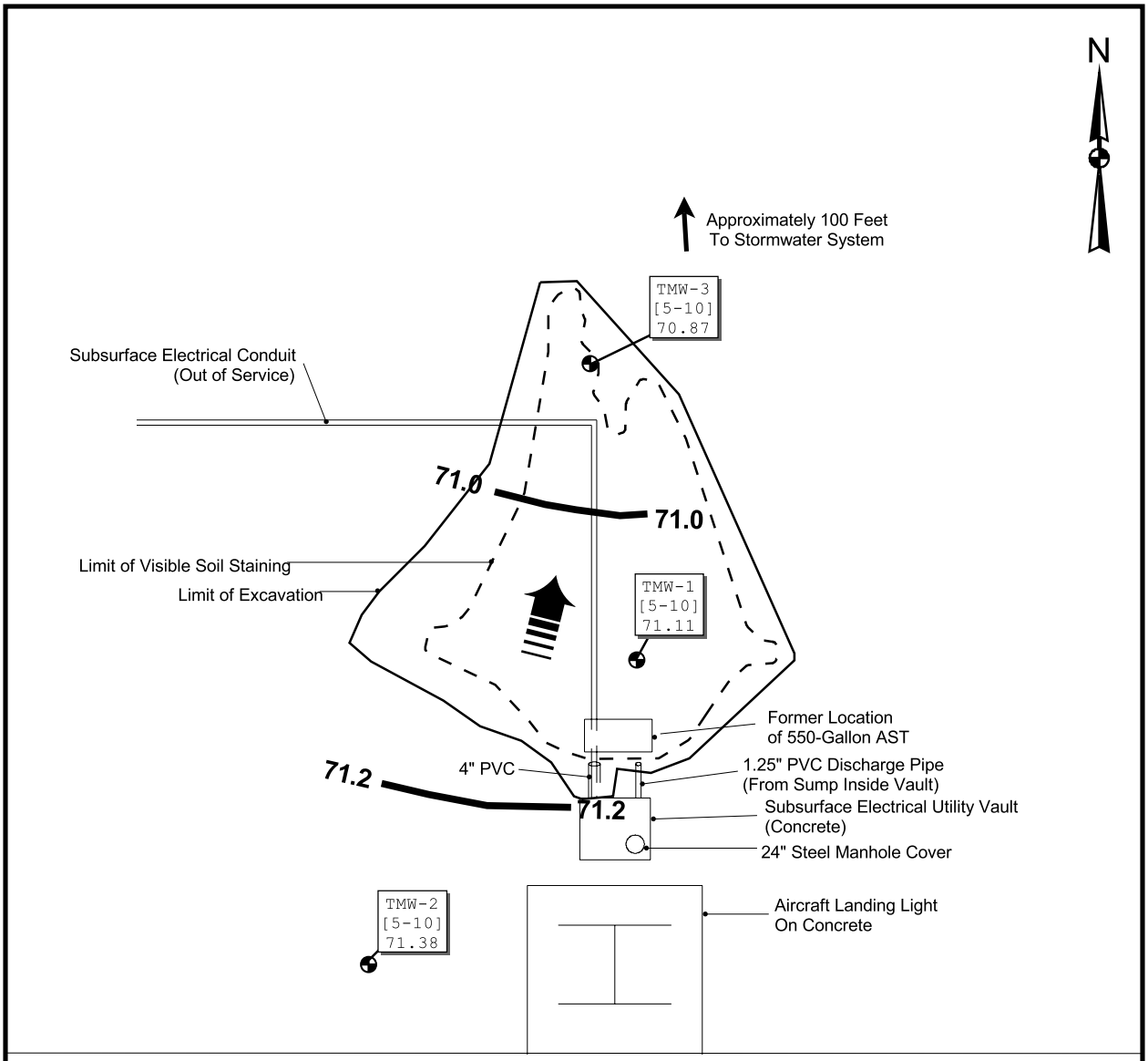

Legend

- Temporary Monitoring Well
- TMW-1 [5-10] 69.24 — Monitoring Well Designation; Screen Interval, Ft BLS; Groundwater Elevation taken on 08/29/02, Ft MSL
- Approximate Groundwater Flow Direction
- Groundwater Contours (Dashed where inferred), Ft MSL

20 0 20 Feet

DRAWN BY MJJ	DATE 28Oct02	GROUNDWATER FLOW MAP (08/29/02) 9RT LENS SITE ASSESSMENT REPORT ADDENDUM NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0486
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 3-3 REV 0

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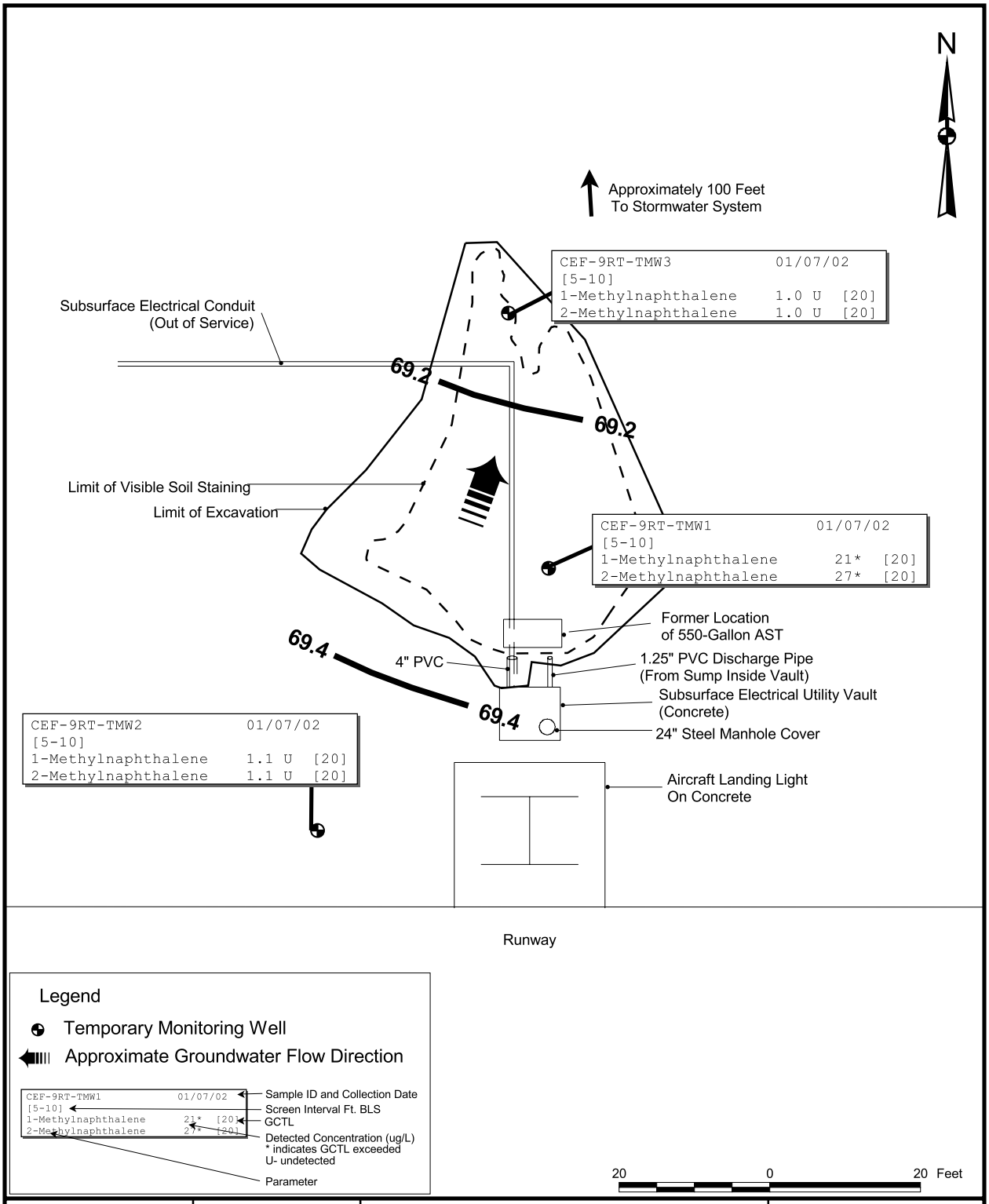
Table 3-4
Groundwater Sampling Positive Detection Results

Site Assessment Report Addendum
9RT Lens
Naval Air Station Cecil Field
Jacksonville, Florida

Compounds	Monitoring Well Identification	GCTL	CEF-9RT-TMW1	CEF-9RT-TMW1	CEF-9RT-TMW2	CEF-9RT-TMW3
	Sample Identification		CEF-9RT-GW-TMW1	CEF-9RT-GW-DU01	CEF-9RT-GW-TMW2	CEF-9RT-GW-TMW3
	Date Sampled		1/7/2002	1/7/2002	1/7/2002	1/7/2002
VOCs (µg/L)						
Ethylbenzene		30	1.9J	2.1J	<5.0	<5.0
PAHs (µg/L)						
1-Methylnaphthalene		20	21	23	<1.1	<1.0
2-Methylnaphthalene		20	27	30	<1.1	<1.0
Acenaphthene		20	1.6	1.7	<1.1	<1.0
Fluorene		280	2	2.1	<1.1	<1.0
Naphthalene		20	9.8	11	<1.1	<1.0
Phenanthrene		210	0.30J	0.32J	<1.1	<1.0
TRPH (mg/L)		5	2.1	1.6	<0.86	<0.89
Total Lead (mg/L)		0.015	0.0052JB	0.0069JB	0.0038JB	0.0030JB

Notes:
Sample identification "CEF-9RT-GW-DU01" is a duplicate sample from the well indicated.
B = indicates compounds present in method blank
J = estimated since trace level less than reporting limit



DRAWN BY MJJ	DATE 28Oct02	GROUNDWATER PAH CONCENTRATION MAP 9RT LENS SITE ASSESSMENT REPORT ADDENDUM NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0486
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 3-4 / REV 0

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Following the field test and extraction of the raw data, TtNUS printed the respective drawdown and recovery graphs for each well to check for normal representation of drawdown activity for each well. The graphs are presented in Appendix L. TtNUS personnel used a computer program (Bradbury and Rothschild, 1985) to input the data and variables for each well to generate SPECAP, hydraulic conductivity (K), and transmissivity (T) data. Both the input and output data are shown in Appendix M. The SPECAP, K, and T values are summarized on Table 3-5. In unconfined aquifers, the storage coefficient is the same as the specific yield (S_y) of the aquifer. The storage coefficient used was estimated to be 0.15, which was based on referenced information published by C. W. Fetter (Fetter, 1980) and it was compared to the S_y used by K. J. Halford (Halford, 1998). Fetter indicated that the minimum S_y for gravel and coarse-grain sand formations equal 0.20 and the minimum S_y for fine-grain sand formations equal 0.10. Halford used a S_y value of 0.2. Since the majority of the soil underlying this site consists of very fine grain sand to silty sand, Halford's estimate for S_y was decreased to 0.15 to better represent the site-specific soils.

Table 3-5
Aquifer Properties Based on Analysis of SPECAP

Site Assessment Report Addendum
9RT Lens
Naval Air Station Cecil Field
Naval Air Station Cecil Field

Well Number	SPECAP	T	K (ft/day)
CEF-9RT-TMW2	0.39 gpm/ft	9.89×10^{-3} ft^2/sec or 6391.81 gpd/ft	10.42 ft/day
CEF-9RT-TMW3	0.46 gpm/ft	1.16×10^{-2} ft^2/sec or 7490.36 gpd/ft	12.21 ft/day

Notes: gmp/ft = gallons per minute per foot; gpd/ft = gallons per day per foot; sec = seconds; ft^2 = square feet/foot; ft/day = feet per day

Halford indicated that several wells from the same zone were tested in his study and their K value ranged from 0.6 to 5 ft/day. The average K value for this site is about 11.32 ft/day, which is approximately double Halford's upper estimate.

Using the average K value just presented, the velocity of groundwater flow through the materials underlying the site was estimated using a modified form of Darcy's equation:

$$V_h = K_h \times I/n_e$$

Where,

V_h = average horizontal velocity, ft/day

K_h = average horizontal hydraulic conductivity, ft/day

I = hydraulic gradient, feet per foot

n_e = effective porosity, dimensionless

The value for "I" was calculated from water level data and groundwater contours collected in January 2002 and August 2002. The approximate averaged value is 0.006 feet per foot. The effective porosity was approximated at 0.15 for fine sands (TtNUS, 1999).

Using these values, the average V_h is estimated to be 0.4528 ft/day or 165.27 ft per year in the water table zone for this site. Groundwater velocities will vary depending on lateral and vertical aquifer permeability differences and seasonal fluctuations in the hydraulic gradient, and contaminant velocities will be further affected by the change in groundwater density.

4.0 SUMMARY AND RECOMMENDATIONS

TtNUS completed additional SA activities on the 9RT Lens site, NAS Cecil Field. This additional SA was completed following an Interim Remedial Action (IRA) by ESA and ERI (ESA and ERI, 1998) and a SAR by J. A. Jones (J. A. Jones, 1999), at the request of the Navy to answer the following questions posed informally by the FDEP:

1. "This (letter report) should be a SAR and follow format."
2. "Do not even know on the base where this is!"
3. "GWFD needs to be verified really N?"
4. Soil – Loc. 46, 94, 64. KAG.
5. Re-sample TMW-1.

Regarding the first item, TtNUS has placed copies of the original IRA and SAR in this SARA as appendices and formatted the investigation in the traditional SAR format used for NAS Cecil Field. As to the second item, Figure 1-1 shows the location of the site relative to the main base features at NAS Cecil Field. The third item, concerning groundwater flow direction, was verified as being to the north. Regarding the fourth comment of the FDEP, TtNUS could not ascertain the meaning of the comment. However, the results of the additional soil investigation appear to confirm the IRA and SAR comment that no excessively contaminated soil remains on site. Considering all the soil data collected to date, TtNUS recommends no further action regarding soil conditions at 9RT Lens.

In response to the fifth item, TtNUS re-sampled the temporary well in question as well as the other two wells on site. The groundwater analytical data indicate that temporary monitoring well TMW1 is still impacted by petroleum products, but at lower concentrations than originally reported in the IRA. Since the concentrations of the two contaminants (1- and 2-methylnaphthalene) are within a few µg/L of the GCTL, TtNUS recommends that the three temporary monitoring wells be abandoned and replaced with permanent water table monitoring wells. Further, TtNUS considers these concentrations low enough and the groundwater velocity high enough that natural attenuation may remediate the site within a year. Therefore, TtNUS recommends semi-annual monitoring of the three new permanent wells for one year for PAHs only.

The groundwater analytical data also indicate that a vertical extent well is unnecessary due to the low concentrations. TtNUS performed no well inventory since the potable wells at NAS Cecil Field have already been reported in the General Information Report (ABB-ES, 1998). It should be noted that the closest potable well to the site is approximately 4,200 ft to the northeast.

It should also be noted that the free product that was reported in the IRA was removed, and none was encountered during this additional investigation.

REFERENCES

ABB-ES (ABB Environmental Services), 1998. "General Information Report, NAS Cecil Field, Jacksonville, Florida. Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina, August.

Bradbury, K. R. and Rothschild, E. R., 1985. "A Computerized Technique for Estimating the Hydraulic Conductivity of Aquifers from Specific Capacity Data", Ground Water, 23(2), pp. 240-246.

ESA (Environmental Science Associates, Inc.) and ERI (Environmental Recovery, Inc.), 1998. "Remediation of Diesel Fuel Contaminated Soils" for the 9RT Lens Site, NAS Cecil Field, Jacksonville, Florida. Prepared for Aggreko, Jacksonville, Florida, September.

Fetter, Jr., C. W., 1980. "Applied Hydrogeology". Charles E. Merrill Publishing Co., Columbus, Ohio.

Halford, K. J., 1998. "Ground-Water Flow in the Surficial Aquifer System and Potential Movement of Contaminants from Selected Waste-Disposal Sites at Cecil Field NAS, Jacksonville, Florida." U.S. Geological Survey Water-Resources Investigations Report 97-4278. Prepared in cooperation with the SOUTHNAVFACENGCOM.

J. A. Jones (J. A. Jones Environmental Services), 1999. "Site Assessment Activities" for 9RT Lens Site, NAS Cecil Field, Jacksonville, Florida. Prepared for Aggreko, Jacksonville, Florida, May.

TtNUS (Tetra Tech NUS, Inc.), 1999. "Remedial Investigation Report for Site 36-Control Tower Plume and Site 37-Hangars 13 and 14 DCE Plume". NAS Cecil Field, Jacksonville, Florida. Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina. October.

APPENDIX A

REMEDIATION OF DIESEL CONTAMINATED SOILS

Remediation of Diesel Fuel Contaminated Soils

9 RT LENS
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

Prepared for:

Aggreko
8300 Philips Highway
Jacksonville, Florida

Prepared by:

Environmental Science Associates, Inc.
35 Jefferson Avenue
Ponte Vedra, Florida 32082

and

Environmental Recovery, Inc.
251 Levy Road
Atlantic Beach, Florida 32233

September 1998

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Figure 3. Site Sketch Indicating Limits of Excavation 9

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Attachment A - Photodocumentation

Attachment B - Laboratory Results;
Post-Cleanup Confirmatory Soil Analysis
Post Cleanup Confirmatory Groundwater Analysis

Attachment C - Laboratory Results; Soil Pre-Burn Analysis

Attachment D - Disposal Documentation-Soil Manifests

Attachment E - Disposal Documentation-Wastewater Manifest

Remediation of Diesel Fuel Contaminated Soils

9 RT LENS
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

Summary of Field Activities

On August 20, 1998, Environmental Science Associates, Inc. (ESA) was contracted by Environmental Recovery, Inc. (ERI) of Atlantic Beach, Florida to, concurrent with the excavation of petroleum contaminated soils, survey and delineate impacted soils at a site located adjacent to the north side of an aircraft landing light unit (identified as "9 RT Lens") on the north side of Runway 9 at the Cecil Field Naval Air Station in Jacksonville, Duval County, Florida (refer to Figure 1, Site Location Map). The soils had become contaminated with diesel fuel as a result of a loose fuel line connection on a temporary Aboveground Storage Tank (AST). The AST had been placed on site two days prior to the incideny in order to provide diesel fuel to an auxiliary generator that was being used to provide power for the landing light unit. An estimated 250 to 300 gallons of diesel fuel was reported to have been discharged onto the ground surface as a result of the incident.

Excavation of the petroleum impacted soils was initiated on Thursday, August 20, 1998, and continued on Friday, August 21, and Saturday, August 22, 1998. Prior to initiating soil excavation, a visual reconnaissance of the site was performed. An area of visible surficial staining was apparent on the ground surface to the at the location where the auxiliary generator AST had been sited. Soils and grass in an area measuring approximately 45 ft in width (from east to west, at the widest point) and approximately 55 ft in total length (from south to north) were visually impacted (refer to Figure 2). The area of discolored soil was located approximately 40 ft north of the edge of runway 9 RT, and adjacent to the north side of an aircraft landing light unit (9 RT Lens). The field observations appeared to suggest that the fuel discharged from the tank had followed the slope/contour of the ground surface in a northerly direction. The visual reconnaissance of the site also included an inspection for areas of potential impact, including storm drains, culvert pipes, underground utilities, or other features that might represent points of collection or preferential pathways for the migration of contaminants outside of the area of obvious impact. Subsurface structures identified in the vicinity of the spill area include an underground utility vault located approximately 5 ft south of the area of visible staining, as well as underground electrical conduits thought to be located in the immediate vicinity.

Site 9 RT Lens consisted of a portable landing light unit situated on a concrete pad, measuring 20 ft in length and 20 ft in width, as well as a subsurface utility vault, measuring approximately 8 ft in length, 8 ft in width and 7 ft in depth, flush mounted to surface grade with a 24-inch steel manhole located near the southeast corner of the vault. An inspection of the interior of the utility vault indicated the presence of diesel fuel within the structure. Although the vault appeared to be located in a slightly upgradient position relative to the spill area, free product appeared to have entered the vault by flowing along the length of an underground

electrical conduit that entered through the north wall of the vault, facing the spill area. A floating layer of diesel fuel was apparent on the surface of standing water contained within a sump located in the floor of the vault, at the southeast corner. The sump was fitted with a submersible float-switch pump designed to prevent the accumulation of water within the vault. Liquids accumulating in the sump were discharged through a 1.25-inch PVC discharge pipe located at the northeast corner of the vault. This pump was disabled during the initial response activities until product within the sump had been recovered using a vacuum tanker and the interior of the vault had been pressure-washed and rinsed (refer to Figure 2, Site Sketch and to Attachment A, Photodocumentation). It was also determined at the time of the initial response that the underground electrical conduits providing power to the landing light unit through the utility vault were located below surface grade within the area of the spill. These electrical subsurface conduits were located during the initial soil remedial activities, and were determined to be out of service. No other underground structures were identified within the area of concern.

The extent of soil contamination was delineated using soil headspace analysis screening procedures as outlined in Chapter 62-770 Florida Administrative Code(F.A.C.) and in the Florida Department of Environmental Protection (FDEP) "Guidelines for the Assessment and Remediation of Petroleum Contaminated Soils". Organic vapor analysis of the soil was performed in the field using a Foxboro Model 128 Organic Vapor Analyzer/Flame Ionization Detector (OVA/FID). The instrument was calibrated in the field prior to sample collection using a standard of 95 parts per million (ppm) methane. Soil samples collected from the area of impact were screened for the presence of volatile petroleum hydrocarbon vapors using soil vapor headspace analysis techniques. In this procedure, a clean 16-ounce, widemouth glass jar is half-filled with the soil sample to be tested, the jar is then sealed with aluminum foil, and allowed to equilibrate at ambient temperatures for a period of five to ten minutes. The organic vapor concentration in the headspace of the jar was then analyzed using the OVA/FID. Samples were analyzed both with and without a carbon filter in order to detect and correct for the presence of naturally occurring organic vapors (i.e., methane). The corrected reading is reported in parts per million (ppm), and represents the concentration of organic vapor from the soil sample resulting from the presence of volatile petroleum hydrocarbon compounds in the sample.

Soil samples were collected from the visibly stained areas, as well as from locations outside of the area of visible staining, in order to determine the extent of impact. Soil excavation was conducted using heavy equipment (backhoe), and was initiated at the south end of the spill area, at the apparent source area. Visibly contaminated soils were excavated, and soil samples were collected from the excavated areas for organic vapor analysis. Excavation was continued until OVA readings were below the target cleanup level of 10 ppm, or until the water table was encountered. Groundwater was encountered at a depth of approximately 2.5 ft below original surface grade (refer to Figure 3, which is a site sketch illustrating OVA soil sampling locations and limits of excavation). Free product was observed at the level of the water table in some areas of the excavation, with the greatest concentration of product located immediately below the former AST location, near the south end of the spill area. Free product was also observed along the length of an underground electrical conduit that bisected the spill area from north to south. Free product was recovered using a vacuum tanker truck as well as absorbent pads and booms. An estimated 3,000-gallons of petroleum contact water was generated during product recovery operations and decontamination of the subsurface utility vault located adjacent to the spill area. These liquids were transported for disposal at a permitted facility.

The final excavation was irregular in shape and measured approximately 60 ft in length (from north to south, at the widest point), and approximately 45 ft in width (from east to west, at the widest point). The excavation ranged in depth from approximately 0.25 ft in depth in those areas that appeared to have been only surficially impacted, to approximately 3.0 ft in depth below the original surface grade in the apparent worst case areas, with an average depth of approximately 2.0 to 2.5 ft below grade (refer to Figure 3).

An estimated total of approximately 160 cubic yards (224.37 tons) of petroleum contaminated soil was excavated. These soils were stockpiled on site on a concrete runway apron on top of, and covered with, 6 mil plastic sheeting. A representative composite sample of the stockpiled soil was collected for pre-burn laboratory analysis. The soil pre-burn sample was analyzed by an FDEP-approved environmental laboratory (IntraLab, Inc.) for soil pre-burn parameters. A copy of the soil pre-bun analysis is provided in Attachment B. The soil was transported on 8/25/98 to a permitted soil thermal treatment facility (Kedesh Asphalt, Inc. of Kingsland, Georgia) for disposal by thermal treatment/recycling. Copies of manifests documenting disposal of the petroleum contaminated soils are provided as Attachment D. A copy of the manifest documenting disposal of oily wastewater generated during the remedial activities is provided in Attachment E.

Following completion of the soil excavation activities, a total of four (4) confirmatory soil samples (CS-1 through CS-4) were collected from the walls of the excavation for laboratory analysis, to confirm that all contaminated soil was removed. The confirmatory soil sampling locatons are identified as follows:

- Confirmatory Soil Sample #1 was collected from the north wall of the excavation, in the apparent downgradient position relative to the source area, at a depth of approximately 2.0 ft below the original surface grade, which was just above the level of groundwater saturation.

- Confirmatory Soil Sample #2 was collected from the south wall of the excavation adjacent to the subsurface utility vault, in the upgradient position relative to the source area, at a depth of approximately 2.5 ft below the original surface grade, which was just above the level of groundwater saturation.

- Confirmatory Soil Sample #3 was collected from the bottom of the excavation at the midpoint along the east wall of the excavation, at a depth of approximately 2.25 ft below the original surface grade, which was just above the level of groundwater saturation.

- Confirmatory Soil Sample #4 was collected from the bottom of the excavation at the midpoint along the west wall of the excavation, at a depth of approximately 2.25 ft below the original surface grade, just above the level of groundwater saturation.

Each of these samples were collected using a stainless steel hand auger, which was decontaminated between sampling locations to prevent the possibility of cross-contamination. Samples were placed into pre-cleaned, laboratory supplied sample containers, appropriately

labeled, sealed in zip-lock type bags and placed on wet ice for transport. The samples were hand-delivered to a FDEP-approved laboratory (Intralabs, Inc.) for analysis by the following methods:

EPA Method 8020/5035	Volatile Organic Compounds
EPA Method 8100	Extractable Organic Compounds
Fla-PRO	Total Petroleum Hydrocarbons

The results of the laboratory analysis are summarized as follows:

Table 2. Summary of Laboratory Analysis
Confirmatory Soil Sampling
Remediation of Diesel Fuel Contaminated Soil
-9 RT Lens-
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

Parameter	Confirmatory Soil Sample ID				Soil Cleanup Target Levels*
	CS-1 North	CS-2 South	CS-3 East	CS-4 West	
Volatile Organic Compounds: (EPA Method 8021B)	BDL	BDL	BDL		
Benzene				BDL	1.1 mg/Kg
Toluene				2.08 μg/Kg	300 mg/Kg
Ethylbenzene				2.10 μg/Kg	240 mg/Kg
Xylenes				8.84 μg/Kg	290 mg/Kg
Extractable Organic Compounds: (EPA Method 8270C)	BDL	BDL	BDL	BDL	
FLA PRO:	BDL	BDL	BDL	BDL	350 mg/Kg

BDL = Below Detection Limits
*Soil Cleanup Target Levels as per 62-770 F.A.C., Table IV, Direct Exposure, Residential Use

The results of the laboratory analysis were below detection limits for all parameters in all four confirmatory soil samples collected, with the exception of trace concentrations of Volatile Organic Compounds detected in Confirmatory Soil Sample #CS-4 West; however, the concentrations of those compounds detected appear to be well below the soil cleanup target levels specified in Chapter 62-770 F.A.C., Table IV, "Selected Soil Cleanup Target Levels". Copies of the laboratory reports of the confirmatory soil analysis are provided as Attachment B, and Confirmatory Soil Sampling locations are illustrated in Figure 4.

Following backfilling of the excavation with clean fill, a temporary well point (TMW-1) was installed, and a groundwater sample was collected from the area of the excavation selected as representative of the apparent worst case location. This area was identified during the soil remedial activities as that area of the excavation near the apparent source area (the former AST location), and adjacent to the underground electrical cable trench.. The temporary well point was

constructed of 2-inch PVC with 5 ft of 0.01.-inch slotted well screen, and was installed such that the well screen intercepted the top of the water table, which was encountered at a depth of approximately 2.4 ft below surface grade. Prior to sample collection, the temporary well point was purged a total of five (5) standing volumes using a portable peristaltic pump. The groundwater sample was collected using a discreet Teflon bailer. Sample containers, which had been provided by the designated laboratory, were appropriately labelled, preserved, sealed in zip-lock type bags, placed on wet ice, and hand-delivered, under standard chain of custody procedures, to an FDEP-approved environmental laboratory (FDEP CompQAP # 920323) for analysis, as follows:

EPA Method 602	Volatile Organic Compounds
EPA Method 610	Polynuclear Aromatic Hydrocarbons
Fla-PRO	Total Petroleum Hydrocarbons

The results of the laboratory analysis are summarized as follows:

Table 3. Summary of Groundwater Analysis
Remediation of Diesel Fuel Contaminated Soil
-9 RT Lens-
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

Parameter	Groundwater Concentration TMW-1	Groundwater Cleanup Target Levels*
Volatile Organic Compounds:		
(EPA Method 602)		
Benzene	BDL	1 μg/L
Toluene	12.3μg/L	40 μg/L
Ethylbenzene	18.3 μg/L	30 μg/L
Xylenes	120.0 μg/L	20 μg/L
Polynuclear Aromatic Hydrocarbons:		
(EPA Method 610)		
Naphthalene	168μg/L	20μg/L
1-Methylnaphthalene	303μg/L	n/a
2-Methylenaphthalene	484μg/L	n/a
Phenanthrene	48.2μg/L	210μg/L
Flourene	35.8μg/L	210μg/L
Pyrene	4.3μg/l	210μg/L
FLA PRO:	34.4 mg/L	5 mg/L

BDL = Below Detection Limits
*Groundwater Cleanup Target Levels as per 62-770 F.A.C., Table V

The results of the laboratory analysis of the groundwater sample collected from TMW-1 detected concentraions of petroleum hydrocarbons, including Total Xylenes, Naphthalene, and TPH, at concentrations exceeding the FDEP Groundwater Cleanup Target Levels, as specified by Chapter 62-770, F.A.C., TableV. A copy of the laboratory report of the groundwater analysis is provided in Attachment D, and the location of the temporary well installation is illustrated in Figure 4.

Recommendations for Further Action:

The results of the laboratory analysis of a groundwater sample collected from the apparent source area indicated the presence of petroleum hydrocarbon contamination in excess of the target level specified in Chapter 62-770 F.A.C., Petroleum Contamination Site Cleanup Criteria. Based on these results, additional assessment would appear to be warranted to meet the requirements of Chapter 62-770. In light of current and past activities at site 9 RT Lens, it is recommended that any additional sampling performed at the site include analysis to identify and/or confirm the chemical nature and characteristics of the petroleum hydrocarbon contaminants detected by post-cleanup confirmatory groundwater sampling. The data generated by additional groundwater sampling and analysis could be used to determine if the site meets the criteria for either No Further Action, in accordance with 62.770.680, F.A.C., or for rehabilitation through Natural Attenuation, in accordance with 62-770.690, F.A.C., as well as to determine if the hydrocarbon analytes detected by the post-cleanup confirmatory groundwater sampling are solely attributable to the subject diesel fuel spill, or whether any pre-existing contamination may account for all or part of the groundwater contamination detected at the site.

Respectfully submitted,
Environmental Science Associates, Inc.

Richard Moriarty
Environmental Scientist

Environmental Recovery, Inc.

Karl M. Kramer, REM, CHMM
Senior Environmental Manager

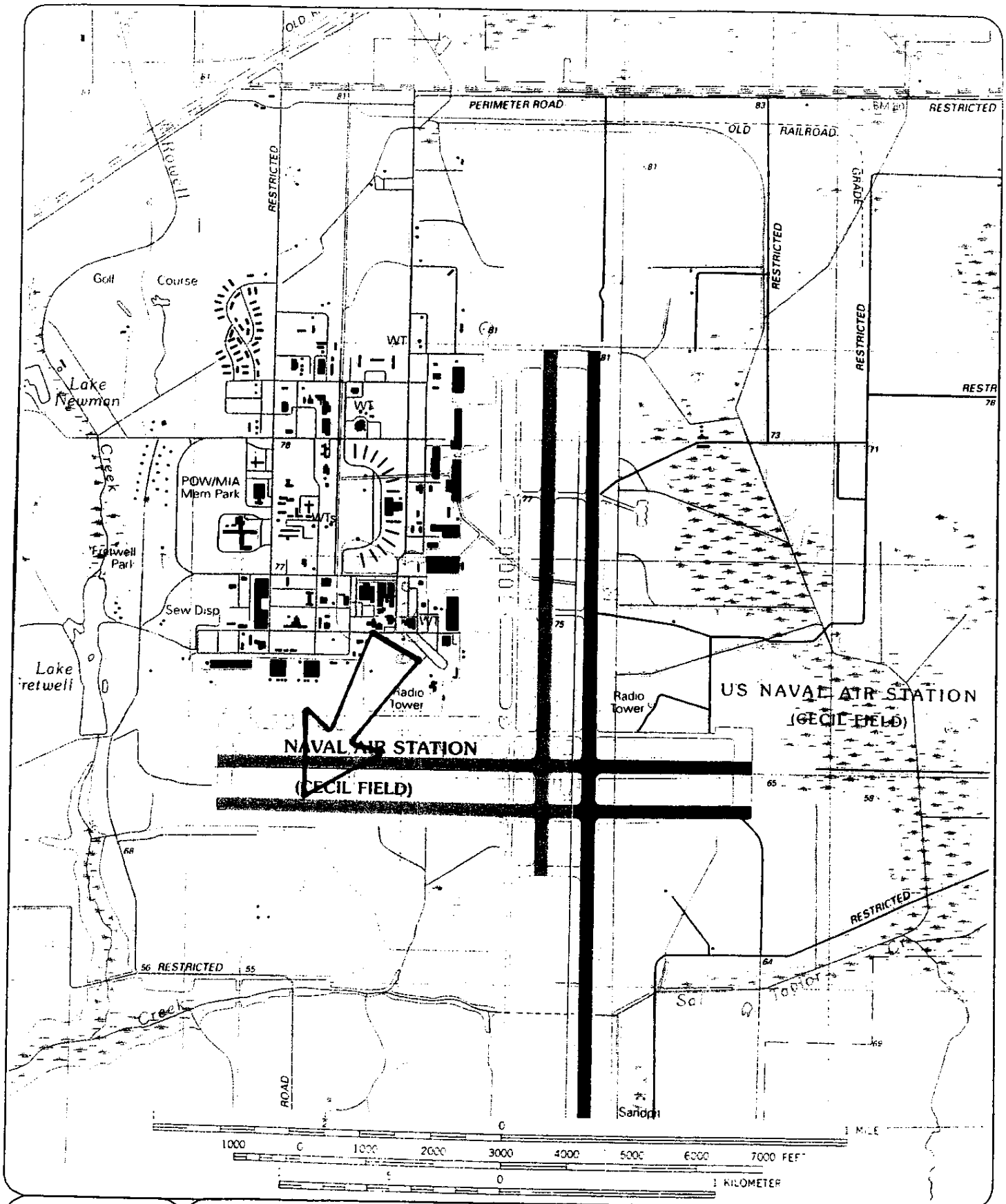


Figure 1. Site Location Map.
"9 RT Lens"
Cecil Field Naval Air Station, Jacksonville, Duval County, Florida
(USGS Topographic Map, Jacksonville Heights and Fiftone Quadrangles)

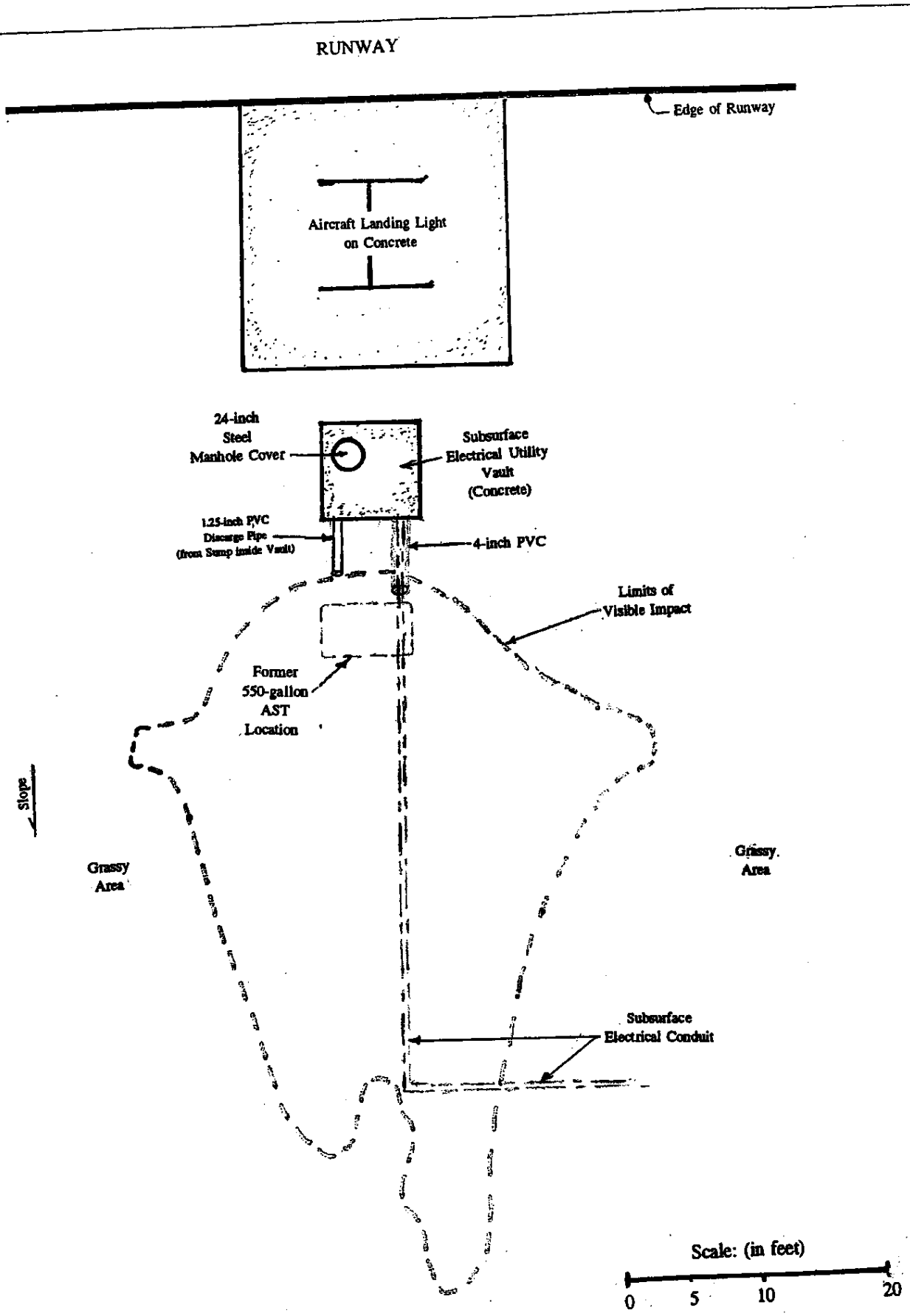


Figure 2. Site Sketch Indicating Limits of Visible Surface Staining.
-9 RT Lens-
Cecil Field Naval Air Station, Jacksonville, Duval County, Florida

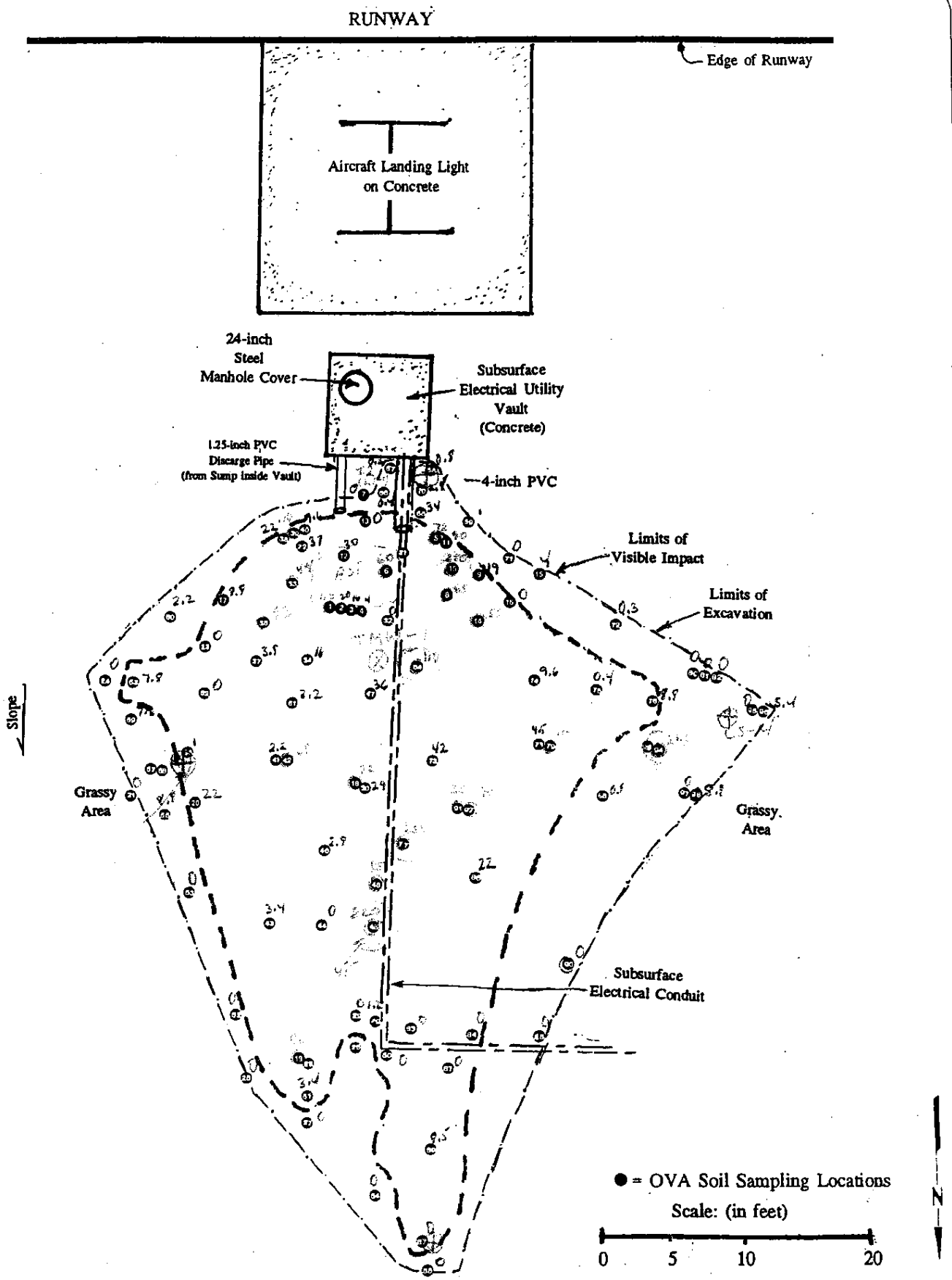


Figure 3. Site Sketch Indicating OVA Soil Sampling Locations and Limits of Excavation.
-9 RT Lens-
Cecil Field Naval Air Station, Jacksonville, Duval County, Florida

Table 1. OVA Soil Screening Results
Remediation of Diesel Fuel Contaminated Soils
-9 RT Lens- ; Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

		ORGANIC VAPOR CONCENTRATION (in parts per million)			
Sample I.D.	Sample Depth (below grade)	Unfiltered	Filtered	Total	Remarks
1	Surficial	160	0	160	Apparent worst case area, at former AST location.
2	1.0 ft	20	0	20	1.0 ft below Sample #1.
3	2.0 ft	16	0	16	2.0 ft below Sample #1.
4	3.0 ft	4.0	0	4.0	3.0 ft below Sample #1.
5	1.0 ft	72	0	72	SW corner of surficially stained area. (cont'd excavating).
6	1.0 ft	60	0	60	SW corner of surficially stained area. (cont'd excavating).
7	Surficial	0	0	0	South side of excavation, center.
8	2.0 ft	65	0	65	SW corner of excavation.
9	1.0 ft	19	0	19	2 ft SW of Sample #8.
10	3.0 ft	250	0	250	Found U/G Utility - electrical cable @ 3 ft BG - free product observed.
11	2.0 ft	90	0	90	1 ft below Sample #5, at water table
12	3.0 ft	30	0	30	Bottom of excavation, below water table.
13	3.0 ft	0	0	0	South wall, SW corner of exc.
14	2.5 ft	55	0	55	SE corner of excavation.
15	2.0 ft	4.0	0	4.0	SW corner of excavation.
16	2.5 ft	0	0	0	East side of visibly stained area.
17	1.0 ft	8.8	0	8.8	East side of visibly stained area.
18	0.5 ft	72	0	72	Continued excavating.
19	0.25 ft	90	0	90	Continued excavating.
20	0.25 ft	22	0	22	Bottom of exc., east side (cont'd excavating.)
21	Surficial	0	0	0	Perimeter of spill area, east side
22	0.75 ft	37	0	37	Bottom of exc.(cont'd excavating)
23	Surficial	0	0	0	SE corner of visible spill area..

Table 1., continued

Sample I.D.	Sample Depth (below grade)	ORGANIC VAPOR CONCENTRATION (in parts per million) Unfiltered	Filtered	Total	Remarks
24	Surficial	0	0	0	Perimeter of spill area, SE corner.
25	Surficial	0	0	0	Perimeter, NE corner of visible staining.
26	Surficial	0	0	0	Perimeter, north side, center.
27	0.5 ft	0	0	0	Perimeter, north side of visible staining.
28	0.5 ft	0	0	0	0.5 ft below Sample #19.
29	0.5 ft	0	0	0	North side, center of spill area.
30	0.75 ft	29	0	29	0.25 ft below Sample #18.
31	2.0 ft	220	0	220	Cable trench, below wire (free product observed).
32	2.5 ft	0	0	0	Bottom, center of exc.,@ water table
33	2.5 ft	49	0	49	East wall, bottom of excavation..
34	2.5 ft	16	0	16	East wall of exc.(cont'd excavating)
35	1.5 ft	82	0	82	East wall of exc.(cont'd excavating)
36	2.0 ft	1.0	0	1.0	East wall of excavation.
37	2.0 ft	3.8	0	3.8	East wall of excavation.
38	1.0 ft	22	0	22	East wall, SE corner of exccavation.
39	2.0 ft	110	0	110	1 ft below Sample #38.
40	2.5 ft	9.6	0	9.6	Bottom of excavation, SE corner.
41	1.0 ft	2.2	0	2.2	5 ft north of #36.
42	2.0 ft	68	0	68	1 ft below Sample #41.
43	2.0 ft	3.4	0	3.4	East wall, north end.
44	2.0 ft	0	0	0	Bottom of exc., @ water table.
45	2.0 ft	220	0	220	Below elec. cables.
46	1.5 ft	2.8	0	2.8	Bottom of exc., at water table.
47	1.5 ft	36	0	36	East wall (cont'd excavating).
48	1.5 ft	85	0	85	Bottom, center of exc., below electrical cables.
49	1.5 ft	1.2	0	1.2	4 ft North of Sample #48.
50	1.5 ft	0	0	0	4 ft East of Sample #49.

Table 1., continued

Sample I.D.	Sample Depth (below grade)	ORGANIC VAPOR CONCENTRATION (in parts per million) Unfiltered	Filtered	Total	Remarks
51	1.0 ft	3.4	0	3.4	East wall of excavation.
52	0.5 ft	0	0	0	East side of excavation.
53	0.5 ft	0	0	0	East side of excavation..
54	0.3 ft	0	0	0	Northeast corner of exc..
55	0.3 ft	0	0	0	North end, center.
56	0.5 ft	0	0	0	East side of excavation.
57	0.5 ft	12	0	12	East side (cont'd excavating).
58	0.75 ft	8.8	0	8.8	0.25 ft below #57.
59	0.75 ft	7.6	0	7.6	5 ft south of #58.
60	0.5 ft	2.2	0	2.2	SE corner of excavation.
61	0.3 ft	3.2	0	3.2	East side of excavation.
62	0.3 ft	0	0	0	4 ft East of #61
63	2.5 ft	7.8	0	7.8	3 ft East of #62.
64	2.5 ft	110	0	110	Bottom of exc., west side, . below water table.
65	2.5 ft	34	0	34	South wall of exc., at 4-inch PVC cable conduit pipe.
66	2.0 ft	0.4	0	0.4	Adjacent to cable conduit,west side.
67	2.0 ft	0.2	0	0.2	Adjacent to cable conduit, east side.
68	2.0 ft	0.8	0	0.8	SW corner of exc., adjacent to cable conduit pipe and utility vault
69	2.0 ft	0	0	0	Adjacent to cable conduit, west side
70	2.5 ft	2.8	0	2.8	Below cable conduit pipe.
71	2.5 ft	0	0	0	South wall of exc., SE corner.
72	2.5 ft	0.3	0	0.3	West wall of excavation
73	2.0 ft	42	0	42	Bottom of exc., west of electrical cable (cont'd excavating).
74	2.0 ft	9.6	0	9.6	Bottom of exc., west side.
75	1.0 ft	0.4	0	0.4	West wall of excavation..

Table 1., continued

Sample I.D.	Sample Depth (below grade)	ORGANIC VAPOR CONCENTRATION (in parts per million) Unfiltered	Filtered	Total	Remarks
76	2.0 ft	8.8	0	8.8	West wall, 1 ft below Sample #75.
77	2.5 ft	250	0	250	Bottom of excavation, below water table.
78	1.5 ft	4.5	0	4.5	West wall, midpoint.
79	2.5 ft	180	0	180	West wall, 1.0 ft below #78.
80	1.0 ft	0	0	0	West wall, 3 ft west of #79.
81	2.0 ft	0	0	0	West wall, 1 ft below #80.
82	3.0 ft	0	0	0	West wall, 1 ft below #81.
83	2.0 ft	0	0	0	North wall of excavation, at 90° turn in electric cables.
84	2.0 ft	0	0	0	Below elec. cables, 5 ft west of #83.
85	2.0 ft	0	0	0	West wall of excavation..
86	2.5 ft	22	0	22	Bottom of excavation, at water table.
87	2.0 ft	0	0	0	West wall, NW corner of excavation, beloe elec. cables.
88	2.0 ft	0	0	0	West wall, NW corner.
89	2.0 ft	8.5	0	8.5	West wall, 10 ft south of #88.
90	2.0 ft	0	0	0	West wall, 10 ft south of #89.
91	1.0 ft	55	0	55	West wall, 1 ft BG.
92	2.5 ft	130	0	130	West wall, 1.5 ft below #91 (cont'd excavating).
93	1.0 ft	32	0	32	8 ft west of #91, 92.
94	2.0 ft	200	0	200	West wall,1 ft below #93.. (cont'd excavating).
95	1.0 ft	0	0	0	West wall, 5 ft west of #93, 94.
96	2.0 ft	5.4	0	5.4	West wall, 1.0 ft below #95.
97	1.0 ft	0	0	0	West wall, 5 ft north of #95, 96.
98	2.0 ft	8.8	0	8.8	West wall, 1 ft below #97. at water table.

Field Meter: Foxboro 128 OVA/FID
Field Calibration Check: Daily, prior to start of field activities.
Description of Procedures: OVA Soil Headspace Analysis

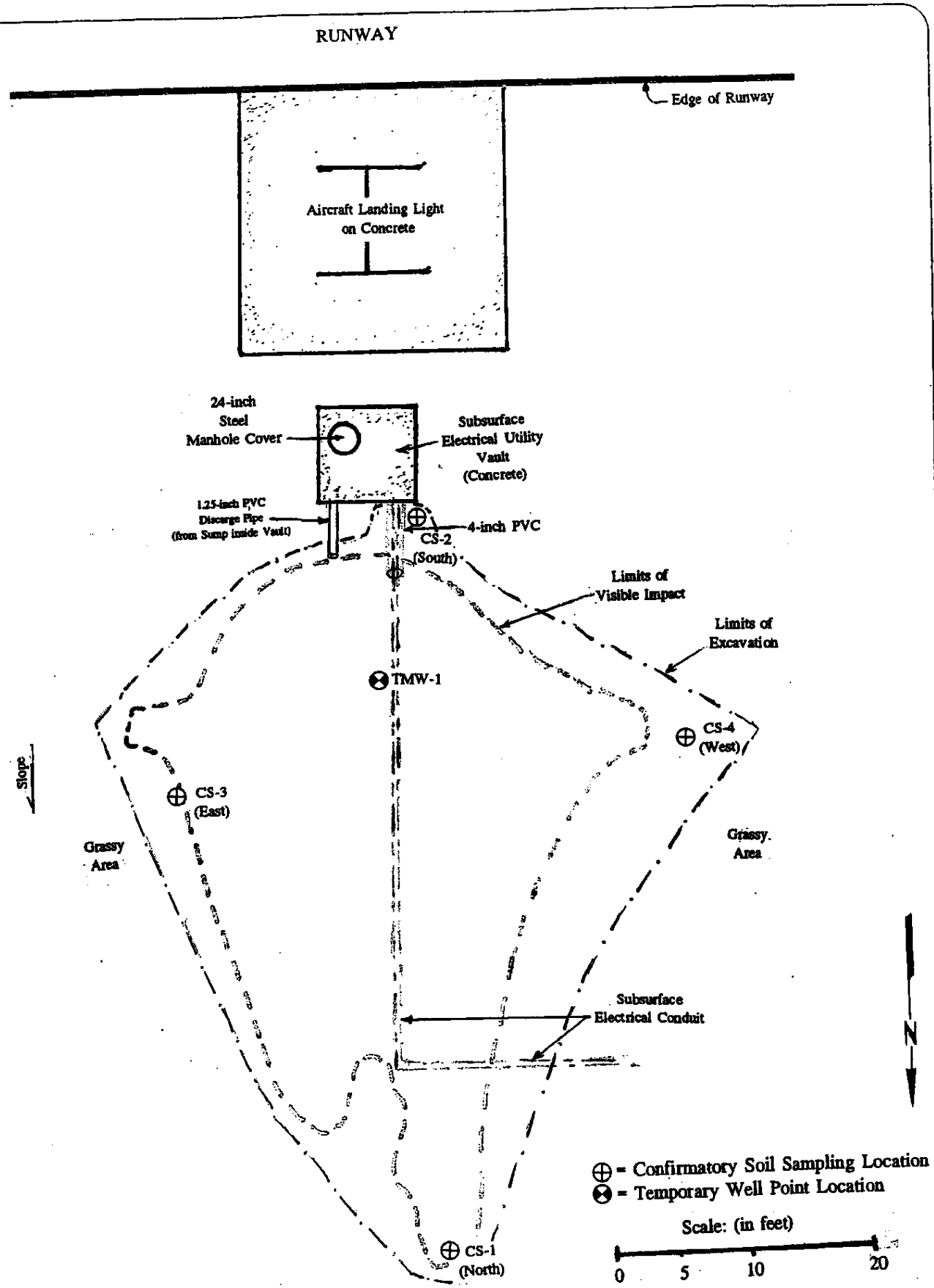


Figure 4. Site Sketch Indicating Confirmatory Soil and Groundwater Sampling Locations.
-9 RT Lens-
Cecil Field Naval Air Station, Jacksonville, Duval County, Florida

ATTACHMENT A

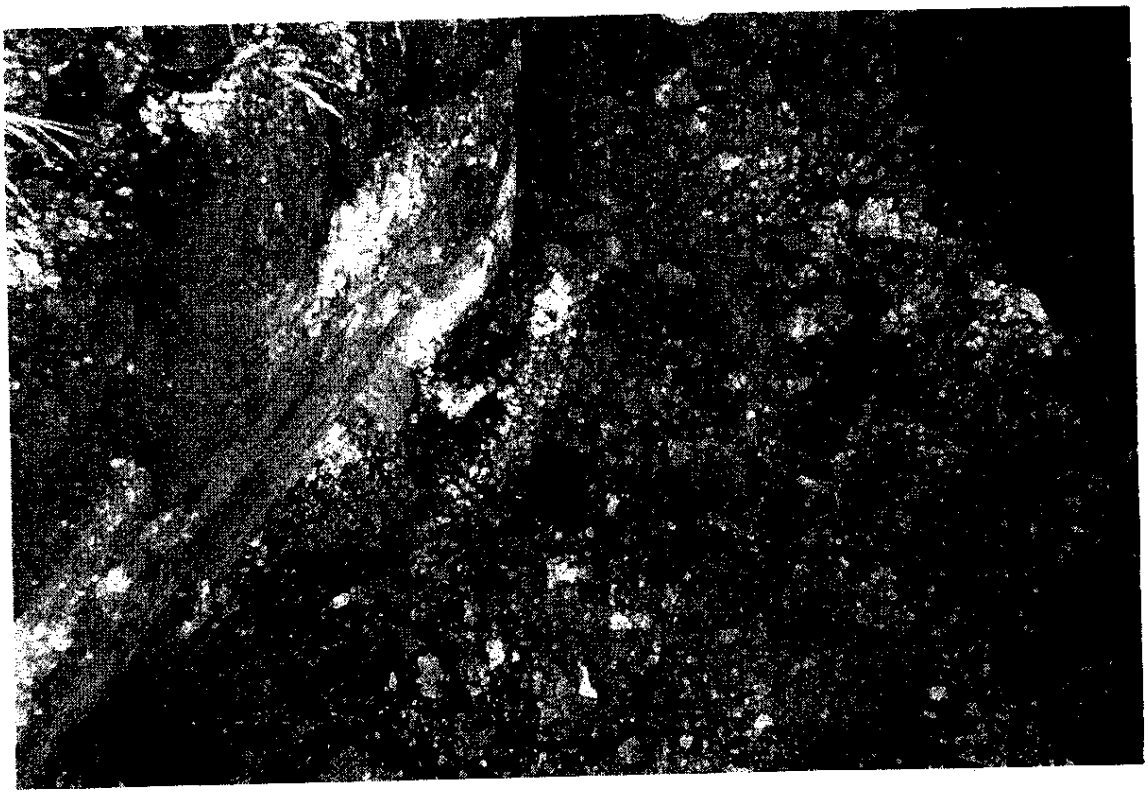
Photodocumentation

1. Photograph, facing generally northwest, overlooking area of discolored soil and grass resulting from diesel fuel spill, prior to start of soil excavation activities, 8/20/98.

2. Photograph, facing generally north/northwest, overlooking area of discolored soil and grass at start of soil excavation activities, 8/20/98.

Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

3. Photograph, facing generally east/southeast, overlooking former auxillary generator AST location at start of soil excavation activities, 8/20/98.



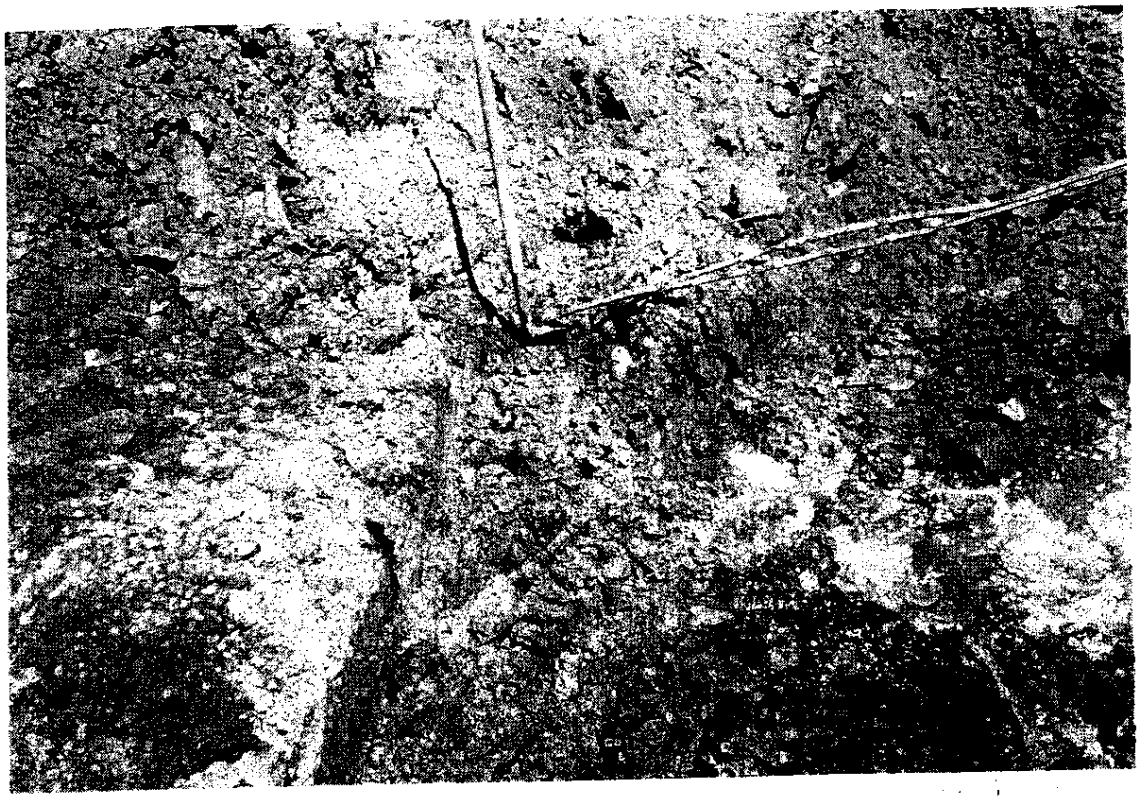
4. Photodocumentation of free product at base of excavation, below former auxillary generator AST location, 8/20/98.

Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

5. Photograph, facing generally west, overlooking area of excavation near former auxillary generator AST location, with accumulation of product evident within excavation, 8/21/98.

6. Photodocumentation of soil excavation activities, and location of subsurface electrical conduits near center of excavation, 8/21/98.

Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida



7. Photodocumentation of product evident along length of electrical conduit, approximately 35 ft north of apparent source area, 8/21/98.

8. Photodocumentation of product evident at base of excavation, along length of electrical conduit cable trench, 8/21/98.

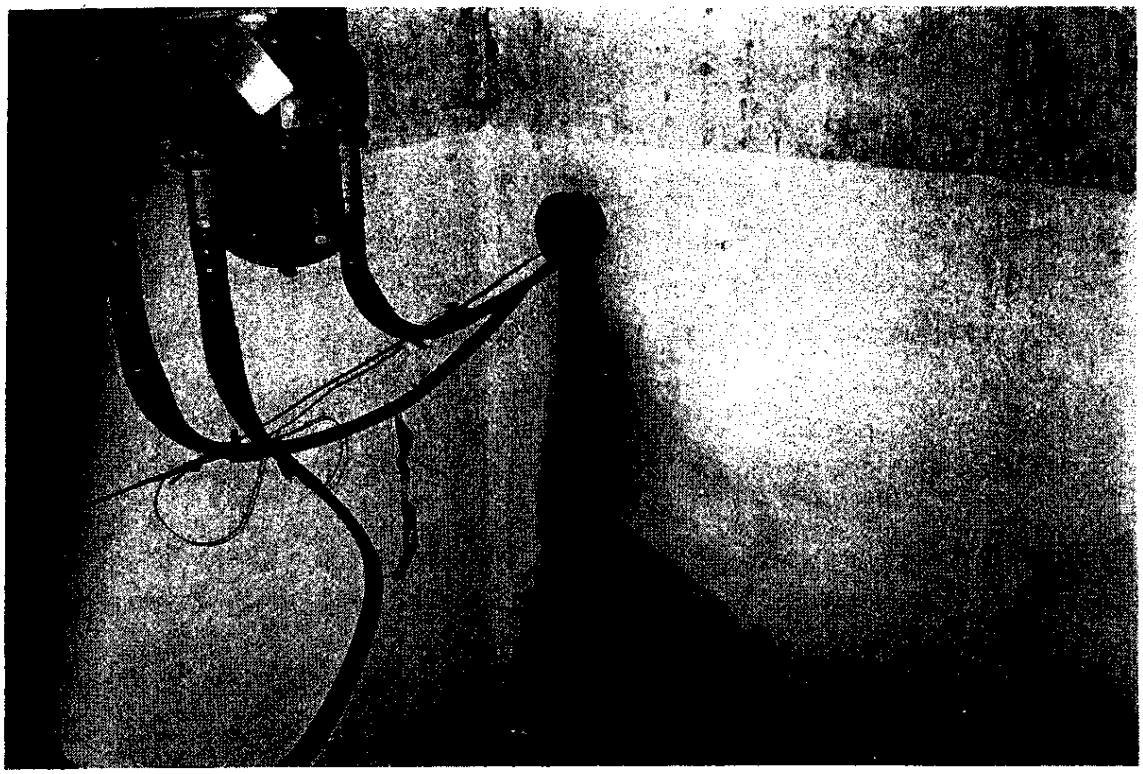
Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

9. Photograph documenting product recovery from area of excavation, 8/21/98.

10. Photograph, facing generally north, overlooking area of excavation following completion of field activities on 8/21/98.

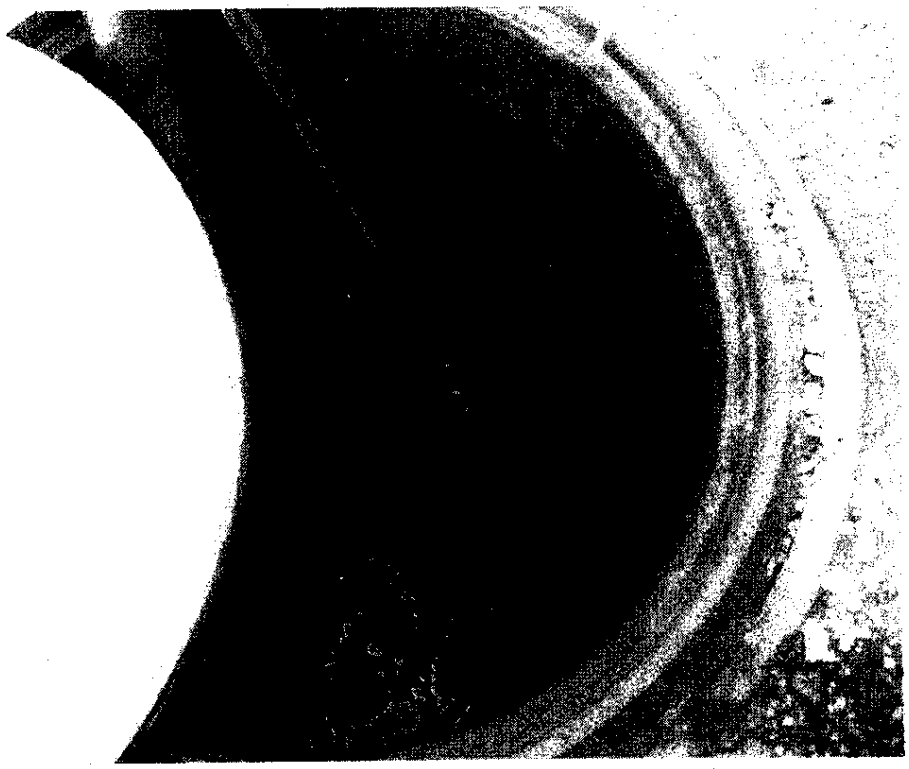
Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

11. Photograph overlooking exposed electrical conduit entering 4-inch PVC pipe, connected to underground utility vault., 8/22/98.



12. Photograph taken within subsurface electrical utility vault, overlooking electrical cable entering vault through cable conduit on north side of vault, approximately 3 ft elow surface grade. Product entered vault through cable conduit.

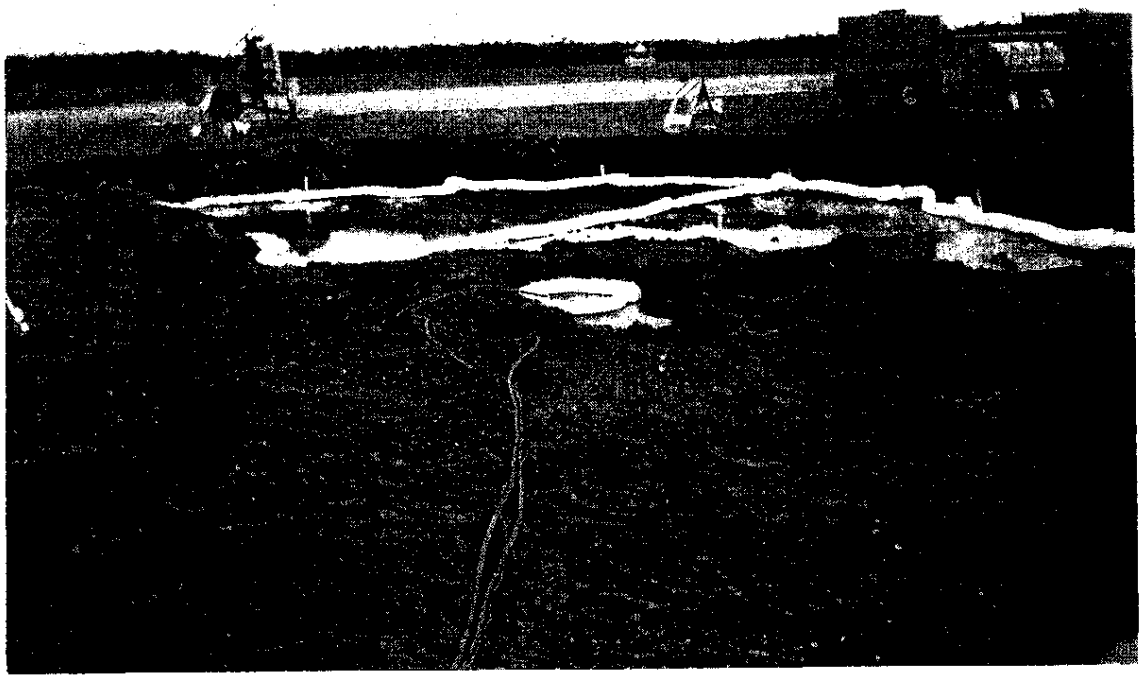
Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida



13. Photograph overlooking open manway into subsurface electrical utility vault. Product appeared to have entered vault through cable conduit, and collected in sump located at southeast corner of utility vault. Product in sump was recovered by vacuum tanker, and vault was pressure-washed and rinsed.

Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

14. Photograph, facing generally northwest, overlooking area of excavation near completion of field activities, 8/22/98.



15. Photograph, facing generally southwest, overlooking area of excavation following completion of soil excavation activities, 8/22/98.

Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

16. Photograph, facing generally south, overlooking temporary well point (TMW-1), documenting groundwater sampling activities, 9/04/98.

Photodocumentation: Diesel Fuel Spill Cleanup. "9 RT Lens"
Cecil Field Naval Air Station
Jacksonville, Duval County, Florida

ATTACHMENT B

Laboratory Results:

Post-Cleanup Confirmatory Soil Analysis
Post-Cleanup Confirmatory Groundwater Analysis

IntraLabs

Page: 1
August 26, 98
Report#: 9808001325
Order #: 80062917
FDEP CompQAP#920323

Mitch Kramer-ERI
251 Levy Rd.
Atlantic Bch, FL 32233

Site location/Project

ERI Project #5237

Sample Id: #1 North
Collected: 08/22/98 13:30:
Received: 08/22/98 10:00
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8021B-LL VOA Compounds in Soils {Low Level}			MEDF 1				
Methyl-tert-butyl-ether	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Benzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Toluene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Chlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Ethylbenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
m & p Xylene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
o- Xylene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,3-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,4-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,2-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
270C PAHs (610) in SOILS and Wastes by GC-MS			MEDF 1				
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	08/24/98	08/25/98	E86349
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Fluorene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Anthracene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Pyrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Chrysene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	08/24/98	08/25/98	E86349
L-PRO (Petroleum Residual Organic)-{SOILS}			MEDF 1				
Petroleum Range Organics (C8-C	BDL	mg/Kg	FL-PRO (DE	1.000	08/24/98	08/25/98	E86349

August 26, 98

Report#: 9808001325
Order #: 80062917
FDEP CompQAP#920323

Mitch Kramer-ERI
251 Levy Rd.
Atlantic Bch, FL 32233

Site location/Project
ERI Project #5237

Sample Id: #1 North
Collected: 08/22/98 13:30:
Received: 08/22/98 10:00
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst

Report Comments:

BDL:Indicates Analyte is Below Detection Limit
MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted,mg/Kg denotes wet weight
62-770:If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

August 26, 98
Report#: 9808001325
Order #: 80062918
FDEP CompQAP#920323

Mitch Kramer-ERI
251 Levy Rd.
Atlantic Bch, FL 32233

Site location/Project
ERI Project #5237

Sample Id: #2 South
Collected: 08/22/98 13:35:
Received: 08/22/98 10:00
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8021B-LL VOA Compounds in Soils {Low Level}			MEDF 1				
Methyl-tert-butyl-ether	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Benzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Toluene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Chlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Ethylbenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
m & p Xylene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
o- Xylene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,3-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,4-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,2-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
8270C PAHs (610) in SOILS and Wastes by GC-MS			MEDF 1				
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	08/24/98	08/25/98	E86349
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Fluorene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Anthracene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Pyrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Chrysene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	08/24/98	08/25/98	E86349
FL-PRO (Petroleum Residual Organic)-{SOILS}			MEDF 1				
Petroleum Range Organics (C8-C	BDL	mg/Kg	FL-PRO (DE	1.000	08/24/98	08/25/98	E86349

August 26, 98

Report#: 9808001325
Order #: 80062918
FDEP CompQAP#920323

Mitch Kramer-ERI
251 Levy Rd.
Atlantic Bch, FL 32233

Site location/Project
ERI Project #5237

Sample Id: #2 South
Collected: 08/22/98 13:35:
Received: 08/22/98 10:00
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst

Report Comments:
BDL:Indicates Analyte is Below Detection Limit
Qualifier following result conforms to FAC 62-160 Table 7
62-770:If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

MEDF: Matrix Effected Dilution Factor
Unless otherwise noted,mg/Kg denotes wet weight

Thomas A. Carr

Thomas A.Carr , Principal

August 26, 98

Report#: 9808001325
Order #: 80062919
FDEP CompQAP#920323

Mitch Kramer-ERI
251 Levy Rd.
Atlantic Bch, FL 32233

Site location/Project
ERI Project #5237

Sample Id: #3 East
Collected: 08/22/98 13:50:
Received: 08/22/98 10:00
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8021B-LL VOA Compounds in Soils {Low Level}			MEDF 1				
Methyl-tert-butyl-ether	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Benzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Toluene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Chlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Ethylbenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
m & p Xylene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
o- Xylene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,3-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,4-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,2-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
270C PAHs (610) in SOILS and Wastes by GC-MS			MEDF 1				
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	08/24/98	08/25/98	E86349
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Fluorene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Anthracene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Pyrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Chrysene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	08/24/98	08/25/98	E86349
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	08/24/98	08/25/98	E86349
L-PRO (Petroleum Residual Organic)-{SOILS}			MEDF 1				
Petroleum Range Organics (C8-C	BDL	mg/Kg	FL-PRO (DE	1.000	08/24/98	08/25/98	E86349

August 26, 98

Report#: 9808001325
Order #: 80062919
FDEP CompQAP#920323

Mitch Kramer-ERI
251 Levy Rd.
Atlantic Bch, FL 32233

Site location/Project
ERI Project #5237

Sample Id: #3 East
Collected: 08/22/98 13:50:
Received: 08/22/98 10:00
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst

Report Comments:

BDL: Indicates Analyte is Below Detection Limit
MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted, mg/Kg denotes wet weight
62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

98108-1325

8-62917-8-62919

Chain of Custody Record

Company Name: Environmental Recovery, Inc

Address: 35 Jefferson Ave

City: Ponte Vedra State: Fla Zip: 32082

Project Name: ERI Project # 5251 Contract 9RT LENS - Confirmatory Soil Samples

Project Manager: Mr Mitch Kramer

LAB ANALYSIS

#	Sample Label	Date Collected	Time Collected	Matr	# of Cont.	PARAMETER	8020 (5035)	8100 (by 8270)	Fla-PRO							5035 COMMENTS / NOTES
#1	North	8/22/98	13:30	Soil	1x40ml Vial 1x250ml Glass		X	X	X						8-62917	29.6/34.7
#2	South	8/22/98	13:35	Soil	1x40ml Vial 1x250ml Glass		X	X	X						8-62918	29.5/34.5 + 29.7/35.2
#3	East	8/22/98	13:50	Soil	1x40ml Vial 1x250ml Glass		X	X	X						8-62919	29.6/35.4

Samples collected by R Moriarty/ESA
Sample containers sealed in ziplock type bags and placed on wet ice for
Samples hand delivered to IntraLabs by Mitchell Kramer

Turnaround Time Request: ___ Standard X Rush

Date Required 8/25/98 see M.S.

Samples Rcvd. on ice? (Yes) No

Relinquished by:	Date / Time	Received by:	Date / Time
R Moriarty	8/22/98 15:0	J. Cam	8/22/98 1500
FED EX	8/24/98 1000	[illegible]	8/24/98 1000

PS231

Page 1 of 1

IntraLabs, Inc.
Address: 1909 Southampton Road
Jacksonville, FL 32207
Phone: (904) 396-6868
Fax: (904) 396-3933

IntraLabs

Page: 1
August 27, 98
Report#: 9808001376
Order #: 80063318
FDEP CompQAP#920323

Mitch-Environmental Recovery
251 Levy Rd.
Atlantic Beach, FL 32233

Site location/Project

ERI Project # 5237

Sample Id: 9RT Lens West
Collected: 08/22/98 17:45:
Received: 08/23/98 09:30
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8021B-LL VOA Compounds in Soils {Low Level}			MEDF	1			
Methyl-tert-butyl-ether	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Benzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Toluene	2.08	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Chlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
Ethylbenzene	2.10	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
m & p Xylene	7.10	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
o- Xylene	1.74	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,3-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,4-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349
1,2-Dichlorobenzene	BDL	ug/Kg	5035/8021B	1.000	08/25/98	08/25/98	E86349

Report Comments:
BDL:Indicates Analyte is Below Detection Limit
MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted,mg/Kg denotes wet weight
62-770:If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

849 Cresswell Lane W. • Jacksonville, FL. 32221 • Phone: (904)781-2225 • Fax: (904)781-9161

August 27, 98

Report#: 9808001376
Order #: 80063322
FDEP CompQAP#920323

Mitch-Environmental Recovery
251 Levy Rd.
Atlantic Beach, FL 32233

Site location/Project

ERI Project # 5237

Sample Id: 9RT Lens West
Collected: 08/22/98 17:45:
Received: 08/23/98 09:30
Collected by:Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8270C PAHs (610) in SOILS and Wastes by GC-MS			MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	08/26/98	08/26/98	E86349
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Fluorene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Anthracene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Pyrene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Chrysene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/26/98	E86349
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	08/26/98	08/26/98	E86349
FL-PRO (Petroleum Residual Organic)-{SOILS}			MEDF	1			
Petroleum Range Organics (C8-C	BDL	mg/Kg	FL-PRO (DE	1.000	08/26/98	08/26/98	E86349

Report Comments:
BDL:Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7 Unless otherwise noted,mg/Kg denotes wet weight
62-770:If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

98/08 — 1376
8 — 63318/63322

Chain of Custody Record

Company Name: Environmental Recovery, Inc
Address: 251 Levy Road
City: Atlantic Beach, State: Florida, Zip: 32233
Project Name: ERI Project # 5237 Cecil Field, N.A.S. 9RT LENS - Confirmatory Soil Samples
Project Manager: Mr Mitch Kramer (904) 241-2200

LAB ANALYSIS

IntraLabs, Inc.
Address: 1909 Southampton Road
Jacksonville, FL 32207
Phone: (904) 396-6868
Fax: (904) 396-3933

#	Sample Label	Date Collected	Time Collected	Matr	# of Cont.	PARAMETER: 8020 (5035)	8100 (by 8270)	FL-PRO (TPH)						COMMENTS / NOTES
#4	9RT LENS - West	8/22/98	17:45	Soil	2x40ml vials & 250ml glass	X		63318						Method 5035 - Vials (Tare wt / Filled wt) Vial #1 Vial #2
							X	X	63322					

Sample collected by R Moriarty / ESA
Sample containers sealed in ziplock type bags and placed on wet ice for transport (RM)
Samples hand delivered to IntraLabs rep on Sunday 8/23/98 (RM)

Turnaround Time Request	Samples Recd. on ice?	Relinquished by:	Date / Time	Received by:	Date / Time
___ Standard	Yes	R Moriarty	8/23/98 15:45	[signature]	8/23/98 15:45
X Rush	No	[signature]	8/24/98 5:00	[signature]	8/24/98 5:00
Date Required 8/26/98		CD		[signature]	08/25/98 0930

Page ____ of ____

IntraLabs

Page: 1
September 11, 98
Report#: 9809000333
Order #: 80067095
FDEP CompQAP#920323

Mitch Kramer - ERI, Inc.
251 Levy Rd.
Atlantic Beach, FL 32233

Site location/Project
Cecil Fld. N.A.S./9 RT LENS

Sample Id: TMW-1
Collected: 09/04/98 10:30:
Received: 09/05/98 10:00
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8021.B VOA {602} Compounds in Water by GC			MEDF	1			
Methyl-tert-butyl-ether	BDL	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
Benzene	BDL	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
Toluene	12.3	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
Chlorobenzene	BDL	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
Ethylbenzene	18.3	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
m & p Xylene	79.2	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
o- Xylene	45.8	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
1,3-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
1,4-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
1,2-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	09/07/98	09/07/98	E86349
8270C PAHs (610) in WATER by GC-MS (Ion Trap)			MEDF	1			
Naphthalene	168	ug/L	3510/8270C	5.000	09/08/98	09/09/98	E86349
2-Methylnaphthalene	484	ug/L	3510/8270C	5.000	09/08/98	09/09/98	E86349
1-Methylnaphthalene	303	ug/L	3510/8270C	5.000	09/08/98	09/09/98	E86349
Acenaphthene	BDL	ug/L	3510/8270C	3.000	09/08/98	09/09/98	E86349
Phenanthrene	48.2	ug/L	3510/8270C	5.000	09/08/98	09/09/98	E86349
Fluoranthene	BDL	ug/L	3510/8270C	0.300	09/08/98	09/09/98	E86349
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	09/08/98	09/09/98	E86349
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	09/08/98	09/09/98	E86349
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	09/08/98	09/09/98	E86349
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	09/08/98	09/09/98	E86349
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	09/08/98	09/09/98	E86349
Fluorene	35.8	ug/L	3510/8270C	5.000	09/08/98	09/09/98	E86349
Anthracene	BDL	ug/L	3510/8270C	0.300	09/08/98	09/09/98	E86349
Pyrene	4.3	ug/L	3510/8270C	0.300	09/08/98	09/09/98	E86349
Chrysene	BDL	ug/L	3510/8270C	5.000	09/08/98	09/09/98	E86349
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	09/08/98	09/09/98	E86349
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	09/08/98	09/09/98	E86349
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	09/08/98	09/09/98	E86349
FL-PRO (Petroleum Residual Organic)-{WATER}			MEDF	1			
Petroleum Range Organics (C8-C	34.4	mg/L	FL-PRO (DE	0.100	09/08/98	09/09/98	E86349

September 11, 98
Report#: 9809000333
Order #: 80067095
FDEP CompQAP#920323

Mitch Kramer - ERI, Inc.
251 Levy Rd.
Atlantic Beach, FL 32233

Site location/Project
Cecil Fld. N.A.S./9 RT LENS

Sample Id: TMW-1
Collected: 09/04/98 10:30:
Received: 09/05/98 10:00
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst

Report Comments:
BDL:Indicates Analyte is Below Detection Limit
MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted,mg/Kg denotes wet weight
62-770:If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

Subu# 98|09-333 (8)
Order # 8-67095

Chain of Custody Record

Company Name: Environmental Recovery, Inc
Address: 251 Levy Road
City: Atlantic Beach State: Fla Zip: 32233
Project Name: CECP Field N.A.S. 9RT LENS ERH#
Project Manager: Mr Mitch Kapusel

LAB ANALYSIS

IntraLabs, Inc.
Address: 1909 Southampton Road
Jacksonville, FL 32207
Phone: (904) 396-6868
Fax: (904) 396-3933

#	Sample Label	Date Collected	Time Collected	Matr	# of Cont.	602	610 (by 8270)	Fla Pb
1	TMW-1	9/4/98	10:30	GW	3x40ml VOAs HCL 1x1000ml Glass w/o 1x1000ml Glass w/o	X	X	X

COMMENTS / NOTES

Samples Collected By RA/ESA

Sample Containers Sealed in Zip lock Type bags and Placed on wet ice for Transport (RA)

Sample Hand Delivered to IntraLab Rep 9/4/98 (RA)

Turnaround Time Request
X Standard
___ Rush
Date Required _____

Samples Recd. on ice?
(Yes) No

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	9/4/98 12:40	[signature]	9/4/98 1240
[signature]	9/4/98 1700	CD	9/4/98 1700
CD		(8) PSL	9/05/98 10:00

Page _____ of _____

esa Well Sampling Log

Date: 9/4/98 Time: 0930 Project Number: Diesel Fuel Spill Clean

Site Location: 9 RT LENS - Cecil Field Naval Air Station

Well I.D. TMW-1 Depth of well (from TOC) 10.06 ft Depth to water 5.04 ft

Relative to Mean Sea Level: Top of Casing (TOC) _____ ft Static Water Level _____ ft

Well Diameter 2 in. Well Construction 5 ft. 0.010 in. slotted screen Casing Material PVC

Well Volume _____ gal Well Vol= 5.64 /H × 1 /r^2 × 0.163= .9 gal/vol

H= 10.60 /TD - 5.04 /DTW= 5.54 ft

Well Type: ___upgradient ___downgradient ___ hot spot _____ other

Longitude _____ Latitude _____

Purge Information:

Purging eqpt: Peristaltic Pump w/ Dedicated Tubing (new) Purge rate: 0.25 gal/min.

Purge Start Time: 10:05 Well Recharge Rate: Good

Volume	Gallons	pH	Conductivity	Temp. (°C)	Time	Other
1	.9	5.74	152	29.5		
2	1.8	5.68	138	28.3		
3	2.7	5.67	131	28.3		
4	3.6	5.59	126	28.2		
Field Parameters						

Purge Stop Time: 10:25 Total gallons purged: 4.5

Sample Information:

Sample Collection Time: 10:30 Sample Collected Using: Teflon Bailer

Order of Sampling	1	2	3	4	5	6
Sample Parameters	602	610	Flashpo			
Sample Containers	3x40ml vials	1x1000ml glass	1x1000ml glass			
pH of Preserved Samples	HCL<2	UNP.	UNP			
Additional Preservative						

Product noted: No (Sheen?) Odor noted: Yes - Petroleum Color: Brown Turbidity: Moderate

Comments: Installed well point @ worst case area, near center of spill, next to U/G electrical

Field Instrument Information:

Instruments Used: Corning pH, conductivity, Digital Temp

Calibration: pH 4.0 ✓ 7.0 ✓ 10.0 ____ Conductivity: 1418 ✓ Time/Date: _____

Ambient Conditions: Warm Sunny

Field Personnel (name/title): Richard Moriarty - Environmental Scientist

Sample delivered to laboratory by: Hand delivered

Person responsible for sample (signature): Richard Moriarty

ATTACHMENT C

Soil Pre-Burn Analysis

IntraLabs

Page: 1
September 01, 98
Report#: 9808001375
Order #: 80063291
FDEP CompQAP#920323

Mitch - Environmental Recovery
251 Levy Rd.
Atlantic Beach, FL 32233

Site location/Project
ERI Project # 5237

Sample Id: Soil Preburn
Collected: 08/22/98 00:00:
Received: 08/25/98 09:30
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
Lead, TCLP	BDL	mg/L	1311/7421	0.005	08/25/98	08/26/98	E86349
Mercury, TCLP (Cold Vapor AA)	BDL	mg/L	1311/7470A	0.000	08/25/98	08/27/98	E86349
TCLP Extraction Procedure	FL.#1		1311 Extra		08/25/98	08/26/98	E86349
6010B TCLP RCRA-6 Metals {No PB or Hg} by ICP			MEDF	1			
Arsenic, TCLP	BDL	mg/L	3050/6010B	0.010	08/25/98	08/26/98	E86349
Barium, TCLP	BDL	mg/L	3050/6010B	0.100	08/25/98	08/26/98	E86349
Cadmium, TCLP	BDL	mg/L	3050/6010B	0.100	08/25/98	08/26/98	E86349
Chromium, TCLP	BDL	mg/L	3050/6010B	0.100	08/25/98	08/26/98	E86349
Selenium, TCLP	BDL	mg/L	3050/6010B	0.010	08/25/98	08/26/98	E86349
Silver, TCLP	BDL	mg/L	3050/6010B	0.100	08/25/98	08/26/98	E86349
8021.B VOA {8020} Compounds in Soil & Waste GC			MEDF	1			
Methyl-tert-butyl-ether	0.18	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
Benzene	BDL	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
Toluene	BDL	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
Chlorobenzene	BDL	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
Ethylbenzene	BDL	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
m & p Xylene	0.14	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
o- Xylene	BDL	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
1,3-Dichlorobenzene	BDL	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
1,4-Dichlorobenzene	BDL	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
1,2-Dichlorobenzene	BDL	mg/Kg	5030/8021B	0.100	08/28/98	08/28/98	E86349
8270C PAHs (610) in SOILS and Wastes by GC-MS			MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
2-Methylnaphthalene	35.7	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
1-Methylnaphthalene	30.8	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Phenanthrene	22.0	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	08/26/98	08/27/98	E86349
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Fluorene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Anthracene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Pyrene	1.98	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Chrysene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	08/26/98	08/27/98	E86349

September 01, 98
Report#: 9808001375
Order #: 80063291
FDEP CompQAP#920323

Mitch - Environmental Recovery
251 Levy Rd.
Atlantic Beach, FL 32233

Site location/Project
ERI Project # 5237

Sample Id: Soil Preburn
Collected: 08/22/98 00:00:
Received: 08/25/98 09:30
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	08/26/98	08/27/98	E86349
Hydrocarbons, (TRPH)	615	mg/Kg	418.1/9073	0.200	08/26/98	08/26/98	E86349

Report Comments:
BDL:Indicates Analyte is Below Detection Limit
MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted,mg/Kg denotes wet weight
62-770:If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

98/08 — 1375
8 — 63291

Chain of Custody Record

Company Name: Environmental Recovery, Inc

Address: 251 Levy Road

City: Atlantic Beach, State: Florida, Zip: 32233

Project Name: ERI Project # 5237 Cecilfield N.A.S, 9RT LENS - Confirmatory Soil Samples

Project Manager: Mr Mitch Kramer (904) 241-2200

LAB ANALYSIS

#	Sample Label	Date Collected	Time Collected	Matr	# of Cont.	PARAMETER: BTEX (8020)	BNA (8270)	TCLP Pesticides	TPH				
1	Soil PREBURN Composite - 9RT LENS	8/22/98		Soil	1x250ml glass	X	X	X	X				

COMMENTS / NOTES

Composite Sample collected by R Moriarty / ESA
Sample container sealed in zip-lock type bag and placed on wet ice for Transport (RM)
Sample Hand Delivered to Intralab Rep on Sunday 8/23/98 (RM)

IntraLabs, Inc.
Address: 1909 Southampton Road
Jacksonville, FL 32207
Phone: (904) 396-6868
Fax: (904) 396-3933

Turnaround Time Request: X Standard ____ Rush
Date Required ____

Samples Recd. on ice? (Yes) No

Relinquished by:	Date / Time	Received by:	Date / Time
R Moriarty	8/23/98 15:45	L Carr	8/23/98 1525
Eugene C Dennis CD	8/24/98 5:00	CD	8/24/98 6:00
		PEL	08/25/98 0930

Page ____ of ____

ATTACHMENT D

Soil Disposal Manifests

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A
Manifest Document No.: 238098
2. Page 1 of 1
DATE: 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215
ERI JOB No: 5237

4. Generator's Phone (904) 779-1178 Attn:

5. Transporter 1 Company Name: Modlin's Trucking, Inc.
6. US EPA ID Number: N / A
A. Transporter's Phone: Ph: (904)284-9448

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Kedesh, Inc. (Soil Recycling)
1871 King Avenue, (US 17-N)
Kingsland, Georgia 31548
10. US EPA ID Number: 295 102 012 361
C. Facility's Phone: Ph: (912)579-9979

11. Waste Shipping Name and Description	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11(a) Diesel fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
ERI Project No: 5237
24 HR EMERGENCY RESPONSE NUMBER: 1(800) 359-3740
(904) 241-2800

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Wastes.

Printed/Typed Name: LeRoy A Long
Signature: LeRoy A Long
Month 10 Day 25 Year 98

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ROBERT KATIBAH
Signature
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Roger Crews
Signature: Roger Crews
Month 10 Day 25 Year 98

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

007542

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

14:58 08/25/98 TICKET NO. 020332

TRUCK NO. 9800
GROSS WT. 70120 LBS TRANSPORTER Modlin
TARE WT (M) 28600 LBS GENERATOR C&I
NET WT. 55520 LBS DRIVER
NET WT. 27.76 TON
CUSTOMER NUMBER: 00
JOB NUMBER: 011733

Weighers Signature
WEIGHMASTER

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A
Manifest Document No.: 237998
2. Page 1 of 1
DATE: 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215
4. Generator's Phone (904) 779-1178 Attn:

ERI JOB No: 5237

5. Transporter 1 Company Name: Modlin's Trucking, Inc.
6. US EPA ID Number: N / A
A. Transporter's Phone: Ph: (904) 284-9448

7. Transporter 2 Company Name:
8. US EPA ID Number:
B. Transporter's Phone:

9. Designated Facility Name and Site Address
Kedesh, Inc. (Soil Recycling)
1871 King Avenue, (US 17-N)
Kingsland, Georgia 31548
10. US EPA ID Number: 295 102 012 361
C. Facility's Phone: Ph: (912) 579-9979

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11(a) Diesel fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

#9803

ERI Project No: 5237
24 HR EMERGENCY RESPONSE NUMBER: 1 (800) 359-3740
(904) 241-2200

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
LeRoy A Long	LeRoy A Long	08	25	98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Randy Jenkins	Randy Jenkins	8	25	98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Peggy Crews	Peggy Crews	8	25	98

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

007533

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

TICKET NO. 020323

12:33 08/25/98

TRUCK NO. 9803
GROSS WT. 70920 LBS TRANSPORTER Modlin
TARE WT (M) 22600 LBS GENERATOR CRI
NET WT. 48320 LBS DRIVER Randy Jenkins
NET WT. 24.16 TON
CUSTOMER NUMBER: 00
JOB NUMBER: 011733

Weighers Signature Peggy Crews

WEIGHMASTER

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A

Manifest Document No.: 237898

2. Page 1 of 1

DATE: 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215

ERI JOB No: 5237

4. Generator's Phone (904) 779-1178 Attn:

5. Transporter 1 Company Name: Modlin's Trucking, Inc.

6. US EPA ID Number: N / A

A. Transporter's Phone: Ph: (904)284-9448

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address
Kedesh, Inc. (Soil Recycling)
1871 King Avenue, (US 17-N)
Kingsland, Georgia 31548

10. US EPA ID Number: 295 102 012 361

C. Facility's Phone: Ph: (912)579-9979

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		Y
b.				
c.				
d.				

GENERATOR

J. Additional Descriptions for Materials Listed Above
11(a) Diesel fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Modlin's #9703

ERI Project No: 5237
24 HR EMERGENCY RESPONSE NUMBER: 1 (800) 359-3740
(904) 241-2200

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: LeRoy A Long — Signature: LeRoy A Long — Month 08 Day 25 Year 98

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: D.J. Martin — Signature: D.J. Martin — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Peggy Crews — Signature: Peggy Crews — Month 08 Day 25 Year 98

ORIGINAL - RETURN TO GENERATOR

007528

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

TICKET NO. 020318

12:10 08/25/98

TRUCK NO. 9703
GROSS WT. 63400 LBS TRANSPORTER Modlin
TARE WT (M) 22600 LBS GENERATOR E&I
NET WT. 40800 LBS DRIVER D. Martin
NET WT. 20.40 TON
CUSTOMER NUMBER: 00
JOB NUMBER: 011733

Weighers Signature Peggy Crews

WEIGHMASTER

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A
Manifest Document No.: 297798
2. Page 1 of 1
DATE: 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215
4. Generator's Phone (904) 779-1178 Attn:

ERI JOB No: 5237

5. Transporter 1 Company Name: Modlin's Trucking, Inc.
6. US EPA ID Number: N / A
A. Transporter's Phone: Ph: (904)284-9448

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Kedesh, Inc. (Soil Recycling)
1871 King Avenue, (US 17-N)
Kingsland, Georgia 31548
10. US EPA ID Number: 295 102 012 361
C. Facility's Phone: Ph: (912)579-9979

11. Waste Shipping Name and Description	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		V
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11(a) Diesel fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

ERI Project No: 5237
24 HR EMERGENCY RESPONSE NUMBER: 1 (800) 359-3740
(904) 241-2200

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: LeRoy A Long
Signature: LeRoy A Long
Month 08 Day 25 Year 98

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ROBERT KAYIBAH
Signature
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Doyle Crews
Signature
Month 8 Day 25 Year 98

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

007525

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

TICKET NO. 020315

11:55 08/25/98

TRUCK NO. 9800
GROSS WT. 70340 LBS TRANSPORTER Modlin
TARE WT (M) 22600 LBS GENERATOR ERT
NET WT. 47740 LBS DRIVER
NET WT. 23.87 TON
CUSTOMER NUMBER: 00
JOB NUMBER: 011733

Weighers Signature
WEIGHMASTER

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A
Manifest Document No.: 23759B
2. Page 1 of 1
DATE: 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215
ERI JOB No: 5237

4. Generator's Phone (904) 779-1178 Attn:

5. Transporter 1 Company Name: Modlin's Trucking, Inc.
6. US EPA ID Number: N / A
7. Transporter's Phone: Ph: (904)284-9448

7. Transporter 2 Company Name
8. US EPA ID Number
8. Transporter's Phone

9. Designated Facility Name and Site Address
Kedesh, Inc. (Soil Recycling)
1871 King Avenue, (US 17-N)
Kingsland, Georgia 31548
10. US EPA ID Number: 295 102 012 361
C. Facility's Phone: Ph: (912)579-9979

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11(a) Diesel fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

TK 9702

ERI Project No:5237
24 HR EMERGENCY RESPONSE NUMBER: 1(800) 359-3740
(904) 241-2200

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
LeRoy A Long	LeRoy A Long	08	25	98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Dwight Moody	Dwight Moody	8	25	98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Peggy Crews	Peggy Crews	8	25	98

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

007514

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

TICKET NO. 020304

09:42 08/25/98

TRUCK NO. 9702
GROSS WT. 72980 LBS TRANSPORTER Modlin
TARE WT (M) 22600 LBS GENERATOR E.R.T. Cecil Fields
NET WT. 50380 LBS DRIVER D. Moody
NET WT. 25.19 TON
CUSTOMER NUMBER: 011733
JOB NUMBER: 011733

Weighers Signature Peggy Graves

WEIGHMASTER

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A
Manifest Document No.: 237698
2. Page 1 of 1
DATE: 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215
ERI JOB No: 5237
4. Generator's Phone (904) 779-1178 Attn:

5. Transporter 1 Company Name: Modlin's Trucking, Inc.
6. US EPA ID Number: N / A
A. Transporter's Phone: Ph: (904) 284-9448

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Kedesh, Inc. (Soil Recycling)
1871 King Avenue, (US 17-N)
Kingsland, Georgia 31548
10. US EPA ID Number: 295 102 012 361
C. Facility's Phone: Ph: (912) 579-9979

11. Waste Shipping Name and Description

	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		Y
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
11(a) Diesel fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

#602

ERI Project No: 5237
24 HR EMERGENCY RESPONSE NUMBER: 1(800) 359-3740
(904) 241-2800

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of hazardous wastes.

Printed/Typed Name: LeRoy A Long
Signature: LeRoy A Long
Month 08 Day 25 Year 98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: James Allison
Signature: James Allison
Month 08 Day 25 Year 98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19

Printed/Typed Name: Peggy Creson
Signature: Peggy Creson
Month 08 Day 25 Year 98

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

007513

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

09:41 08/25/98 TICKET NO. 020303

TRUCK NO. 602
GROSS WT. 72740 LBS TRANSPORTER Modlin
TARE WT (M) 23100 LBS GENERATOR ERT Cecil Fields
NET WT. 49640 LBS DRIVER J. Lacas
NET WT. 24.82 TON
CUSTOMER NUMBER: 011733
JOB NUMBER: 011733

Weighers Signature Peggy Cilwa

WEIGHMASTER

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A

Manifest Document No.: 237498

2. Page 1 of 1

DATE - 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215

ERI JOB No: 5237

4. Generator's Phone (904) 779-1178 Attn:

5. Transporter 1 Company Name: Modlin's Trucking, Inc.

6. US EPA ID Number: N / A

A. Transporter's Phone: Ph: (904) 284-9448

7. Transporter 2 Company Name:

8. US EPA ID Number:

B. Transporter's Phone:

9. Designated Facility Name and Site Address
Kedesh, Inc. (Soil Recycling)
1871 King Avenue, (US 17-N)
Kingsland, Georgia 31548

10. US EPA ID Number: 295 102 012 361

C. Facility's Phone: Ph: (912) 579-9979

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11(a) Diesel fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

#9803

ERI Project No: 5237
24 HR EMERGENCY RESPONSE NUMBER: 1(800) 359-3740
(904) 241-2200

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste

Printed/Typed Name: LeRoy A Long
Signature: LeRoy A Long
Month Day Year: 08 25 98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Randy Jenkins
Signature: Randy Jenkins
Month Day Year: 8 25 98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Reggy Crews
Signature: Reggy Crews
Month Day Year: 8 25 98

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

007510

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

TICKET NO. 020300

09:32 08/25/98

TRUCK NO. 9803
GROSS WT. 72240 LBS TRANSPORTER Modlin
TARE WT (M) 22600 LBS GENERATOR ERI Cecil Fields
NET WT. 49640 LBS DRIVER Randy Jenkins
NET WT. 24.82 TON
CUSTOMER NUMBER: 011733
JOB NUMBER: 011733

Weighers Signature Peggy Crews

WEIGHMASTER

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A
Manifest Document No.: 237398
2. Page 1 of 1
DATE: 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215
ERI JOB No: 5237

4. Generator's Phone: (904) 779-1178 Attn:

5. Transporter 1 Company Name: Modlin's Trucking, Inc.
6. US EPA ID Number: N / A
A. Transporter's Phone: Ph: (904)284-9448

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Kedeth, Inc. (Soil Recycling)
1871 King Avenue, (US 17-N)
Kingsland, Georgia 31548
10. US EPA ID Number: 295 102 012 361
C. Facility's Phone: Ph: (912)579-9979

11. Waste Shipping Name and Description

	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11(a) Diesel fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

ERI Project No:5237
24 HR EMERGENCY RESPONSE NUMBER: 1(800) 359-3748
(904) 241-2200

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: LeRoy A Long
Signature: LeRoy A Long
Month 08 Day 25 Year 98

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Peggy Crews
Signature: Peggy Crews
Month 08 Day 25 Year 98

GENERATOR
TRANSPORTER
FACILITY

T/S/D/F COPY

007511

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

09:34 08/25/98 TICKET NO. 020301

TRUCK NO. 9703
GROSS WT. 77680 LBS TRANSPORTER Modlin
TARE WT (M) 22600 LBS GENERATOR EBJ Cecil Fields
NET WT. 55080 LBS DRIVER Ed Martin
NET WT. 27.54 TON
CUSTOMER NUMBER: 011733
JOB NUMBER: 011733 Weighers Signature Peggy Irwin
WEIGHMASTER

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N / A

Manifest Document No.: 237298

2. Page 1 of 1

DATE: 24AUG98

3. Generator's Name and Mailing Address
Aggreko, Inc. / Lon Coleman/Jones
P.O. BOX 124 NAS Cecil Field, Jacksonville, FL 32215

ERI JOB No: 5237

4. Generator's Phone (904) 779-1178 Attn:

5. Transporter 1 Company Name: Modlin's Trucking, Inc.

6. US EPA ID Number: N / A

A. Transporter's Phone: Ph: (904) 284-9448

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address
Kedesh, Inc. (Soil Recycling)
1871 King Avenue, (UB 17-N)
Kingsland, Georgia 31548

10. US EPA ID Number: 295 102 012 361

C. Facility's Phone: Ph: (912) 579-9979

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NONREGULATED MATERIAL PETROLEUM CONTAMINATED SOIL	001	DT		Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
(1)(a) Diesel Fuel contaminated soil recovered from Aggreko generator diesel fuel spill at NAS Cecil Field, next to runway 9R lens.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

#9800

ERI Project No: 5237
24 HR EMERGENCY RESPONSE NUMBER: 1 (800) 359-3740
(904) 241-2200

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: LeRoy A Long — Signature: LeRoy A Long — Month 08 Day 25 Year 98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: ROBERT KATIBAH — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Peggy Crews — Signature: Peggy Crews — Month 8 Day 25 Year 98

GENERATOR

TRANSPORTER

FACILITY

ORIGINAL - RETURN TO GENERATOR

007509

Underground Utility Contractors, Inc.
901 Highway 17 North
Kingsland, GA 31548
(912) 729-7555
(912) 882-3183

09:30 08/25/98 TICKET NO. 020299

TRUCK NO: 9800
GROSS WT. 74220 LBS TRANSPORTER Modlin
TARE WT (M) 22600 LBS GENERATOR EBI
NET WT. 51620 LBS DRIVER Cecil Fields
NET WT. 25.81 TON
CUSTOMER NUMBER: 011733
JOB NUMBER: 011733

Weighers Signature Peggy Graves
WEIGHMASTER

ATTACHMENT E

Oily Wastewater Disposal Manifest

Please print or type
(Form designed for use on elite (12-pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FL5170022474
Manifest Document No. 235178
2. Page 1 of 1

3. Generator's Name and Mailing Address
AGGREKO, INC. / LON COLEMAN / JONES
P.O. BOX 124 NAS Cecil Field, Jacksonville, Florida 32215
4. Generator's Phone (904) 779-1178

E.R.I. # 5237

5. Transporter 1 Company Name
ENVIRONMENTAL RECOVERY INC.
6. US EPA ID Number
FLD092718576
A. Transporter's Phone
(904) 241-2200

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
ENVIRONMENTAL RECOVERY INC.
251 LEDY ROAD
Atlantic Beach, Florida 32233
10. US EPA ID Number
FLD092718576
C. Facility's Phone
(904) 241-2200

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Industrial Waste Water (Ground Water)	001	TT	EST 03000	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
H.P. Recover from Aggreko generator diesel fuel spill at Cecil Field, North Runway 9R.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
24 HR. Emergency Number: (904) 241-2200
(800) 359-3740

GENERATOR

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: LeRoy A Long
Signature: LeRoy A Long
Month 08 Day 22 Year 98

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Richard C Grimes
Signature: Richard C. Grimes
Month 08 Day 22 Year 98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name
Signature
Month Day Year

FACILITY

19. Discrepancy Indication Space
Received 3000 Gal

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Julian F. Candown
Signature: Julian F. Candown
Month 08 Day 22 Year 98

Printed by J.J. KELLER & ASSOCIATES, INC.

APPENDIX B

SITE ASSESSMENT ACTIVITIES: 9RT LENS SITE

9 RT - Aug - 1998 - Diesel Spill of 250-300 gallons

① Location map

- Visual observation 45' W x 55' L
- diesel fuel in utility vault
- headspace sampling

Excavated soils OVA < 10ppm or until 2.5' below original grade = ▽ ⊗ that time.

Free product ⊗ ▽ in some areas of the excavation & along the length of an underground conduit that bisects spill area N-S.

- 3000 gallons of petroleum-contact water was generated.

FINAL EXCAVATION - 60' in length (N-S - widest)
45' width (E-W - widest)

Depth = 0.25' "surficially" impacted
3.0' worst case areas.

160 yds³ (224.4 tons)

4 conf. samples CS-1 - CS-4
1 = N wall d/g position ⊗ 2' bls just above ▽
2 = S wall adj. utility vault d/g 2.5' bls just above ▽
3 = Bottom of excavation @ midpoint of E wall - 2.25' bls just ↑ ▽
4 = Bottom of midpoint of W wall 2.25' just above ▽

8020/8100/8270/FL-PRO

⊗ Compared to residential vs. leach.

AFTER BACKFILL TMW-1 "worst case"
> GCTL = xylene; naph; 1-methylnaph; 2-meth/g naph; TRPH

Wrote do a CAR letter

PROBLEMS - 8270 detection limits in soil = 330ppb!
+ are too high

J.A. Jones - Package - needs to be a Site Assessment Report / 62-770 w/ minimum requirements

3 temp wells - 4/22/99 - Sampled 4/23/99 - 602/610/FL-PRO - (good DLs)

- GW @ time of investigation = 6.64' - 7.02 vs 2.50 in 1998)

#10 - 250 - 3 ft
#64 - 110 - 2.5 ft
#45 - 220 - 2.0 ft
#94 - 220 - 2.0 ft
#77 - 250 - [illegible]

- Soil

J.A. JONES
ENVIRONMENTAL
SERVICES

August 4, 1999

Florida Department of Environmental Protection (FDEP)
Bureau of Petroleum Storage Systems
Twin Towers Office Building
2600 Blair Stone Road, MS 4540
Tallahassee, Florida 32399-2400

Attention: Mr. Michael Deliz, P.G.

Reference: 9 RT Lens Site
Cecil Field Naval Air Station, Jacksonville, Florida
JAJESC/LCF/090-0041/003

Subject: Site Assessment Activities

BUREAU OF WASTE CLEANUP
AUG 09 1999
TECHNICAL REVIEW SECTION

Dear Mr. Deliz:

On behalf of Aggreko, J.A Jones Environmental Services Company (J.A. Jones) is pleased to submit Site Assessment Report for the above referenced site in accordance with your request dated January 1999. Please copy both Aggreko and J.A. Jones with your response.

If you have any questions or require additional information, please contact us at (904) 363-0911 or by facsimile at (904) 363-1421.

Sincerely,

J.A. JONES ENVIRONMENTAL SERVICES COMPANY

Jaime L. Smith
Scientist

Enclosures

cc: Mr. Huey Bourque with Aggreko
Mr. Bob Lacy with Lon Colman/Jones
Project File

8936 Western Way, Suite 10
Jacksonville, FL 32256
Telephone 904 363 0911
Facsimile 904 363 1421

J.A. JONES
ENVIRONMENTAL
SERVICES

May 20, 1999

Aggreko
4607 W. Admiral Doyle Drive
New Lberia, LA 70560

Attention: Mr. Huey Bourque

Reference: 9 RT Lens Site
Cecil Field Naval Air Station, Jacksonville, Florida
JAJESC/LCF/090-001/002

Subject: Site Assessment Activities

Dear Mr. Bourque:

J.A. Jones Environmental Services Company (J.A. Jones) has completed the sampling activities as outlined in the approved proposal, dated April 5, 1999. This report summarizes the results of the field activities and sampling analytical results completed at the above referenced site in April 1999.

Limitations

The services and work described in this report were performed in accordance with generally accepted professional engineering and consulting principles and practices. No other warranty, expressed or implied, is made. The services were performed in accordance with our agreement with our client. This report is prepared exclusively for the use and information of our client unless otherwise specified herein. Any reliance on the contents of this report by a third party is at such party's sole risk.

Opinions, findings, and recommendations presented and contained in this report shall apply to conditions when services and work were performed and are intended for the client, purposes, locations, time frames, and specific project parameters as indicated herein. We do not assume responsibility for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services and work as described herein. We do not warrant the accuracy of information furnished or supplied by others, or the use of separate or segregated portions of the report.

8936 Western Way, Suite 10
Jacksonville, FL 32256
Telephone 904 363 0911
Facsimile 904 363 1421

Site Background Information

9 RT Lens site is a portable landing light unit located on the north side of Runway 9 at the Cecil Field Naval Air Station in Jacksonville, Duval County, Florida. In August 1998, a diesel fuel spill of approximately 250 to 300 gallons was discharged as a result of a loose fuel line connection on a temporary aboveground storage tank (AST).

Environmental Science Associated, Inc. (ESA), was contracted by Environmental Recovery, Inc. (ERI) to survey and delineate the contaminated soils which resulted from the AST spill. Visual observation confirmed that the contamination measured approximately 45 ft in width (from east to west) and approximately 55 ft in length (from north to south). Excavation of the impacted soils was initiated on August 20, 1998 and continued through August 22, 1998. The soil was transported to a permitted soil thermal treatment facility located in Kingsland, Georgia for disposal. The analytical results of soil sampling completed immediately after the source removal of petroleum-contaminated soils indicated that no soil contamination was present at the site. The analytical results of groundwater sampling completed immediately after the soils removal indicated the potential presence of petroleum-contaminated groundwater in the source area. The groundwater analytical results from this report are summarized in **Table 2** of this letter report. The field activities and sampling results completed by ESA and ERI were submitted in a report entitled Remediation of Diesel Fuel Contaminated Soils, dated September 1998.

In April 1999, J.A. Jones was contracted by the client, Aggreko, to complete site assessment activities to determine the presence or absence of petroleum-contaminated groundwater at the site. This letter report summarizes the site assessment activities.

Groundwater Sampling

On April 22, 1999, J.A. Jones installed three temporary monitoring wells, TMW-1, TMW-2 and TMW-3. Please note that the temporary monitoring well, TMW-1, was installed in the same general location as the previous TMW-1 installed by ERI in August 1998. During monitoring well installation, soil samples were collected at one-foot intervals and screened for total organic vapors using a Flame Ionization Detector-Organic Vapor Analyzer (FID-OVA). No organic vapors were detected during well installation activities. The temporary monitoring well details are provided as an **Attachment**.

On April 23, 1999, groundwater samples were collected from the wells and submitted to a state-certified laboratory for analysis using EPA Methods 602, 610 and Fl-Pro. All sampling activities were conducted in accordance with J.A. Jones' FDEP-approved Comprehensive Quality Assurance Plan (Comp QAP) No. 940157. In addition, groundwater elevations were taken from the three monitoring wells to determine the direction of groundwater flow.

The groundwater elevation data is summarized in **Table 1** and presented on **Figure 1**. Groundwater analytical results are summarized in **Table 2** and presented on **Figure 2**. A copy of groundwater analytical results are provided as an **Attachment**.

Conclusion/Recommendations

Based upon the groundwater level data collected on February 16, 1999, the surficial groundwater flow direction is to the north (**Figure 1**).

The sampling results were evaluated in accordance with FDEP groundwater cleanup target levels (CTLs) listed in Table V in Chapter 62-770, Florida Administrative Code (FAC). No groundwater contaminant concentrations exceeded the state CTLs. Therefore, J.A. Jones recommends a No Further Action be implemented at this site (NFA).

If you have any questions or require additional information, please contact me at (904) 363-0911 or by fax at (904) 363-1421.

Sincerely,

J.A. JONES ENVIRONMENTAL SERVICES COMPANY

Julie Vontz

Julie Vontz
Project Engineer

JoAnne (Pearl) Snelson, P.E. 5/20/99
Project Manager
Florida Reg. No. 0051612

Attachments

cc: Mr. Bob Lacy with Lon Coleman/Jones
Project File

TABLE 1: GROUNDWATER ELEVATION TABLE

Facility Name: 9 RT LENS

All Measurements = Feet
No Data = Blank

WELL NO.	TMW-1			TMW-2			TMW-3											
DIAMETER	2"			2"			2"											
WELL DEPTH	10'			10'			10'											
SCREEN INTERVAL	5-10'			5-10'			5-10'											
TOC ELEVATION	25.00			25.18			24.54											
DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP									
04/23/99	17.99	7.01		18.16	7.02		17.90	6.64										

TABLE 2: GROUNDWATER MONITORING WELL ANALYTICAL SUMMARY

Facility Name: 9 RT Lens

Not Sampled = NS
Analytical Results = ppb

Sample Location	Sample Date	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	Napthalene	TRPH (mg/l)	
TMW-1*	08/22/98	BDL	12.3	18.3	120.0	BDL	168	34.4	
TMW-1	04/21/99	<1	<1	4.1	19.95	<1	<5	0.7	
TMW-2	04/21/99	<1	<1	<1	<2	<1	<5	0.1	
TMW-3	04/21/99	<1	<1	<1	<2	<1	<5	0.1	
FDEP CTLs		1	40	30	20	35	20	5	
FDEP NADSCs		100	400	300	200	350	200	50	

* TMW-1 was installed by ERI .

Cleanup Target Levels (CTLs) = the concentrations for the chemical(s) of concern listed in Table V, Chapter 62-770, FAC.

Natural Attenuation Default Source Concentrations (NADSCs) = the concentrations for the chemical(s) of concern listed in Table IX, Chapter 62-770, FAC.

TEMPORARY MONITORING COMPLETION DETAILS

PROJECT:	9 Rt Lens	CONSTRUCTION TYPE:	Soil Boring
SITE LOCATION:	Jacksonville, FL	CASING DIAMETER:	2"
BORING NUMBER:	TMW-1	CASED INTERVAL:	Ground surface-5 ft bls
PROJECT MANAGER:	Julie Vontz	SCREEN SLOT SIZE:	0.01 in
LOGGED BY:	Gary Hedger	SCREENED INTERVAL:	5-10 ft bls
DRILLING CONTRACTOR:	J.A. Jones	SAND PACK:	20/30 grade
DRILLER'S NAME:	David Poweski	SAND INTERVAL:	Ground service-10 ft bls
DRILLING METHOD:	Hand Auger	BENTONITE INTERVAL:	NA
BORING DEPTH:	10'	GROUT INTERVAL:	NA
BOREHOLE DIAMETER:	4"	WELL DEVELOPMENT VOLUME:	2.5 gallons
DEPTH TO GROUNDWATER:	7'	APPROXIMATE FLOW RATE:	< 1 gpm
COMPLETION DATE:	4/22/99	CLARITY OF PURGE WATER:	Slightly cloudy

DEPTH (ft bls)	LITHOLOGIC DESCRIPTION	Total Organic Vapors
1	Light Grey, Fine Sand	0
2	Brown, Fine Sand	0
3	Brown, Fine Sand	0
4	Brown, Fine Sand	0
5	Brown, Fine Sand	0
6	Brown, Fine Sand	0
7	Wet	0
8	White, Fine Sand (Wet)	0
9	White, Fine Sand (Wet)	0
10	White, Fine Sand (Wet)	

Total Organic Vapors = Total Unfiltered - Filtered Organic Vapors
Measured using Foxboro Flame Ionization Detector (FID)

TEMPORARY MONITORING COMPLETION DETAILS

PROJECT:	9 Rt Lens	CONSTRUCTION TYPE:	Soil Boring
SITE LOCATION:	Jacksonville, FL	CASING DIAMETER:	2"
BORING NUMBER:	TMW-2	CASED INTERVAL:	Ground surface-5 ft bls
PROJECT MANAGER:	Julie Vontz	SCREEN SLOT SIZE:	0.01 in
LOGGED BY:	Gary Hedger	SCREENED INTERVAL:	5-10 ft bls
DRILLING CONTRACTOR:	J.A. Jones	SAND PACK:	20/30 grade
DRILLER'S NAME:	David Poweski	SAND INTERVAL:	Ground surface-10 ft bls
DRILLING METHOD:	Hand Auger	BENTONITE INTERVAL:	NA
BORING DEPTH:	10'	GROUT INTERVAL:	NA
BOREHOLE DIAMETER:	4"	WELL DEVELOPMENT VOLUME:	2.5 gallons
DEPTH TO GROUNDWATER:	7'	APPROXIMATE FLOW RATE:	< 1 gpm
COMPLETION DATE:	4/22/99	CLARITY OF PURGE WATER:	Slightly cloudy

DEPTH (ft bls)	LITHOLOGIC DESCRIPTION	Total Organic Vapors
1	Light Grey, Fine Sand	0
2	Brown, Fine Sand	0
3	Brown, Fine Sand	0
4	Brown, Fine Sand	0
5	Brown, Fine Sand	0
6	Brown, Fine Sand	0
7	Wet	0
8	Wet	0
9	Wet	0
10	Wet	0

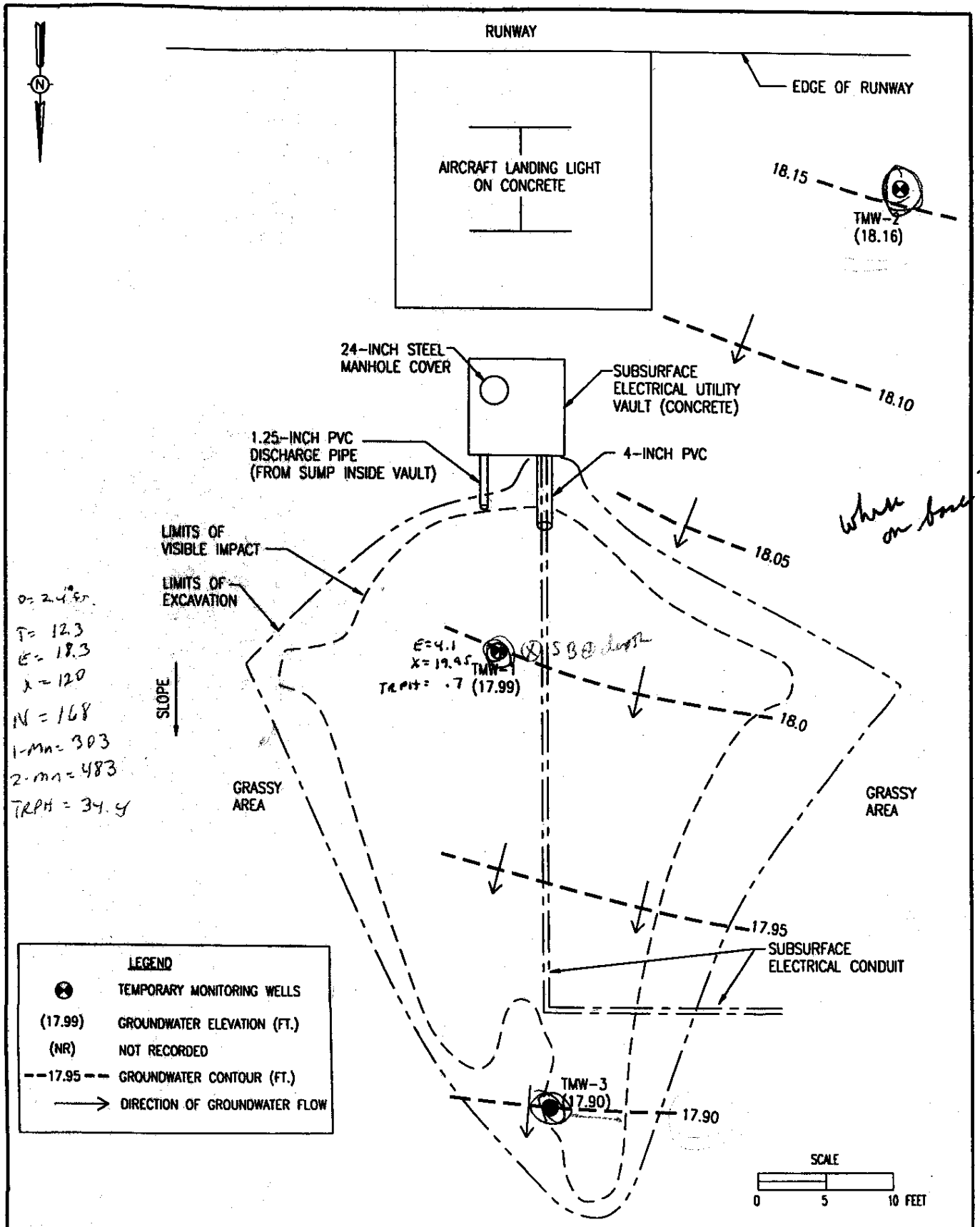
Total Organic Vapors = Total Unfiltered - Filtered Organic Vapors
Measured using Foxboro Flame Ionization Detector (FID)

TEMPORARY MONITORING COMPLETION DETAILS

PROJECT:	9 Rt Lens	CONSTRUCTION TYPE:	Soil Boring
SITE LOCATION:	Jacksonville, FL	CASING DIAMETER:	2"
BORING NUMBER:	TMW-3	CASED INTERVAL:	Ground surface-5 ft bls
PROJECT MANAGER:	Julie Vontz	SCREEN SLOT SIZE:	0.01 in
LOGGED BY:	Gary Hedger	SCREENED INTERVAL:	5-10 ft bls
DRILLING CONTRACTOR:	J.A. Jones	SAND PACK:	20/30 grade
DRILLER'S NAME:	David Poweski	SAND INTERVAL:	Ground surface-10 ft bls
DRILLING METHOD:	Hand Auger	BENTONITE INTERVAL:	NA
BORING DEPTH:	10'	GROUT INTERVAL:	NA
BOREHOLE DIAMETER:	4"	WELL DEVELOPMENT VOLUME:	2.5 gallons
DEPTH TO GROUNDWATER:	7'	APPROXIMATE FLOW RATE:	< 1 gpm
COMPLETION DATE:	4/22/99	CLARITY OF PURGE WATER:	Slightly cloudy

DEPTH (ft bls)	LITHOLOGIC DESCRIPTION	Total Organic Vapors
1	Brown, Fine Sand	0
2	Brown, Fine Sand	0
3	Brown, Fine Sand	0.2
4	Brown, Fine Sand	0.4
5	Brown, Fine Sand	0
6	Brown, Fine Sand	0
6.5	Wet	0
7	Wet	0
8	Wet	0
9	Wet	0
10	Wet	0

Total Organic Vapors = Total Unfiltered - Filtered Organic Vapors
Measured using Foxboro Flame Ionization Detector (FID)
Measured using Foxboro Flame Ionization Detector (FID)



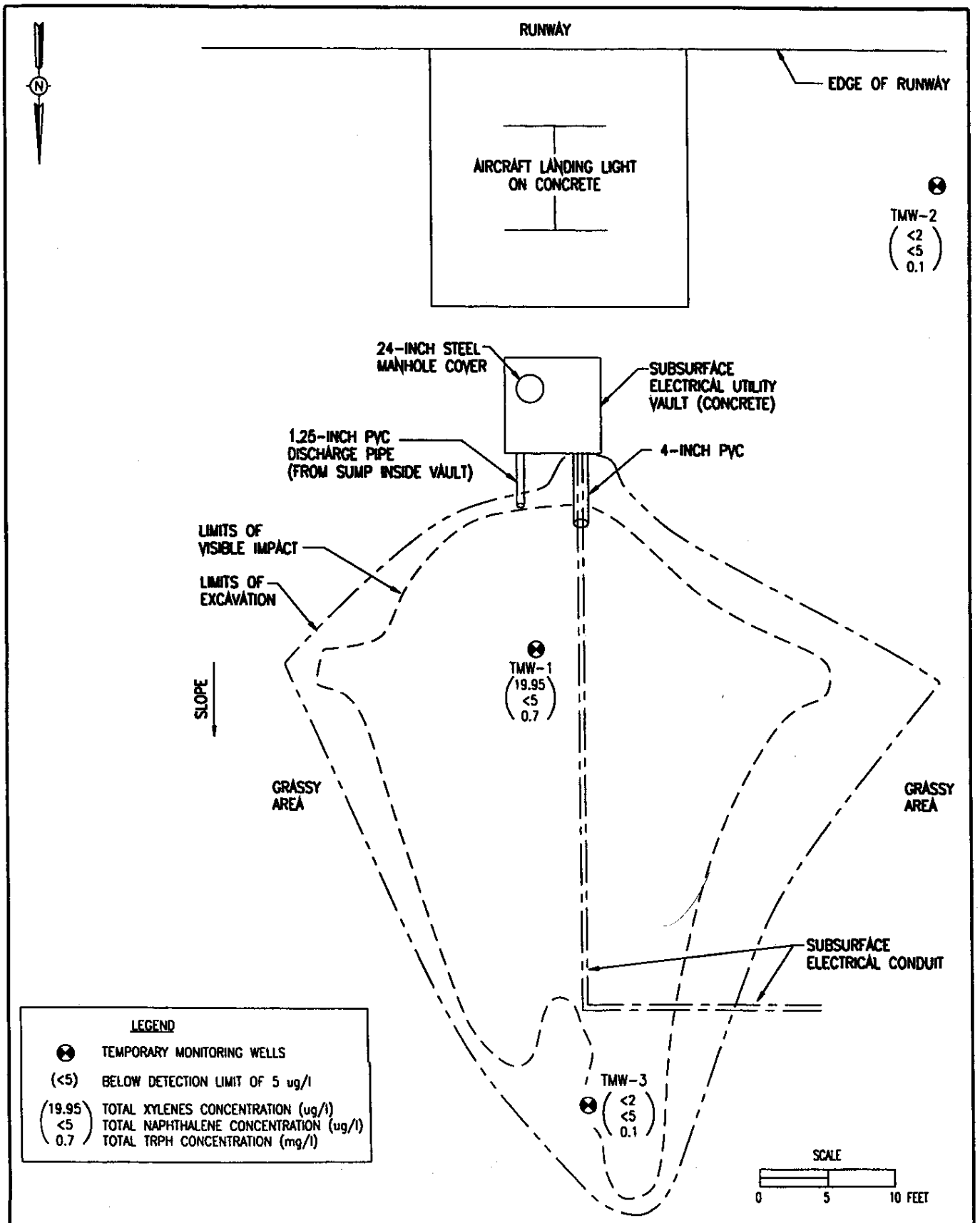
J.A. JONES ENVIRONMENTAL SERVICES

9R+LENS
CECIL FIELD NAVAL STATION
JACKSONVILLE, FLORIDA

SITE MAP WITH GROUNDWATER ELEVATIONS, APRIL 23, 1999

FIGURE 1

PROJECT NO. 90



J.A. JONES
ENVIRONMENTAL SERVICES

9R+LENS
CECIL FIELD NAVAL STATION
JACKSONVILLE, FLORIDA

SITE MAP WITH GROUNDWATER CONCENTRATIONS, APRIL 23, 1999

FIGURE 2

PROJECT NO. 90

IntraLabs

Page: 1
April 29, 99
Report#: 9904001248
Order #: 90036759
FDEP CompQAP#920323

Julie Vontz-J. A. Jones
8936 Western WAy, Suite 10
Jacksonville, FL 32256

Site location/Project
Cecil Field /Low Coleman

Sample Id: TMW-2
Collected: 04/23/99 13:46:0
Received: 04/24/99 09:30
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8021.B VOA {602} Compounds in Water by GC			MEDF 1				
Methyl-tert-butyl-ether	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
Benzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
Toluene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
Chlorobenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
Ethylbenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
m & p Xylene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
o- Xylene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
1,3-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
1,4-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
1,2-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
8270C PAHs (610) in WATER by GC/MC (Ion Trap)			MEDF 1				
Naphthalene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
2-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
1-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
Acenaphthene	BDL	ug/L	3510/8270C	3.000	04/26/99	04/27/99	E86349
Phenanthrene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
Fluoranthene	BDL	ug/L	3510/8270C	0.300	04/26/99	04/27/99	E86349
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	04/26/99	04/27/99	E86349
Fluorene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
Anthracene	BDL	ug/L	3510/8270C	0.300	04/26/99	04/27/99	E86349
Pyrene	BDL	ug/L	3510/8270C	0.300	04/26/99	04/27/99	E86349
Chrysene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	04/26/99	04/27/99	E86349
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
FL-PRO (Petroleum Residual Organic)-{WATER}			MEDF 1				
Petroleum Range Organics (C8-C	0.1	mg/L	FL-PRO (DE	0.100	04/26/99	04/27/99	E86349

April 29, 99

Report#: 9904001248
Order #: 90036759
FDEP CompQAP#920323

Julie Vontz-J. A. Jones
8936 Western WAy, Suite 10
Jacksonville, FL 32256

Site location/Project
Cecil Field /Low Coleman

Sample Id: TMW-2
Collected: 04/23/99 13:46:0
Received: 04/24/99 09:30
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst

Report Comments:
BDL:Indicates Analyte is Below Detection Limit
MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted,mg/Kg denotes wet weight
62-770:If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

April 29, 99

Report#: 9904001248
Order #: 90036760
FDEP CompQAP#920323

Julie Vontz-J. A. Jones
8936 Western WAy, Suite 10
Jacksonville, FL 32256

Sample Id: TMW-1
Collected: ~~04/23/99~~ 14:09:0
Received: 04/24/99 09:30
Collected by: Client

Site location/Project

Cecil Field /Low Coleman

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8021.B VOA {602} Compounds in Water by GC			MEDF 1				
Methyl-tert-butyl-ether	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
Benzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
Toluene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
Chlorobenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
Ethylbenzene	4.10	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
m & p Xylene	14.4	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
o- Xylene	5.55	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
1,3-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
1,4-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
1,2-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	04/26/99	04/26/99	E86349
8270C PAHs (610) in WATER by GC/MC (Ion Trap)			MEDF 1				
Naphthalene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
2-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
1-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
Acenaphthene	BDL	ug/L	3510/8270C	3.000	04/26/99	04/27/99	E86349
Phenanthrene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
Fluoranthene	BDL	ug/L	3510/8270C	0.300	04/26/99	04/27/99	E86349
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	04/26/99	04/27/99	E86349
Fluorene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
Anthracene	BDL	ug/L	3510/8270C	0.300	04/26/99	04/27/99	E86349
Pyrene	BDL	ug/L	3510/8270C	0.300	04/26/99	04/27/99	E86349
Chrysene	BDL	ug/L	3510/8270C	5.000	04/26/99	04/27/99	E86349
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	04/26/99	04/27/99	E86349
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	04/26/99	04/27/99	E86349
FL-PRO (Petroleum Residual Organic)-{WATER}			MEDF 1				
Petroleum Range Organics (C8-C	0.7	mg/L	FL-PRO (DE	0.100	04/26/99	04/27/99	E86349

April 29, 99
Report#: 9904001248
Order #: 90036760
FDEP CompQAP#920323

Julie Vontz-J. A. Jones
8936 Western WAy, Suite 10
Jacksonville, FL 32256

Site location/Project
Cecil Field /Low Coleman

Sample Id: TMW-1
Collected: 04/23/99 14:09:0
Received: 04/24/99 09:30
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst

Report Comments:
BDL: Indicates Analyte is Below Detection Limit
MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted, mg/Kg denotes wet weight
62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

99/04-1248 9-36759/36760

Chain of Custody Record

P.O. # 90-5090 JOB # 90-001

Company Name: J.A. JONES ENVIRONMENTAL SER.

Address: 8936 WESTERN WAY SUITE 10

City: JAX State: FL Zip:

Project Name: CECIL FIELD/LOW COLEMAN

Project Manager: JULIE VONTZ

LAB ANALYSIS

IntraLabs, Inc.
Address: 1909 Southampton Road
Jacksonville, FL 32207
Phone: (904) 396-6868
Fax: (904) 396-3933

#	Sample Label	Date Collected	Time Collected	Matr	# of Cont.	PARAMETER 602	610	FL PRO						COMMENTS / NOTES
	TMW-2	4-23-99	1346		4	2	1	1						36759
	TMW-1	4-23-99	1409		4	2	1	1						36760

Turnaround Time Request: ___/___ Standard ____ Rush Date Required _____

Samples Recd. on ice? Yes No

Relinquished by:	Date / Time	Received by:	Date / Time
W.R. Hedges	4-23-99 1535	Eugene Cline	4/23/99 15:50
Eugene Cline	4/23/99 17:00	FEDEX	4/23/99 17:00
FEDEX		[illegible]	04/24/99 0930

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IntraLabs

Page: 1
May 11, 99
Report#: 9905000256
Order #: 90040512
FDEP CompQAP#920323

Julie Vontz-J. A. Jones
8936 Western Way, Suite 10
Jacksonville, FL 32256

Sample Id: TMW-3
Collected: 04/23/99 02:00:0
Received: 05/06/99 09:30
Collected by: Client

Site location/Project
9 RT Lena-Cecil Field

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst
8021.B VOA {602} Compounds in Water by GC			MEDF	1			
Methyl-tert-butyl-ether	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
Benzene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
Toluene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
Chlorobenzene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
Ethylbenzene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
m & p Xylene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
o- Xylene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
1,3-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
1,4-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
1,2-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	05/06/1999	05/06/1999	E86349
8270C PAHs (610) in WATER by GC/MC (Ion Trap)			MEDF	1			
Naphthalene	BDL	ug/L	3510/8270C	5.000	05/07/1999	05/08/1999	E86349
2-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	05/07/1999	05/08/1999	E86349
1-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	05/07/1999	05/08/1999	E86349
Acenaphthene	BDL	ug/L	3510/8270C	3.000	05/07/1999	05/08/1999	E86349
Phenanthrene	BDL	ug/L	3510/8270C	5.000	05/07/1999	05/08/1999	E86349
Fluoranthene	BDL	ug/L	3510/8270C	0.300	05/07/1999	05/08/1999	E86349
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	05/07/1999	05/08/1999	E86349
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	05/07/1999	05/08/1999	E86349
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	05/07/1999	05/08/1999	E86349
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	05/07/1999	05/08/1999	E86349
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	05/07/1999	05/08/1999	E86349
Fluorene	BDL	ug/L	3510/8270C	5.000	05/07/1999	05/08/1999	E86349
Anthracene	BDL	ug/L	3510/8270C	0.300	05/07/1999	05/08/1999	E86349
Pyrene	BDL	ug/L	3510/8270C	0.300	05/07/1999	05/08/1999	E86349
Chrysene	BDL	ug/L	3510/8270C	1.000	05/07/1999	05/08/1999	E86349
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	05/07/1999	05/08/1999	E86349
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	05/07/1999	05/08/1999	E86349
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	05/07/1999	05/08/1999	E86349
FL-PRO (Petroleum Residual Organic)-{WATER}			MEDF	1			
Petroleum Range Organics (C8-C	0.1	mg/L	FL-PRO (DE	0.100	05/06/1999	05/07/1999	E86349

May 11, 99

Report#: 9905000256
Order #: 90040512
FDEP CompQAP#920323

Julie Vontz-J. A. Jones
8936 Western Way, Suite 10
Jacksonville, FL 32256

Site location/Project
9 RT Lens-Cecil Field

Sample Id: TMW-3
Collected: 04/23/99 02:00:0
Received: 05/06/99 09:30
Collected by: Client

PARAMETER	Result	Units	Method	Det.Limit	Extracted	Analyzed	Analyst

Report Comments:
BDL:Indicates Analyte is Below Detection Limit
MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted,mg/Kg denotes wet weight
62-770:If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Thomas A. Carr

Thomas A.Carr , Principal

19/05 — 256

9 — 40512

Chain of Custody Record

Company Name: JA Jones

Address:

City: Jacksonville State: Fl Zip:

Project Name: QRT Leas - Cecil Field

Project Manager: Julie Voots

LAB ANALYSIS

IntraLabs, Inc.
Address: 1909 Southampton Road
Jacksonville, FL 32207
Phone: (904) 396-6868
Fax: (904) 396-3933

#	Sample Label	Date Collected	Time Collected	Matr	# of Cont.	PARAMETER 602	610	EDB							COMMENTS / NOTES
	TMW-3	4/23/99	2:00pm	GW	1	✓	✓	✓							

Turnaround Time Request	Samples Rec'd on ice?	Relinquished by:	Date / Time	Received by:	Date / Time
✓ Standard	(Yes) No	Kristen Morgan	5/5/99 1030	J. Cam	5/5/99 1030
Rush		J. Cam	5/5/99 1720	Fed Ex	5/5/99 1720
Date Required _____		Fed Ex		[illegible]	05/06/99 0730

Page _____ of _____

APPENDIX C

SOIL BORING LOGS

Tetra Tech NUS, Inc.

PROJECT NAME:	9RT Lens	BORING No:	CEF-9RT-~~SB~~ SB MB-001
PROJECT NUMBER:	N0486.GH0050190	DATE:	1-7-02
DRILLING COMPANY:	Not applicable	GEOLOGIST:	Mervin Dale
DRILLING RIG:	Not applicable	Assistants:	D. Siefken/L. Middleton

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1					BR	FINE SAND, BROWN			0			
	1-2					BK	BLACK FINE SAND, SOME SILT			0			
	2-3					BK	BLACK FINE SAND, SOME SILT			0			
	3-4					DARK BR	DARK BROWN FINE SAND, SOME SILT			0			
	4-5					BR	BROWN, SILTY ~~SAN~~ FINE SAND			0			
	5-6					BR	BROWN SILTY, FINE SAND		▼ H_2O Level ~ 6 ft	0			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Hand auger borings

Converted to Well: Yes _____ No X Well I.D. #: n/a

Tetra Tech NUS, Inc.

PROJECT NAME: 9RT Lens
PROJECT NUMBER: N0486.GH0050190
DRILLING COMPANY: Not applicable
DRILLING RIG: Not applicable

BORING No: CEF-9RT-SB002-MD
DATE: 1-7-02
GEOLOGIST: Mervin Dale
Assistants: D. Siefken/L. Middleton

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1					BR	BROWN, FINE SAND			0			
	1-2					DK BR	DARK BROWN, FINE SAND SOME SILT			0			
	2-3					DK BR	DARK BROWN, FINE SAND, SOME SILT			0			
	3-4					DK BR	DARK BROWN, FINE SAND SOME SILT			0			
	4-5						" "			0			
	5-6					LT BR	LIGHT BROWN TO TAN FINE SAND		▼ H2O ~ 6 Ft	0			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Hand auger borings

Converted to Well: Yes ____ No X Well I.D. #: n/a

Tetra Tech NUS, Inc.

PROJECT NAME:	9RT Lens	BORING No:	CEF-9RT-SB003
PROJECT NUMBER:	N0486.GH0050190	DATE:	1-7-02
DRILLING COMPANY:	Not applicable	GEOLOGIST:	Mervin Dale
DRILLING RIG:	Not applicable	Assistants:	D. Siefken/L. Middleton

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1					BK	BLACK, FINE SAND SOME SILT			0			
	1-2					BR	BROWN, FINE SAND SOME SILT			0			
	2-3						" "			0			
	3-4					BR	~~LIGHT~~ DS BROWN, FINE SAND			0			
	4-5					BR	BROWN FINE SAND		▼ H_2O level ~ 5.	0			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Hand auger borings

Converted to Well: Yes ____ No X Well I.D. #: n/a

Tetra Tech NUS, Inc.

PROJECT NAME: 9RT Lens
PROJECT NUMBER: N0486.GH0050190
DRILLING COMPANY: Not applicable
DRILLING RIG: Not applicable

BORING No: CEF-9RT-~~SB~~ SB 004-~~04~~ MD
DATE: 1-7-02
GEOLOGIST: Mervin Dale
Assistants: D. Siefken/L. Middleton

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1					BK	BLACK FINE SAND SOME SILT			0			
	1-2					DK BR	DARK BROWN FINE SAND SOME SILT			0			
	2-3					BR	BROWN FINE SAND SOME SILT			0			
	3-4					BR	BROWN FINE SAND			0			
	4-5					LT BR	LT BR, FINE SAND		▼ H2O level ~ 5.0	0			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Hand auger borings

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No X Well I.D. #: n/a

Tetra Tech NUS, Inc.

PROJECT NAME: 9RT Lens
PROJECT NUMBER: N0486.GH0050190
DRILLING COMPANY: Not applicable
DRILLING RIG: Not applicable

BORING No: CEF-9RT-SB-025-04
DATE: 1-7-02
GEOLOGIST: Mervin Dale
Assistants: D. Siefken/L. Middleton

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1					DK BR	DARK BROWN SAND, FINE SOME SILT			0			
	1-2					BK	BLACK, FINE SAND SOME SILT			0			
	2-3					BN	BROWN, FINE SAND SOME SILT			0			
	3-4					DK BN	DARK BROWN, FINE SAND SOME SILT			0			
	4-5					LT BN	LIGHT BROWN, FINE SAND		▼ H_2O level ~ 5.0	0			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Hand auger borings

Converted to Well: Yes ____ No X Well I.D. #: n/a

APPENDIX D

SOIL SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.GH0050190

[] Surface Soil
[x] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-9RT-SU-001-04
Sample Location: CEF-9RT-SU-001
Sampled By: D. Siefken/L. Middleton
C.O.C. No.: CTO121-010+02A

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1-7-02 Time: 1520 Method: HAND AUGER Monitor Reading (ppm): 0	4.0 ft	DARK BROWN	FINE SAND, SOME SILT

COMPOSITE SAMPLE DATA:

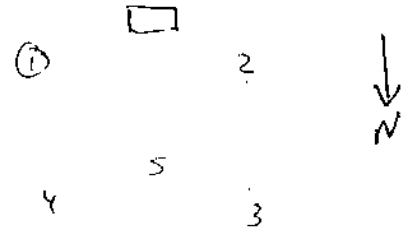
	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: NA Method: NA Monitor Readings (Range in ppm): NA	No composites collected			

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	LAB
BTEX and MTBE	(SW846 8260B)	(3) 5gr. Encore samplers	X	Accura
PAHs	(SW846 8310)	(1) 8oz. Glass Amber Jar	X	Accura
TRPH	(FL-PRO)	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.: NO DUP.

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.GH0050190

[] Surface Soil
[x] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-9RT-SB-002-04
Sample Location: CEF-9RT-SB-002
Sampled By: D. Siefken/L. Middleton
C.O.C. No.: CTO121-010702A

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1-7-02 Time: 1330 Method: HAND AUGER Monitor Reading (ppm): 0	4.0 ft	DARK BROWN	FINE SAND. SOME SILT DRY

COMPOSITE SAMPLE DATA:

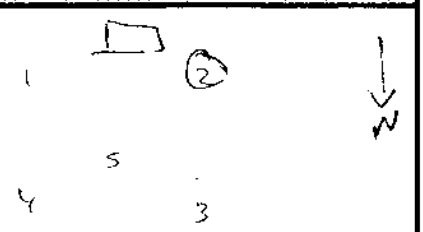
	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: NA Method: NA Monitor Readings (Range in ppm): NA	No composites collected			

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	LAB
BTEX and MTBE	(SW846 8260B)	(3) 5gr. Encore samplers	X	Accura
PAHs	(SW846 8310)	(1) 8oz. Glass Amber Jar	X	Accura
TRPH	(FL-PRO)	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.GH0050190

[] Surface Soil
[x] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-9RT-SU-003-04
Sample Location: CEF-9RT-SU003-
Sampled By: D. Siefken/L. Middleton
C.O.C. No.: CTO121-0107024

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1-7-02 Time: 1540 Method: HANDAUGER Monitor Reading (ppm):	3.5 FT	BROWN	FINE SAND, DRY

COMPOSITE SAMPLE DATA:

	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: NA Method: NA Monitor Readings (Range in ppm): NA	No composites collected			

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	LAB
BTEX and MTBE	(SW846 8260B)	(3) 5gr. Encore samplers	X	Accura
PAHs	(SW846 8310)	(1) 8oz. Glass Amber Jar	X	Accura
TRPH	(FL-PRO)	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:

SEE CAD DRAWING FOR DETAIL

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

CEF-9RT-MS/MSD-003-04

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.GH0050190

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-9RT-SU-004-04
Sample Location: CEF-9RT-SB-
Sampled By: D. Siefken/L. Middleton
C.O.C. No.: CTO121- 010702A

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1-7-02 Time: 1550 Method: HAND AUGER Monitor Reading (ppm): 0	3.5 ft	BROWN	FINE SAND, DRY

COMPOSITE SAMPLE DATA:

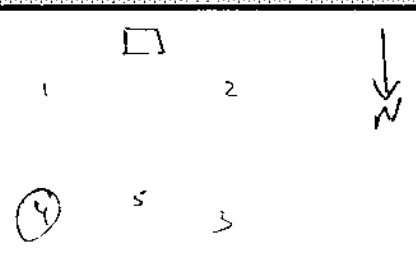
	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: NA Method: NA Monitor Readings (Range in ppm): NA	No composites collected			

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	LAB
BTEX and MTBE	(SW846 8260B)	(3) 5gr. Encore samplers	X	Accura
PAHs	(SW846 8310)	(1) 8oz. Glass Amber Jar	X	Accura
TRPH	(FL-PRO)	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.GH0050190

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-9RT-SU-005-04
Sample Location: CEF-9RT-SU-005-04
Sampled By: D. Siefken/L. Middleton
C.O.C. No.: CTO121-010702A

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1-7-02 Time: 1600 Method: HAND AUGER Monitor Reading (ppm): 0	3.5 ft	DARK BROWN	FINE SAND SOME SILT DRY

COMPOSITE SAMPLE DATA:

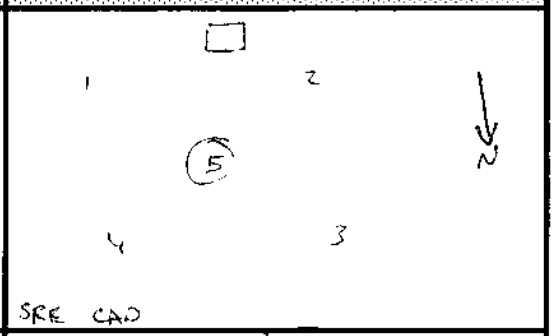
	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: NA Method: NA Monitor Readings (Range in ppm): NA	No composites collected			

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	LAB
BTEX and MTBE	(SW846 8260B)	(3) 5gr. Encore samplers	X	Accura
PAHs	(SW846 8310)	(1) 8oz. Glass Amber Jar	X	Accura
TRPH	(FL-PRO)	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	CEF-9RT-SU-DUP-01

Signature(s):

APPENDIX E

SOIL RE-SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.~~GH0050120~~ 621C

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Sample ID No. CEF-9RT SU-001- 04B
Sample Location CEF-9RT ~~SU~~-001- 5B
Sampled By: ~~DG & LK~~ LM+AP
C.O.C. No.: CTO 121- 041802

Type of Sample:
- [x] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/18/02	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1255	3-4'	DARK BROWN	MEDIUM TO FINE SAND
Method: Hand auger			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date: NA	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method: NA				
Monitor Readings (Range in ppm): NA			NA	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
TRPH	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.: ~~CEF-9RT-SU-DUP-02~~ Rem

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.~~GH0050120~~ 6210

[ ] Surface Soil
[✓] Subsurface Soil
[ ] Sediment
[ ] Other:
[X] QA Sample Type: MSMSD

Sample ID No.: CEF-9RT SU-002-04B
Sample Location: CEF-9RT ~~SU~~-002-
Sampled By: ~~DS & LK~~ LM AP
C.O.C. No.: CTO 121- 041602
SB

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 4/18/02			
Time: 1245			
Method: Hand auger			
Monitor Reading (ppm): 0	3-4'	LIGHT BROWN	MEDIUM TO FINE SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA				
Method:				
NA				
Monitor Readings			NA	
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
TRPH	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD ✓ — JUST COLLECT AN EXTRA JAR - LABEL IT W/ SAME SAMPLE ID. NO.

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.~~SH0050120~~ 621C

[ ] Surface Soil
[x] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: CEF-9RT SU-003- 04B
Sample Location: CEF-9RT ~~SU~~ SB-003-
Sampled By: ~~DS & LK~~ LM + AP
C.O.C. No.: CTO 121- 041802

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

MB

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 4/18/02 Time: 1232 Method: Hand auger Monitor Reading (ppm): 0	3-4'	LIGHT BROWN	MEDIUM TO FINE SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA				
Method:				
NA				
Monitor Readings			NA	
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
TRPH	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
~~CEF-9RT-MS/MSD-003-04B~~ RM	

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486.~~CH0050120~~ 02IC

[ ] Surface Soil
[x] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No. CEF-9RT SU-004- 04B
Sample Location CEF-9RT SU-004
Sampled By: ~~DS & LK~~ LM & AP
C.O.C. No.: CTO 121- 041802
SB

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

MD

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 4/18/02 Time: 1215 Method: Hand auger Monitor Reading (ppm): 0	3-4'	LIGHT	MEDIUM TO FINE SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA				MOIST
Method:				
NA				
Monitor Readings			NA	
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
TRPH	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	~~CEF-9RT SU-DUP-013~~

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASCF, 9RT Lens
Project No.: N0486 ~~GH0050120~~ 621C

[] Surface Soil
[✓] Subsurface Soil
[] Sediment
[] Other:
[✓] QA Sample Type: Duplicate

Sample ID No. CEF-9RT SU-005- 04B
Sample Location CEF-9RT SU-005-
Sampled By: ~~DS & LK~~ LM & AP
C.O.C. No.: CTO 121- 044802

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 4/18/02 Time: 1225 Method: Hand auger Monitor Reading (ppm): 0	3-4'	DARK BROWN	MEDIUM TO FINE SAND

COMPOSITE SAMPLE DATA:

	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: NA				
Method: NA				
Monitor Readings (Range in ppm): NA			NA	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
TRPH	(1) 8oz. Glass Amber Jar	X	Accura

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	CEF-9RT-SU-DUP-01B

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: 9RT Lens
Project No.: N3996JG0050235

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-9RT-SU-003-04C
Sample Location: CEF-9RT-SB-003
Sampled By: LM/LK
C.O.C. No.: 9RT-053002

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 5/30/02 Time: 1240 Method: SSHA* Monitor Reading (ppm): 0	3 to 4 ft bls	MEDIUM YELLOW/ BROWN	SAND: fine + v. fine; damp

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA				
Method:				
NA				
Monitor Readings			NA	
(Range in ppm):				
NA				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
TPHCWG	(1) 4oz. Glass Jar	X	STL

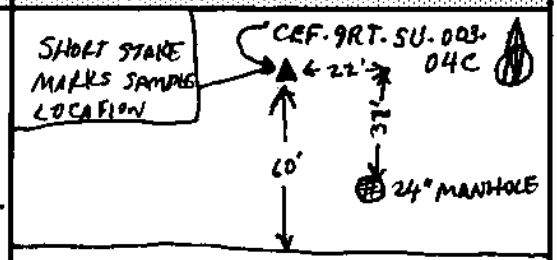
OBSERVATIONS / NOTES:

LITHOLOGY: 0 - 4' bls = SAND; fine and very fine; high organic content 1 - 2.5' bls, then becoming medium yellow/brown

SHORT STAKE STILL PRESENT AT SAMPLING LOCATION

SSHA = Stainless Steel Hand Auger

MAP:



RUNWAY 9R

Circle if Applicable:

~~MS/MSD~~ None

Duplicate ID No.: None

Signature(s):

APPENDIX F

RELATIVE SURVEY CALCULATIONS

Survey Elevation Calculations
9RT Lens
Site Assessment Report Addendum
NAS Cecil Field
Jacksonville, Florida

Height of Instrument	+	-	Elevation	Description
			75.00	Assigned elevation to arbitrary benchmark "S" on top of 24" steel manhole cover
79.07	4.07			Height of Benchmark in current survey setup
79.07		4.23	74.84	TMW1
79.07		3.31	75.76	TMW2
79.07		3.96	75.11	TMW3

APPENDIX G

GROUNDWATER SAMPLE LOG SHEETS AND LOW FLOW PURGE SHEETS

Tetra Tech NUS, Inc. **GROUNDWATER SAMPLE LOG SHEET**

Project Site Name: *NAS Cecil Field, 9RT Lens*
Project No.: *N0486GH0050190, CTO 121*

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

Sample ID No.: CEF-9RT-GW-TMW 1
Sample Location: CEF-9RT-TMW 1
Sampled By: D. Siefken / L. Middleton
C.O.C. No.: CTO121-010702B
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Date: 1/7/02	Visual	Std. Units	mS/cm	°C	NTU	mg/l	mV	
Time: 1330								
Method: Peristaltic	LT Brown	5.14	0.097	19.1	3.7	11.95	157	

LOW FLOW PURGE DATA

Date: 1/7/02	Time	pH	S.C.	Temp (°C)	Turbidity	DO	ORP	Other

Method: Peristaltic
Monitor Reading (ppm): 0
Well Casing Diameter: 2"
Well Casing Material: PVC
Total Well Depth (TD): 9.80
Static Water Level (WL): 5.60
One Casing Volume(gal/L): 2.7
Start Purge (hrs): 1235
End Purge (hrs): 1320
Total Purge Time (min): 45
Total Vol. Purged (gal/L): 13.5

SEE ATTACHED LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION

Analysis		Preservative	Container Requirements	Collected
*See below**	SW846, 8260B	*HCl*	*minimum 2-40ml vials*	X
PAH	SW846, 8310	~~	*2-1L Amber*	X
Lead	SW846, 6010B	*HNO3*	*1-500ml HDPE*	X
TRPH	FL-PRO	*H_2SO_4 or HCL*	*2-1L Amber*	X
EDB	EPA 504.1	~~	*minimum 2-40ml vials*	X

OBSERVATIONS / NOTES

Lab: Accura, 6017 Financial Dr., Norcross, GA 30071
POC: Philip Kyle, (770) 449-8800

*** BTEX, 1,2-dichloroethane, MTBE, and VOHs**

Circle if Applicable:

MS/MSD	Duplicate ID No.: CEF-9RT-GW-DUO1	Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NAS CECIL FIELD 9RT Lens

PROJECT NUMBER: *N0486GH0050190, CTO 121*

WELL ID.: CEF-9RT-TMW

DATE: 1/7/02

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Cum. Vol. (Liters)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
235	~~0238~~	5.60	300	0	—	—	—	—	—	—	
245	~~0245~~	5.74	300	3	5.79	0.186	107	3.92	20.1	73	
250	~~0250~~	5.77	300	4.5	5.47	0.125	54	3.72	19.5	96	
255	~~0255~~	5.78	300	6.0	5.29	0.112	35	6.91	19.5	141	
300	~~1300~~	5.78	300	7.5	5.25	0.109	28	3.42	19.5	121	
305	~~1305~~	5.78	300	9	5.20	0.103	11	2.66	19.4	133	
310	~~1310~~	5.78	300	10.5	5.10	0.099	9	3.32	19.7	158	
315		5.78	300	12	5.10	0.099	7	3.28	19.8	156	
	1320	5.78	300	13.5	5.14	0.097	3.7	11.95	19.1	197	
	END PURGE										

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: *NAS Cecil Field, 9RT Lens*
Project No.: *N0486GH0050190, CTO 121*

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

Sample ID No.: CEF-9RT-GW-TMW2
Sample Location: CEF-9RT-TMW2
Sampled By: D. Siefken / L. Middleton
C.O.C. No.: CTO121-010702 C
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color Visual	pH Std. Units	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Other
Date: 1/7/02 Time: 1500								
Method: Peristaltic	CLEAR	5.42	0.081	19.3	0	4.16	335	

LOW FLOW PURGE DATA

Date: 1/7/02	Time	pH	S.C.	Temp (°C)	Turbidity	DO	ORP	Other
Method: Peristaltic								
Monitor Reading (ppm): 0								
Well Casing Diameter: 2"								
Well Casing Material: PVC								
Total Well Depth (TD): 10.34								
Static Water Level (WL): 6.21								
One Casing Volume(gal/L): 2.6								
Start Purge (hrs): 1420								
End Purge (hrs): 1450								
Total Purge Time (min): 30								
Total Vol. Purged (gal/L): 9								

SEE ATTACHED LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION

Analysis		Preservative	Container Requirements	Collected
*See below**	SW846, 8260B	*HCl*	*minimum 2-40ml vials*	X
PAH	SW846, 8310	*--*	*2-1L Amber*	X
Lead	SW846, 6010B	*HNO3*	*1-500ml HDPE*	X
TRPH	FL-PRO	*H_2SO_4 or HCL*	*2-1L Amber*	X
EDB	EPA 504.1	*--*	*minimum 2-40ml vials*	X

OBSERVATIONS / NOTES

Lab: Accura, 6017 Financial Dr., Norcross, GA 30071
POC: Philip Kyle, (770) 449-8800

*** BTEX, 1,2-dichloroethane, MTBE, and VOHs**

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NAS CECIL FIELD 9RT Lens

PROJECT NUMBER: N0486GH0050190, CTO 121

WELL ID.: CEF-9RT-TMW2

DATE: 1/7/02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Cum. Vol. (Liters)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1420	6.21	300	0	—	-	—	—	—	—	
1430	6.45	300	3	5.31	0.077	33	9.25	19.3	373	CLEAR
1435	6.48	300	4.5	5.37	0.078	12	6.86	19.3	355	
1440	6.50	300	6	5.36	0.079	5.6	5.44	19.5	331	
1445	6.58	300	7.5	5.34	0.080	2.9	4.31	19.6	338	
1450	6.50	300	9	5.42	0.081	0	4.16	19.3	335	
END PURGE										

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc. **GROUNDWATER SAMPLE LOG SHEET**

Project Site Name:	*NAS Cecil Field, 9RT Lens*	Sample ID No.:	CEF-9RT-GW-TMW 3
Project No.:	*N0486GH0050190, CTO 121*	Sample Location:	CEF-9RT-TMW 3
		Sampled By:	D. Siefken / L. Middleton
[ ] Domestic Well Data		C.O.C. No.:	CTO121-010702C & D
[X] Monitoring Well Data		Type of Sample:	
[ ] Other Well Type:		[X] Low Concentration	
[ ] QA Sample Type:		[ ] High Concentration	

SAMPLING DATA

Date: 1/7/02 Time: 1020	Color Visual	pH Std. Units	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Other
Method: Peristaltic	LtBrown	4.72	0.071	17.83	47	4.43	-115	

LOW FLOW PURGE DATA

Date: 1/7/02	Time	pH	S.C.	Temp (°C)	Turbidity	DO	ORP	Other
Method: Peristaltic Grab								
Monitor Reading (ppm): 0.0								
Well Casing Diameter: 2"								
Well Casing Material: PVC								
Total Well Depth (TD): 10.40	SEE ATTACHED LOW FLOW PURGE DATA SHEET							
Static Water Level (WL): 5.95								
One Casing Volume(gal/L): 2.8								
Start Purge (hrs): 0900								
End Purge (hrs): 0955								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 14								

SAMPLE COLLECTION INFORMATION

Analysis		Preservative	Container Requirements	Collected
*See below**	SW846, 8260B	*HCl*	*minimum 2-40ml vials*	X
PAH	SW846, 8310	~~	*2-1L Amber*	X
Lead	SW846, 6010B	*HNO3*	*1-500ml HDPE*	X
TRPH	FL-PRO	*H_2SO_4 or HCL*	*2-1L Amber*	X
EDB	EPA 504.1	~~	*minimum 2-40ml vials*	X

OBSERVATIONS / NOTES

Lab: Accura, 6017 Financial Dr., Norcross, GA 30071
POC: Philip Kyle, (770) 449-8800

*** BTEX, 1,2-dichloroethane, MTBE, and VOHs**

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	
X	CEF-9RT-GW-MD01	R. [illegible]

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NAS CECIL FIELD 9RT Lens
PROJECT NUMBER: N0486GH0050190, CTO 121

WELL ID.: CEF-9RT-TMW
DATE: 1/7/02

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Cum. Vol. (Liters)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
	0900	5.95	300	0	–	–	–	–	–	–	
3	0910	6.10	300	3	4.96	0.086	180	9.95	18.07	-37	SANDY
	0915	6.10	300	4.5	4.83	0.079	178	7.64	17.65	-69	
	0920	6.10	300	6	4.83	0.019	173	7.25	18.35	-83	
	0925	6.10	300	7.5	4.75	0.075	164	5.55	18.29	-97	
	0930	6.11	300	9.0	4.79	0.073	115	5.25	18.00	-116	
	0935	6.11	200	10.0	4.76	0.073	112	5.03	17.82	-116	
	0940	6.11	200	11.0	4.69	0.071	84	4.65	18.16	-119	
	0945	6.11	200	12.0	4.70	0.071	78	4.52	18.19	-120	
	0950	6.11	200	13.0	4.72	0.071	62	4.38	18.21	-122	
	0955	6.11	200	14.0	4.72	0.071	47	4.43	17.83	-115	
	END PURGE										

SIGNATURE(S): [signature]

APPENDIX H

SPECAP RAW FIELD DATA

In-Situ Inc. Hermit 3000

Report generated: 10/29/02 18:42:49
Report from file: C:\Win-Situ\Data\SN45799 2002-01-09 111819 REC-9RT-TMW2.bin
DataMgr Version 3.70

Serial number: 00045799
Firmware Version 7.10
Unit name: HERMIT 3000

Test name: ~~REC~~ DR-9RT-TMW2 MWD

Test defined on: 01/09/02 08:00:09
Test started on: 01/09/02 11:18:19
Test stopped on: ABEND
Test extracted on: 01/10/02 07:09:10

Data gathered using Logarithmic testing
Maximum time between data points: 0.1667 Minutes.
Number of data samples: 101

TOTAL DATA SAMPLES 101

Channel number [1]
Measurement type: Pressure
Channel name: Probe #1
Linearity: 0.3594000
Scale: 30.2978000
Offset: -0.0542000
Warmup: 50
Specific gravity: 1.000
Mode: TOC
User-defined reference: 0.000 Meters H2O
Referenced on: test start
Pressure head at reference: 0.782 Meters H2O

Channel number [0]
Measurement type: Barometric Pressure
Channel name: Barometric
Linearity: 0.0000000
Scale: 0.0000000
Offset: 0.0000000
Warmup: 50

Date	Time	ET (min)	Chan[1] Meters H2O	Chan[0] Inches Hg
01/09/02	11:18:19	0.0000	0.000	30.279
01/09/02	11:18:19	0.0110	0.001	30.279
01/09/02	11:18:20	0.0220	-0.013	30.279
01/09/02	11:18:20	0.0330	-0.003	30.279
01/09/02	11:18:21	0.0440	-0.005	30.279
01/09/02	11:18:22	0.0550	-0.009	30.279
01/09/02	11:18:22	0.0660	-0.013	30.279
01/09/02	11:18:23	0.0770	-0.017	30.279
01/09/02	11:18:24	0.0880	-0.020	30.279
01/09/02	11:18:24	0.0990	-0.023	30.279
01/09/02	11:18:25	0.1100	-0.025	30.279
01/09/02	11:18:26	0.1210	-0.029	30.281
01/09/02	11:18:26	0.1320	-0.033	30.281
01/09/02	11:18:27	0.1430	-0.037	30.281
01/09/02	11:18:28	0.1540	-0.040	30.279
01/09/02	11:18:28	0.1650	-0.043	30.281
01/09/02	11:18:29	0.1760	-0.045	30.277
01/09/02	11:18:30	0.1870	-0.047	30.277
01/09/02	11:18:30	0.1980	-0.051	30.279
01/09/02	11:18:31	0.2090	-0.053	30.279
01/09/02	11:18:32	0.2200	-0.056	30.279

DR-9RT-TMW2
pg. 1 of 3

01/09/02	11:18:32	0.2310	-0.059	30.279
01/09/02	11:18:33	0.2427	-0.061	30.279
01/09/02	11:18:34	0.2552	-0.063	30.279
01/09/02	11:18:35	0.2683	-0.067	30.279
01/09/02	11:18:35	0.2823	-0.069	30.279
01/09/02	11:18:36	0.2972	-0.071	30.279
01/09/02	11:18:37	0.3128	-0.076	30.281
01/09/02	11:18:38	0.3295	-0.079	30.279
01/09/02	11:18:39	0.3472	-0.081	30.279
01/09/02	11:18:40	0.3658	-0.084	30.281
01/09/02	11:18:42	0.3857	-0.087	30.279
01/09/02	11:18:43	0.4067	-0.092	30.279
01/09/02	11:18:44	0.4288	-0.096	30.279
01/09/02	11:18:46	0.4523	-0.099	30.279
01/09/02	11:18:47	0.4772	-0.104	30.279
01/09/02	11:18:49	0.5035	-0.103	30.277
01/09/02	11:18:50	0.5315	-0.112	30.275
01/09/02	11:18:52	0.5612	-0.115	30.277
01/09/02	11:18:54	0.5925	-0.120	30.279
01/09/02	11:18:56	0.6257	-0.124	30.277
01/09/02	11:18:58	0.6608	-0.127	30.277
01/09/02	11:19:00	0.6982	-0.129	30.277
01/09/02	11:19:03	0.7377	-0.133	30.277
01/09/02	11:19:05	0.7795	-0.136	30.279
01/09/02	11:19:08	0.8238	-0.140	30.277
01/09/02	11:19:11	0.8708	-0.143	30.277
01/09/02	11:19:14	0.9207	-0.145	30.277
01/09/02	11:19:17	0.9733	-0.148	30.277
01/09/02	11:19:20	1.0292	-0.153	30.275
01/09/02	11:19:24	1.0883	-0.156	30.275
01/09/02	11:19:28	1.1510	-0.159	30.277
01/09/02	11:19:32	1.2173	-0.160	30.275
01/09/02	11:19:36	1.2877	-0.163	30.275
01/09/02	11:19:40	1.3622	-0.164	30.273
01/09/02	11:19:45	1.4412	-0.167	30.273
01/09/02	11:19:50	1.5248	-0.168	30.273
01/09/02	11:19:55	1.6133	-0.169	30.271
01/09/02	11:20:01	1.7072	-0.172	30.271
01/09/02	11:20:07	1.8065	-0.172	30.271
01/09/02	11:20:13	1.9118	-0.173	30.269
01/09/02	11:20:20	2.0233	-0.175	30.269
01/09/02	11:20:27	2.1415	-0.176	30.271
01/09/02	11:20:35	2.2667	-0.177	30.269
01/09/02	11:20:42	2.3992	-0.179	30.269
01/09/02	11:20:51	2.5397	-0.180	30.271
01/09/02	11:21:00	2.6885	-0.180	30.269
01/09/02	11:21:09	2.8460	-0.183	30.239
01/09/02	11:21:19	3.0127	-0.184	30.243
01/09/02	11:21:29	3.1793	-0.177	30.251
01/09/02	11:21:39	3.3460	-0.179	30.253
01/09/02	11:21:49	3.5127	-0.179	30.253
01/09/02	11:21:59	3.6793	-0.183	30.281
01/09/02	11:22:09	3.8460	-0.183	30.279
01/09/02	11:22:19	4.0127	-0.183	30.277
01/09/02	11:22:29	4.1793	-0.184	30.277
01/09/02	11:22:39	4.3460	-0.184	30.273
01/09/02	11:22:49	4.5127	-0.185	30.271
01/09/02	11:22:59	4.6793	-0.184	30.271
01/09/02	11:23:09	4.8460	-0.184	30.269
01/09/02	11:23:19	5.0127	-0.185	30.269
01/09/02	11:23:29	5.1793	-0.185	30.269
01/09/02	11:23:39	5.3460	-0.185	30.269
01/09/02	11:23:49	5.5127	-0.185	30.267
01/09/02	11:23:59	5.6793	-0.185	30.269
01/09/02	11:24:09	5.8460	-0.185	30.267
01/09/02	11:24:19	6.0127	-0.184	30.267
01/09/02	11:24:29	6.1793	-0.187	30.251
01/09/02	11:24:39	6.3460	-0.187	30.243
01/09/02	11:24:49	6.5127	-0.181	30.247
01/09/02	11:24:59	6.6793	-0.188	30.251

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01/09/02	11:25:09	6.8460	-0.183	30.253
01/09/02	11:25:19	7.0127	-0.181	30.255
01/09/02	11:25:29	7.1793	-0.183	30.257
01/09/02	11:25:39	7.3460	-0.188	30.257
01/09/02	11:25:49	7.5127	-0.183	30.257
01/09/02	11:25:59	7.6793	-0.188	30.259
01/09/02	11:26:09	7.8460	-0.183	30.259
01/09/02	11:26:19	8.0127	-0.183	30.259
01/09/02	11:26:29	8.1793	-0.187	30.259
01/09/02	11:26:39	8.3460	-0.187	30.290

DR-9RT.TMW2
pg 3 of 3

In-Situ Inc. Hermit 3000

Report generated: 10/29/02 18:40:34
Report from file: C:\Win-Situ\Data\SN45799 2002-01-09 110919 DR-9RT-TMW2.bin
DataMgr Version 3.70

Serial number: 00045799
Firmware Version 7.10
Unit name: HERMIT 3000

Test name: ~~DR~~ RLC-9RT-TMW2 MWA

Test defined on: 01/09/02 07:58:55
Test started on: 01/09/02 11:09:19
Test stopped on: 01/09/02 11:17:25
Test extracted on: 01/10/02 07:08:00

Data gathered using Logarithmic testing
Maximum time between data points: 0.1667 Minutes.
Number of data samples: 99

TOTAL DATA SAMPLES 99

Channel number [1]
Measurement type: Pressure
Channel name: Probe #1
Linearity: 0.3594000
Scale: 30.2978000
Offset: -0.0542000
Warmup: 50
Specific gravity: 1.000
Mode: TOC
User-defined reference: 0.000 Meters H2O
Referenced on: test start
Pressure head at reference: 0.960 Meters H2O

Channel number [0]
Measurement type: Barometric Pressure
Channel name: Barometric
Linearity: 0.0000000
Scale: 0.0000000
Offset: 0.0000000
Warmup: 50

Date	Time	ET (min)	Chan[1] Meters H2O	Chan[0] Inches Hg
01/09/02	11:09:19	0.0000	0.000	30.271
01/09/02	11:09:19	0.0110	0.008	30.271
01/09/02	11:09:20	0.0220	0.001	30.271
01/09/02	11:09:20	0.0330	0.012	30.273
01/09/02	11:09:21	0.0440	0.012	30.271
01/09/02	11:09:22	0.0550	0.016	30.271
01/09/02	11:09:22	0.0660	0.027	30.269
01/09/02	11:09:23	0.0770	0.027	30.269
01/09/02	11:09:24	0.0880	0.031	30.271
01/09/02	11:09:24	0.0990	0.032	30.273
01/09/02	11:09:25	0.1100	0.037	30.273
01/09/02	11:09:26	0.1210	0.033	30.271
01/09/02	11:09:26	0.1320	0.040	30.271
01/09/02	11:09:27	0.1430	0.053	30.273
01/09/02	11:09:28	0.1540	0.055	30.273
01/09/02	11:09:28	0.1650	0.047	30.271
01/09/02	11:09:29	0.1760	0.044	30.273
01/09/02	11:09:30	0.1870	0.061	30.273
01/09/02	11:09:30	0.1980	0.067	30.271
01/09/02	11:09:31	0.2090	0.056	30.271
01/09/02	11:09:32	0.2200	0.053	30.273

RLC-9RT-TMW2
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01/09/02	11:09:32	0.2310	0.072	30.273
01/09/02	11:09:33	0.2427	0.072	30.273
01/09/02	11:09:34	0.2552	0.063	30.275
01/09/02	11:09:35	0.2683	0.068	30.273
01/09/02	11:09:35	0.2823	0.083	30.273
01/09/02	11:09:36	0.2972	0.088	30.273
01/09/02	11:09:37	0.3128	0.091	30.269
01/09/02	11:09:38	0.3295	0.077	30.273
01/09/02	11:09:39	0.3472	0.096	30.269
01/09/02	11:09:40	0.3658	0.096	30.269
01/09/02	11:09:42	0.3857	0.084	30.269
01/09/02	11:09:43	0.4067	0.088	30.269
01/09/02	11:09:44	0.4288	0.093	30.271
01/09/02	11:09:46	0.4523	0.091	30.269
01/09/02	11:09:47	0.4772	0.095	30.271
01/09/02	11:09:49	0.5035	0.112	30.269
01/09/02	11:09:50	0.5315	0.099	30.271
01/09/02	11:09:52	0.5612	0.116	30.271
01/09/02	11:09:54	0.5925	0.120	30.273
01/09/02	11:09:56	0.6257	0.113	30.269
01/09/02	11:09:58	0.6608	0.123	30.273
01/09/02	11:10:00	0.6982	0.132	30.271
01/09/02	11:10:03	0.7377	0.132	30.273
01/09/02	11:10:05	0.7795	0.124	30.271
01/09/02	11:10:08	0.8238	0.140	30.271
01/09/02	11:10:11	0.8708	0.137	30.269
01/09/02	11:10:14	0.9207	0.127	30.269
01/09/02	11:10:17	0.9733	0.139	30.269
01/09/02	11:10:20	1.0292	0.141	30.267
01/09/02	11:10:24	1.0883	0.151	30.267
01/09/02	11:10:28	1.1510	0.140	30.271
01/09/02	11:10:32	1.2173	0.155	30.271
01/09/02	11:10:36	1.2877	0.147	30.271
01/09/02	11:10:40	1.3622	0.151	30.267
01/09/02	11:10:45	1.4412	0.164	30.271
01/09/02	11:10:50	1.5248	0.149	30.271
01/09/02	11:10:55	1.6133	0.157	30.271
01/09/02	11:11:01	1.7072	0.157	30.271
01/09/02	11:11:07	1.8065	0.168	30.271
01/09/02	11:11:13	1.9118	0.149	30.269
01/09/02	11:11:20	2.0233	0.169	30.271
01/09/02	11:11:27	2.1415	0.157	30.271
01/09/02	11:11:35	2.2667	0.169	30.271
01/09/02	11:11:42	2.3992	0.153	30.269
01/09/02	11:11:51	2.5397	0.167	30.269
01/09/02	11:12:00	2.6885	0.161	30.269
01/09/02	11:12:09	2.8460	0.155	30.271
01/09/02	11:12:19	3.0127	0.161	30.269
01/09/02	11:12:29	3.1793	0.175	30.269
01/09/02	11:12:39	3.3460	0.167	30.269
01/09/02	11:12:49	3.5127	0.171	30.269
01/09/02	11:12:59	3.6793	0.176	30.267
01/09/02	11:13:09	3.8460	0.164	30.267
01/09/02	11:13:19	4.0127	0.165	30.269
01/09/02	11:13:29	4.1793	0.176	30.265
01/09/02	11:13:39	4.3460	0.175	30.267
01/09/02	11:13:49	4.5127	0.173	30.267
01/09/02	11:13:59	4.6793	0.173	30.267
01/09/02	11:14:09	4.8460	0.165	30.269
01/09/02	11:14:19	5.0127	0.175	30.241
01/09/02	11:14:29	5.1793	0.171	30.247
01/09/02	11:14:39	5.3460	0.165	30.251
01/09/02	11:14:49	5.5127	0.181	30.253
01/09/02	11:14:59	5.6793	0.172	30.257
01/09/02	11:15:09	5.8460	0.161	30.259
01/09/02	11:15:19	6.0127	0.184	30.259
01/09/02	11:15:29	6.1793	0.169	30.261
01/09/02	11:15:39	6.3460	0.173	30.261
01/09/02	11:15:49	6.5127	0.185	30.263
01/09/02	11:15:59	6.6793	0.175	30.263

REC-9RT-TMW2
Pg. 2 of 3

01/09/02	11:16:09	6.8460	0.169	30.263
01/09/02	11:16:19	7.0127	0.173	30.263
01/09/02	11:16:29	7.1793	0.167	30.267
01/09/02	11:16:39	7.3460	0.161	30.265
01/09/02	11:16:49	7.5127	0.167	30.267
01/09/02	11:16:59	7.6793	0.185	30.265
01/09/02	11:17:09	7.8460	0.175	30.298
01/09/02	11:17:19	8.0127	0.167	30.296

REC-9RT-TMW2
pg. 3 of 3

In-Situ Inc. Hermit 3000

Report generated: 10/29/02 18:43:39
Report from file: C:\Win-Situ\Data\SN45799 2002-01-09 131842 REC-9RT-TMW3.bin
DataMgr Version 3.70

Serial number: 00045799
Firmware Version 7.10
Unit name: HERMIT 3000

Test name: MWD ~~REC~~ DR-9RT-TMW3

Test defined on: 01/09/02 08:01:57
Test started on: 01/09/02 13:18:42
Test stopped on: 01/09/02 13:28:23
Test extracted on: 01/10/02 07:10:50

Data gathered using Logarithmic testing
Maximum time between data points: 0.1667 Minutes.
Number of data samples: 108

TOTAL DATA SAMPLES 108

Channel number [1]
Measurement type: Pressure
Channel name: Probe #1
Linearity: 0.3594000
Scale: 30.2978000
Offset: -0.0542000
Warmup: 50
Specific gravity: 1.000
Mode: TOC
User-defined reference: 0.000 Meters H2O
Referenced on: test start
Pressure head at reference: 0.884 Meters H2O

Channel number [0]
Measurement type: Barometric Pressure
Channel name: Barometric
Linearity: 0.0000000
Scale: 0.0000000
Offset: 0.0000000
Warmup: 50

Date	Time	ET (min)	Chan[1] Meters H2O	Chan[0] Inches Hg
01/09/02	13:18:42	0.0000	0.000	30.188
01/09/02	13:18:42	0.0113	0.000	30.184
01/09/02	13:18:43	0.0227	-0.005	30.186
01/09/02	13:18:44	0.0340	-0.008	30.188
01/09/02	13:18:44	0.0453	-0.012	30.188
01/09/02	13:18:45	0.0567	-0.015	30.188
01/09/02	13:18:46	0.0680	-0.019	30.186
01/09/02	13:18:46	0.0793	-0.023	30.186
01/09/02	13:18:47	0.0907	-0.025	30.188
01/09/02	13:18:48	0.1020	-0.029	30.186
01/09/02	13:18:48	0.1133	-0.032	30.186
01/09/02	13:18:49	0.1247	-0.033	30.186
01/09/02	13:18:50	0.1360	-0.036	30.186
01/09/02	13:18:50	0.1473	-0.040	30.188
01/09/02	13:18:51	0.1587	-0.044	30.184
01/09/02	13:18:52	0.1700	-0.047	30.184
01/09/02	13:18:52	0.1813	-0.049	30.186
01/09/02	13:18:53	0.1927	-0.052	30.186
01/09/02	13:18:54	0.2040	-0.055	30.186
01/09/02	13:18:54	0.2153	-0.057	30.186
01/09/02	13:18:55	0.2267	-0.059	30.186

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01/09/02	13:18:56	0.2383	-0.061	30.186
01/09/02	13:18:57	0.2508	-0.064	30.184
01/09/02	13:18:57	0.2640	-0.067	30.186
01/09/02	13:18:58	0.2780	-0.068	30.184
01/09/02	13:18:59	0.2928	-0.069	30.186
01/09/02	13:19:00	0.3085	-0.071	30.184
01/09/02	13:19:01	0.3252	-0.073	30.184
01/09/02	13:19:02	0.3428	-0.076	30.184
01/09/02	13:19:03	0.3615	-0.079	30.186
01/09/02	13:19:04	0.3813	-0.083	30.186
01/09/02	13:19:06	0.4023	-0.087	30.184
01/09/02	13:19:07	0.4245	-0.091	30.184
01/09/02	13:19:08	0.4480	-0.093	30.182
01/09/02	13:19:10	0.4728	-0.096	30.182
01/09/02	13:19:11	0.4992	-0.095	30.182
01/09/02	13:19:13	0.5272	-0.105	30.184
01/09/02	13:19:15	0.5568	-0.107	30.184
01/09/02	13:19:17	0.5882	-0.108	30.184
01/09/02	13:19:19	0.6213	-0.112	30.182
01/09/02	13:19:21	0.6565	-0.115	30.182
01/09/02	13:19:23	0.6938	-0.119	30.184
01/09/02	13:19:26	0.7333	-0.121	30.182
01/09/02	13:19:28	0.7752	-0.123	30.182
01/09/02	13:19:31	0.8195	-0.125	30.180
01/09/02	13:19:33	0.8665	-0.128	30.180
01/09/02	13:19:36	0.9163	-0.131	30.180
01/09/02	13:19:40	0.9690	-0.132	30.182
01/09/02	13:19:43	1.0248	-0.133	30.182
01/09/02	13:19:47	1.0840	-0.136	30.180
01/09/02	13:19:50	1.1467	-0.137	30.180
01/09/02	13:19:54	1.2130	-0.139	30.178
01/09/02	13:19:59	1.2833	-0.140	30.178
01/09/02	13:20:03	1.3578	-0.143	30.178
01/09/02	13:20:08	1.4368	-0.144	30.176
01/09/02	13:20:13	1.5205	-0.144	30.178
01/09/02	13:20:18	1.6090	-0.147	30.176
01/09/02	13:20:24	1.7028	-0.147	30.176
01/09/02	13:20:30	1.8022	-0.148	30.176
01/09/02	13:20:36	1.9075	-0.148	30.174
01/09/02	13:20:43	2.0190	-0.149	30.174
01/09/02	13:20:50	2.1372	-0.149	30.174
01/09/02	13:20:57	2.2623	-0.152	30.171
01/09/02	13:21:05	2.3948	-0.152	30.174
01/09/02	13:21:14	2.5353	-0.152	30.171
01/09/02	13:21:23	2.6842	-0.153	30.171
01/09/02	13:21:32	2.8417	-0.156	30.155
01/09/02	13:21:42	3.0083	-0.155	30.161
01/09/02	13:21:52	3.1750	-0.156	30.165
01/09/02	13:22:02	3.3417	-0.157	30.171
01/09/02	13:22:12	3.5083	-0.157	30.171
01/09/02	13:22:22	3.6750	-0.156	30.176
01/09/02	13:22:32	3.8417	-0.157	30.176
01/09/02	13:22:42	4.0083	-0.156	30.178
01/09/02	13:22:52	4.1750	-0.157	30.178
01/09/02	13:23:02	4.3417	-0.157	30.180
01/09/02	13:23:12	4.5083	-0.159	30.178
01/09/02	13:23:22	4.6750	-0.159	30.178
01/09/02	13:23:32	4.8417	-0.159	30.180
01/09/02	13:23:42	5.0083	-0.159	30.182
01/09/02	13:23:52	5.1750	-0.159	30.180
01/09/02	13:24:02	5.3417	-0.159	30.182
01/09/02	13:24:12	5.5083	-0.159	30.180
01/09/02	13:24:22	5.6750	-0.159	30.184
01/09/02	13:24:32	5.8417	-0.159	30.184
01/09/02	13:24:42	6.0083	-0.159	30.182
01/09/02	13:24:52	6.1750	-0.157	30.186
01/09/02	13:25:02	6.3417	-0.157	30.182
01/09/02	13:25:12	6.5083	-0.160	30.182
01/09/02	13:25:22	6.6750	-0.159	30.184
01/09/02	13:25:32	6.8417	-0.159	30.186

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01/09/02	13:25:42	7.0083	-0.159	30.186
01/09/02	13:25:52	7.1750	-0.156	30.202
01/09/02	13:26:02	7.3417	-0.156	30.202
01/09/02	13:26:12	7.5083	-0.156	30.194
01/09/02	13:26:22	7.6750	-0.156	30.190
01/09/02	13:26:32	7.8417	-0.157	30.190
01/09/02	13:26:42	8.0083	-0.156	30.188
01/09/02	13:26:52	8.1750	-0.156	30.180
01/09/02	13:27:02	8.3417	-0.156	30.182
01/09/02	13:27:12	8.5083	-0.157	30.180
01/09/02	13:27:22	8.6750	-0.157	30.176
01/09/02	13:27:32	8.8417	-0.156	30.178
01/09/02	13:27:42	9.0083	-0.157	30.174
01/09/02	13:27:52	9.1750	-0.156	30.176
01/09/02	13:28:02	9.3417	-0.156	30.171
01/09/02	13:28:12	9.5083	-0.156	30.171
01/09/02	13:28:22	9.6750	-0.157	30.171

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In-Situ Inc. Hermit 3000

Report generated: 10/29/02 18:43:16
Report from file: C:\Win-Situ\Data\SN45799 2002-01-09 130933 DR-9RT-TMW3.bin
DataMgr Version 3.70

Serial number: 00045799
Firmware Version 7.10
Unit name: HERMIT 3000

Test name: REC ~~DR~~-9RT-TMW3
MD

Test defined on: 01/09/02 08:01:08
Test started on: 01/09/02 13:09:33
Test stopped on: 01/09/02 13:18:16
Test extracted on: 01/10/02 07:10:13

Data gathered using Logarithmic testing
Maximum time between data points: 0.1667 Minutes.
Number of data samples: 103

TOTAL DATA SAMPLES 103

Channel number [1]
Measurement type: Pressure
Channel name: Probe #1
Linearity: 0.3594000
Scale: 30.2978000
Offset: -0.0542000
Warmup: 50
Specific gravity: 1.000
Mode: TOC
User-defined reference: 0.000 Meters H2O
Referenced on: test start
Pressure head at reference: 1.037 Meters H2O

Channel number [0]
Measurement type: Barometric Pressure
Channel name: Barometric
Linearity: 0.0000000
Scale: 0.0000000
Offset: 0.0000000
Warmup: 50

Date	Time	ET (min)	Chan[1] Meters H2O	Chan[0] Inches Hg
01/09/02	13:09:33	0.0000	0.000	30.186
01/09/02	13:09:33	0.0110	0.013	30.184
01/09/02	13:09:34	0.0220	0.019	30.182
01/09/02	13:09:34	0.0330	0.016	30.186
01/09/02	13:09:35	0.0440	0.021	30.184
01/09/02	13:09:36	0.0550	0.029	30.184
01/09/02	13:09:36	0.0660	0.032	30.186
01/09/02	13:09:37	0.0770	0.029	30.186
01/09/02	13:09:38	0.0880	0.037	30.184
01/09/02	13:09:38	0.0990	0.041	30.186
01/09/02	13:09:39	0.1100	0.039	30.184
01/09/02	13:09:40	0.1210	0.048	30.186
01/09/02	13:09:40	0.1320	0.053	30.186
01/09/02	13:09:41	0.1430	0.047	30.188
01/09/02	13:09:42	0.1540	0.057	30.184
01/09/02	13:09:42	0.1650	0.057	30.186
01/09/02	13:09:43	0.1760	0.059	30.184
01/09/02	13:09:44	0.1870	0.064	30.186
01/09/02	13:09:44	0.1980	0.065	30.186
01/09/02	13:09:45	0.2090	0.064	30.184
01/09/02	13:09:46	0.2200	0.072	30.184

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01/09/02	13:09:46	0.2310	0.075	30.184
01/09/02	13:09:47	0.2427	0.071	30.186
01/09/02	13:09:48	0.2552	0.080	30.186
01/09/02	13:09:49	0.2683	0.083	30.186
01/09/02	13:09:49	0.2823	0.085	30.186
01/09/02	13:09:50	0.2972	0.080	30.186
01/09/02	13:09:51	0.3128	0.091	30.186
01/09/02	13:09:52	0.3295	0.095	30.184
01/09/02	13:09:53	0.3472	0.087	30.186
01/09/02	13:09:54	0.3658	0.091	30.186
01/09/02	13:09:56	0.3857	0.101	30.186
01/09/02	13:09:57	0.4067	0.093	30.186
01/09/02	13:09:58	0.4288	0.097	30.186
01/09/02	13:10:00	0.4523	0.100	30.184
01/09/02	13:10:01	0.4772	0.100	30.186
01/09/02	13:10:03	0.5035	0.109	30.184
01/09/02	13:10:04	0.5315	0.104	30.186
01/09/02	13:10:06	0.5612	0.108	30.186
01/09/02	13:10:08	0.5925	0.116	30.184
01/09/02	13:10:10	0.6257	0.120	30.186
01/09/02	13:10:12	0.6608	0.124	30.186
01/09/02	13:10:14	0.6982	0.123	30.186
01/09/02	13:10:17	0.7377	0.119	30.186
01/09/02	13:10:19	0.7795	0.120	30.186
01/09/02	13:10:22	0.8238	0.133	30.184
01/09/02	13:10:25	0.8708	0.125	30.184
01/09/02	13:10:28	0.9207	0.125	30.184
01/09/02	13:10:31	0.9733	0.132	30.186
01/09/02	13:10:34	1.0292	0.129	30.184
01/09/02	13:10:38	1.0883	0.135	30.186
01/09/02	13:10:42	1.1510	0.143	30.186
01/09/02	13:10:46	1.2173	0.141	30.188
01/09/02	13:10:50	1.2877	0.137	30.188
01/09/02	13:10:54	1.3622	0.139	30.186
01/09/02	13:10:59	1.4412	0.139	30.184
01/09/02	13:11:04	1.5248	0.148	30.184
01/09/02	13:11:09	1.6133	0.143	30.184
01/09/02	13:11:15	1.7072	0.141	30.184
01/09/02	13:11:21	1.8065	0.151	30.184
01/09/02	13:11:27	1.9118	0.151	30.182
01/09/02	13:11:34	2.0233	0.143	30.184
01/09/02	13:11:41	2.1415	0.143	30.184
01/09/02	13:11:49	2.2667	0.152	30.182
01/09/02	13:11:56	2.3992	0.153	30.180
01/09/02	13:12:05	2.5397	0.151	30.182
01/09/02	13:12:14	2.6885	0.151	30.182
01/09/02	13:12:23	2.8460	0.153	30.180
01/09/02	13:12:33	3.0127	0.153	30.178
01/09/02	13:12:43	3.1793	0.152	30.176
01/09/02	13:12:53	3.3460	0.153	30.178
01/09/02	13:13:03	3.5127	0.148	30.176
01/09/02	13:13:13	3.6793	0.147	30.178
01/09/02	13:13:23	3.8460	0.144	30.176
01/09/02	13:13:33	4.0127	0.152	30.178
01/09/02	13:13:43	4.1793	0.153	30.178
01/09/02	13:13:53	4.3460	0.144	30.178
01/09/02	13:14:03	4.5127	0.149	30.178
01/09/02	13:14:13	4.6793	0.153	30.176
01/09/02	13:14:23	4.8460	0.145	30.178
01/09/02	13:14:33	5.0127	0.147	30.174
01/09/02	13:14:43	5.1793	0.144	30.174
01/09/02	13:14:53	5.3460	0.148	30.180
01/09/02	13:15:03	5.5127	0.149	30.161
01/09/02	13:15:13	5.6793	0.151	30.169
01/09/02	13:15:23	5.8460	0.159	30.174
01/09/02	13:15:33	6.0127	0.149	30.176
01/09/02	13:15:43	6.1793	0.152	30.178
01/09/02	13:15:53	6.3460	0.147	30.182
01/09/02	13:16:03	6.5127	0.141	30.182
01/09/02	13:16:13	6.6793	0.144	30.182

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01/09/02	13:16:23	6.8460	0.147	30.184
01/09/02	13:16:33	7.0127	0.151	30.184
01/09/02	13:16:43	7.1793	0.152	30.186
01/09/02	13:16:53	7.3460	0.151	30.186
01/09/02	13:17:03	7.5127	0.152	30.190
01/09/02	13:17:13	7.6793	0.149	30.188
01/09/02	13:17:23	7.8460	0.151	30.204
01/09/02	13:17:33	8.0127	0.148	30.206
01/09/02	13:17:43	8.1793	0.152	30.202
01/09/02	13:17:53	8.3460	0.145	30.200
01/09/02	13:18:03	8.5127	0.153	30.194
01/09/02	13:18:13	8.6793	0.139	30.194

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APPENDIX I

SOIL AND GROUNDWATER LABORATORY REPORT

AAL Certificate of Analysis Summary WO# 1192

Client : Tetra Tech Nus - Jacksonville, Jacksonville, FL

Client Project Name: 9RT LENS

Client Project #: NO486GHO050190
Client Contact: PAUL CALLIGAN
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 01/08/02 09:55
Report Date: 02/28/02 14:13
AAL Contact: Philip Kyle
e-Mail:

Analysis Requested	*Lab ID :*	1192-001		1192-002		1192-003		1192-004		1192-005		1192-006	
	Field ID :	CEF-9RT-SU-001-04		CEF-9RT-SU-002-04		CEF-9RT-SU-003-04		CEF-9RT-SU-004-04		CEF-9RT-SU-005-04		CEF-9RT-SU-DUP-01	
	Depth :												
	Matrix :	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled :	01/07/02 15:20		01/07/02 15:30		01/07/02 15:40		01/07/02 15:50		01/07/02 16:00		01/07/02 00:00	
SVOCs by SW846 8270C PAH LL FS	*Prep Date:*	01/15/02 13:00		01/15/02 13:00		01/15/02 13:00		01/15/02 13:00		01/15/02 13:00		01/15/02 13:00	
	Analyzed:	01/18/02 15:06		01/18/02 15:31		01/18/02 13:51		01/18/02 15:57		01/18/02 14:16		01/18/02 14:41	
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
1-Methylnaphthalene		U	33	U	33	U	33	U	33	U	33	U	33
2-Methylnaphthalene		U	33	U	33	U	33	U	33	U	33	U	33
Acenaphthene		U	33	U	33	U	33	U	33	U	33	U	33
Acenaphthylene		U	33	U	33	U	33	U	33	U	33	U	33
Anthracene		U	33	U	33	U	33	U	33	U	33	U	33
Benzo(a)anthracene		U	33	U	33	U	33	U	33	U	33	U	33
Benzo(a)pyrene		U	33	U	33	U	33	U	33	U	33	U	33
Benzo(b)fluoranthene		U	33	U	33	U	33	U	33	U	33	U	33
Benzo(g,h,i)perylene		U	33	U	33	U	33	U	33	U	33	U	33
Benzo(k)fluoranthene		U	33	U	33	U	33	U	33	U	33	U	33
Chrysene		U	33	U	33	U	33	U	33	U	33	U	33
Dibenz(a,h)anthracene		U	33	U	33	U	33	U	33	U	33	U	33
Fluoranthene		U	33	U	33	U	33	U	33	U	33	U	33
Fluorene		U	33	U	33	U	33	U	33	U	33	U	33
Indeno(1,2,3-c,d)Pyrene		U	33	U	33	U	33	U	33	U	33	U	33
Naphthalene		U	33	U	33	U	33	U	33	U	33	U	33

J = Trace Level less than RL, RL = Reporting Limit, U = Below Reporting Limit

AAL Certificate of Analysis Summary WO# 1192

Client : Tetra Tech Nus - Jacksonville, Jacksonville, FL

Client Project Name: 9RT LENS

Client Project #: NO486GHO050190
Client Contact: PAUL CALLIGAN
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 01/08/02 09:55
Report Date: 02/28/02 14:13
AAL Contact: Philip Kyle
e-Mail:

Analysis Requested	*Lab ID :*	1192-001		1192-002		1192-003		1192-004		1192-005		1192-006	
	Field ID :	CEF-9RT-SU-001-04		CEF-9RT-SU-002-04		CEF-9RT-SU-003-04		CEF-9RT-SU-004-04		CEF-9RT-SU-005-04		CEF-9RT-SU-DUP-01	
	Depth :												
	Matrix :	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled :	01/07/02 15:20		01/07/02 15:30		01/07/02 15:40		01/07/02 15:50		01/07/02 16:00		01/07/02 00:00	
SVOCs by SW846 8270C PAH LL FS	*Prep Date:*	01/15/02 13:00		01/15/02 13:00		01/15/02 13:00		01/15/02 13:00		01/15/02 13:00		01/15/02 13:00	
	Analyzed:	01/18/02 15:06		01/18/02 15:31		01/18/02 13:51		01/18/02 15:57		01/18/02 14:16		01/18/02 14:41	
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Phenanthrene		U	33	U	33	U	33	U	33	U	33	U	33
Pyrene		U	33	U	33	U	33	U	33	U	33	U	33
VOCs Navy	*Prep Date:*	01/10/02 12:25		01/10/02 12:25		01/10/02 12:25		01/10/02 12:25		01/10/02 12:25		01/10/02 12:25	
	Analyzed:	01/10/02 17:27		01/10/02 17:54		01/10/02 18:22		01/10/02 20:10		01/10/02 20:37		01/10/02 21:04	
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Benzene		U	5.3	U	5.1	U	5.8	U	4.8	U	7.0	U	4.9
Ethylbenzene		U	5.3	U	5.1	U	5.8	U	4.8	U	7.0	U	4.9
Methyl tert-butyl ether		U	5.3	U	5.1	U	5.8	U	4.8	U	7.0	U	4.9
Toluene		U	5.3	U	5.1	U	5.8	U	4.8	U	7.0	U	4.9
Xylenes, Total		3.0 J	16	3.9 J	16	4.4 J	16	2.8 J	14	3.8 J	21	3.1 J	15

J = Trace Level less than RL, RL = Reporting Limit, U = Below Reporting Limit

AAL Certificate of Analysis Summary WO# 1192

Client : Tetra Tech Nus - Jacksonville, Jacksonville, FL

Client Project Name: 9RT LENS

Client Project #: NO486GHO050190
Client Contact: PAUL CALLIGAN
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 01/08/02 09:55
Report Date: 02/28/02 14:13
AAL Contact: Philip Kyle
e-Mail:

Analysis Requested	*Lab ID :*	1192-007	1192-008		1192-009		1192-010		1192-011		1192-012	
	Field ID :	CEF-9RT-SU-003-04	CEF-9RT-GW-TMW1		CEF-9RT-GW-DU01		CEF-9RT-GW-TMW2		CEF-9RT-GW-TMW3		CEF-9RT-GW-TMW3	
	Depth :		N/A		N/A		N/A		N/A		N/A	
	Matrix :	SOIL	WATER		WATER		WATER		WATER		WATER	
	Sampled :	01/07/02 15:40	01/07/02 13:30		01/07/02 00:00		01/07/02 15:00		01/07/02 10:00		01/07/02 10:00	
EDB by EPA 504	*Prep Date:*		01/15/02 09:49		01/15/02 09:49		01/15/02 09:49		01/15/02 09:49		01/15/02 09:49	
	Analyzed:		01/15/02 13:54		01/15/02 14:24		01/15/02 14:54		01/15/02 15:23		01/15/02 15:53	
	Units:		ug/L		ug/L		ug/L		ug/L		ug/L	
			Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
EDB			U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Extractable TPH Analysis by Florida PRO Method	*Prep Date:*		01/11/02 15:30		01/11/02 15:30		01/11/02 15:30				01/11/02 15:30	
	Analyzed:		01/18/02 18:38		01/18/02 19:30		01/18/02 20:23				01/18/02 16:01	
	Units:		mg/L		mg/L		mg/L				mg/L	
			Results	RL	Results	RL	Results	RL			Results	RL
Petroleum Range Organics			2.1	0.90	1.6	0.85	U	0.86			U	0.89
Metals - Total by SW3010A/6010B	*Prep Date:*		01/11/02 10:00		01/11/02 10:00		01/11/02 10:00		01/11/02 10:00		01/11/02 10:00	
	Analyzed:		01/14/02 14:26		01/14/02 14:30		01/14/02 14:35		01/14/02 14:39		01/14/02 14:49	
	Units:		mg/L		mg/L		mg/L		mg/L		mg/L	
			Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Lead			0.0052 JB	0.010	0.0069 JB	0.010	0.0038 JB	0.010	0.0030 JB	0.010	U	0.010

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AAL Certificate of Analysis Summary WO# 1192

Client : Tetra Tech Nus - Jacksonville, Jacksonville, FL

Client Project Name: 9RT LENS

Client Project #: NO486GHO050190
Client Contact: PAUL CALLIGAN
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 01/08/02 09:55
Report Date: 02/28/02 14:13
AAL Contact: Philip Kyle
e-Mail:

Analysis Requested	*Lab ID :*	1192-007		1192-008		1192-009		1192-010		1192-011	1192-012	
	Field ID :	CEF-9RT-SU-003-04		CEF-9RT-GW-TMW1		CEF-9RT-GW-DU01		CEF-9RT-GW-TMW2		CEF-9RT-GW-TMW3	CEF-9RT-GW-TMW3	
	Depth :			N/A		N/A		N/A		N/A	N/A	
	Matrix :	SOIL		WATER		WATER		WATER		WATER	WATER	
	Sampled :	01/07/02 15:40		01/07/02 13:30		01/07/02 00:00		01/07/02 15:00		01/07/02 10:00	01/07/02 10:00	
SVOCs by SW846 8270C PAH LL FS	*Prep Date:*	01/15/02 13:00		01/17/02 10:30		01/17/02 10:30		01/17/02 10:30			01/17/02 10:30	
	Analyzed:	01/18/02 12:35		01/23/02 17:34		01/23/02 17:59		01/23/02 18:25			01/23/02 16:18	
	Units:	ug/kg		ug/L		ug/L		ug/L			ug/L	
		Results	RL	Results	RL	Results	RL	Results	RL		Results	RL
1-Methylnaphthalene		U	33	21	1.0	23	1.1	U	1.1		U	1.0
2-Methylnaphthalene		U	33	27	1.0	30	1.1	U	1.1		U	1.0
Acenaphthene		U	33	1.6	1.0	1.7	1.1	U	1.1		U	1.0
Acenaphthylene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Anthracene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Benzo(a)anthracene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Benzo(a)pyrene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Benzo(b)fluoranthene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Benzo(g,h,i)perylene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Benzo(k)fluoranthene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Chrysene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Dibenz(a,h)anthracene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Fluoranthene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Fluorene		U	33	2.0	1.0	2.1	1.1	U	1.1		U	1.0
Indeno(1,2,3-c,d)Pyrene		U	33	U	1.0	U	1.1	U	1.1		U	1.0
Naphthalene		U	33	9.8	1.0	11	1.1	U	1.1		U	1.0

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AAL Certificate of Analysis Summary WO# 1192

Client : Tetra Tech Nus - Jacksonville, Jacksonville, FL

Client Project Name: 9RT LENS

Client Project #: NO486GHO050190
Client Contact: PAUL CALLIGAN
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 01/08/02 09:55
Report Date: 02/28/02 14:13
AAL Contact: Philip Kyle
e-Mail:

Analysis Requested	*Lab ID :*	1192-007		1192-008		1192-009		1192-010		1192-011	1192-012	
	Field ID :	CEF-9RT-SU-003-04		CEF-9RT-GW-TMW1		CEF-9RT-GW-DU01		CEF-9RT-GW-TMW2		CEF-9RT-GW-TMW3	CEF-9RT-GW-TMW3	
	Depth :			N/A		N/A		N/A		N/A	N/A	
	Matrix :	SOIL		WATER		WATER		WATER		WATER	WATER	
	Sampled :	01/07/02 15:40		01/07/02 13:30		01/07/02 00:00		01/07/02 15:00		01/07/02 10:00	01/07/02 10:00	
SVOCs by SW846 8270C PAH LL FS	*Prep Date:*	01/15/02 13:00		01/17/02 10:30		01/17/02 10:30		01/17/02 10:30			01/17/02 10:30	
	Analyzed:	01/18/02 12:35		01/23/02 17:34		01/23/02 17:59		01/23/02 18:25			01/23/02 16:18	
	Units:	ug/kg		ug/L		ug/L		ug/L			ug/L	
		Results	RL	Results	RL	Results	RL	Results	RL		Results	RL
Phenanthrene		U	33	0.30 J	1.0	0.32 J	1.1	U	1.1		U	1.0
Pyrene		U	33	U	1.0	U	1.1	U	1.1		U	1.0

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AAL Certificate of Analysis Summary WO# 1192

Client : Tetra Tech Nus - Jacksonville, Jacksonville, FL

Client Project Name: 9RT LENS

Client Project #: NO486GHO050190
Client Contact: PAUL CALLIGAN
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 01/08/02 09:55
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AAL Contact: Philip Kyle
e-Mail:

Analysis Requested	*Lab ID :*	1192-007	1192-008		1192-009		1192-010		1192-011		1192-012
	Field ID :	CEF-9RT-SU-003-04	CEF-9RT-GW-TMW1		CEF-9RT-GW-DU01		CEF-9RT-GW-TMW2		CEF-9RT-GW-TMW3		CEF-9RT-GW-TMW3
	Depth :		N/A		N/A		N/A		N/A		N/A
	Matrix :	SOIL	WATER		WATER		WATER		WATER		WATER
	Sampled :	01/07/02 15:40	01/07/02 13:30		01/07/02 00:00		01/07/02 15:00		01/07/02 10:00		01/07/02 10:00
VOCs by SW8260B	*Prep Date:*		01/11/02 12:36		01/11/02 12:36		01/11/02 12:36		01/11/02 12:36		
	Analyzed:		01/11/02 17:43		01/11/02 16:10		01/11/02 18:10		01/11/02 17:14		
	Units:		ug/L		ug/L		ug/L		ug/L		
			Results	RL	Results	RL	Results	RL	Results	RL	
1,1,1-Trichloroethane			U	5.0	U	5.0	U	5.0	U	5.0	
1,1,2,2-Tetrachloroethane			U	5.0	U	5.0	U	5.0	U	5.0	
1,1,2-Trichloroethane			U	5.0	U	5.0	U	5.0	U	5.0	
1,1-Dichloroethane			U	5.0	U	5.0	U	5.0	U	5.0	
1,1-Dichloroethene			U	5.0	U	5.0	U	5.0	U	5.0	
1,2-Dichlorobenzene			U	5.0	U	5.0	U	5.0	U	5.0	
1,2-Dichloroethane			U	5.0	U	5.0	U	5.0	U	5.0	
1,2-Dichloropropane			U	5.0	U	5.0	U	5.0	U	5.0	
1,3-Dichloroberzene			U	5.0	U	5.0	U	5.0	U	5.0	
1,3-Dichloropropane			U	5.0	U	5.0	U	5.0	U	5.0	
1,4-Dichlorobenzene			U	5.0	U	5.0	U	5.0	U	5.0	
Benzene			U	5.0	U	5.0	U	5.0	U	5.0	
Bromodichloromethane			U	5.0	U	5.0	U	5.0	U	5.0	
Bromoform			U	5.0	U	5.0	U	5.0	U	5.0	
Bromomethane			U	5.0	U	5.0	U	5.0	U	5.0	
Carbon Tetrachloride			U	5.0	U	5.0	U	5.0	U	5.0	

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AAL Certificate of Analysis Summary WO# 1192

Client : Tetra Tech Nus - Jacksonville, Jacksonville, FL

Client Project Name: 9RT LENS

Client Project #: NO486GHO050190
Client Contact: PAUL CALLIGAN
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 01/08/02 09:55
Report Date: 02/28/02 14:13
AAL Contact: Philip Kyle
e-Mail:

Analysis Requested	*Lab ID :*	1192-007	1192-008		1192-009		1192-010		1192-011		1192-012
	Field ID :	CEF-9RT-SU-003-04	CEF-9RT-GW-TMW1		CEF-9RT-GW-DU01		CEF-9RT-GW-TMW2		CEF-9RT-GW-TMW3		CEF-9RT-GW-TMW3
	Depth :		N/A		N/A		N/A		N/A		N/A
	Matrix :	SOIL	WATER		WATER		WATER		WATER		WATER
	Sampled :	01/07/02 15:40	01/07/02 13:30		01/07/02 00:00		01/07/02 15:00		01/07/02 10:00		01/07/02 10:00
VOCs by SW8260B	*Prep Date:*		01/11/02 12:36		01/11/02 12:36		01/11/02 12:36		01/11/02 12:36		
	Analyzed:		01/11/02 17:43		01/11/02 16:10		01/11/02 18:10		01/11/02 17:14		
	Units:		ug/L		ug/L		ug/L		ug/L		
			Results	RL	Results	RL	Results	RL	Results	RL	
Chlorobenzene			U	5.0	U	5.0	U	5.0	U	5.0	
Chloroethane			U	5.0	U	5.0	U	5.0	U	5.0	
Chloroform			U	5.0	U	5.0	U	5.0	U	5.0	
Chloromethane			U	5.0	U	5.0	U	5.0	U	5.0	
cis-1,2-Dichloroethene			U	5.0	U	5.0	U	5.0	U	5.0	
cis-1,3-Dichloropropene			U	5.0	U	5.0	U	5.0	U	5.0	
Dibromochloromethane			U	5.0	U	5.0	U	5.0	U	5.0	
Dichlorodifluoromethane			U	5.0	U	5.0	U	5.0	U	5.0	
Ethylbenzene			1.9 J	5.0	2.1 J	5.0	U	5.0	U	5.0	
Methylene Chloride			U	5.0	U	5.0	U	5.0	U	5.0	
Methyl tert-butyl ether			U	5.0	U	5.0	U	5.0	U	5.0	
Tetrachloroethene			U	5.0	U	5.0	U	5.0	U	5.0	
Toluene			U	5.0	U	5.0	U	5.0	U	5.0	
trans-1,2-Dichloroethene			U	5.0	U	5.0	U	5.0	U	5.0	
trans-1,3-Dichloropropene			U	5.0	U	5.0	U	5.0	U	5.0	
Trichloroethene			U	5.0	U	5.0	U	5.0	U	5.0	

J = Trace Level less than RL, RL = Reporting Limit, U = Below Reporting Limit

AAL Certificate of Analysis Summary WO# 1192

Client : Tetra Tech Nus - Jacksonville, Jacksonville, FL

Client Project Name: 9RT LENS

Client Project #: NO486GHO050190
Client Contact: PAUL CALLIGAN
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 01/08/02 09:55
Report Date: 02/28/02 14:13
AAL Contact: Philip Kyle
e-Mail:

Analysis Requested	*Lab ID :*	1192-007	1192-008		1192-009		1192-010		1192-011		1192-012
	Field ID :	CEF-9RT-SU-003-04	CEF-9RT-GW-TMW1		CEF-9RT-GW-DU01		CEF-9RT-GW-TMW2		CEF-9RT-GW-TMW3		CEF-9RT-GW-TMW3
	Depth :		N/A		N/A		N/A		N/A		N/A
	Matrix :	SOIL	WATER		WATER		WATER		WATER		WATER
	Sampled :	01/07/02 15:40	01/07/02 13:30		01/07/02 00:00		01/07/02 15:00		01/07/02 10:00		01/07/02 10:00
VOCs by SW8260B	*Prep Date:*		01/11/02 12:36		01/11/02 12:36		01/11/02 12:36		01/11/02 12:36		
	Analyzed:		01/11/02 17:43		01/11/02 16:10		01/11/02 18:10		01/11/02 17:14		
	Units:		ug/L		ug/L		ug/L		ug/L		
			Results	RL	Results	RL	Results	RL	Results	RL	
Trichlorofluoromethane			U	5.0	U	5.0	U	5.0	U	5.0	
Vinyl Chloride			U	2.0	U	2.0	U	2.0	U	2.0	
Xylenes, Total			U	15	U	15	U	15	U	15	

J = Trace Level less than RL, RL = Reporting Limit, U = Below Reporting Limit

SOIL WIG

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER CTO 121-010702A PAGE 1 OF 1

PROJECT NO: N0486GH0050190	SITE NAME: 9RT LENS	PROJECT MANAGER AND PHONE NUMBER: MERVIN DALE 904 281 6400	LABORATORY NAME AND CONTACT: ACCURA P. KYLE
SAMPLERS (SIGNATURE): R.L. [illegible]		FIELD OPERATIONS LEADER AND PHONE NUMBER: PAUL CALLIGAN 850 385 9899	ADDRESS: 6017 FINANCIAL DR.
		CARRIER/WAYBILL NUMBER: Fedex 8311 6072 7597	CITY, STATE: NORCROSS, GA 30071

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

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: BTEX AND MTBE 8260B	SVOC PAHS 8270	TRPH SW846 8310	FL-PRO					COMMENTS
		CONTAINER TYPE PLASTIC (P) or GLASS (G)				P	G	G						
		PRESERVATIVE USED				None	None	None						
1/7	1520	CEF - 9RT - SU-001-04	SO	G	5	3	1	1						Cool to 4°C
1/7	1590	CEF - 9RT - SU-002-04	SO	G	5	3	1	1						
1/7	1540	CEF - 9RT - SU-003-04	SO	G	5	3	1	1						
1/7	1550	CEF - 9RT - SU-004-04	SO	G	5	3	1	1						
1/7	1600	CEF - 9RT - SU-005-04	SO	G	5	3	1	1						
1/7	0000	CEF - 9RT - SU-DUP-01	SO	G	5	3	1	1						
1/7	1540	CEF - 9RT - MS/MSD-003-04	SO	G	5	3	1	1						

1. RELINQUISHED BY [signature]	DATE 1/7/02	TIME 1700	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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

3/99
FORM NO. TtNUS-001

GROUNDWATER MNG

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER CTO121-010702B PAGE 1 OF 1

PROJECT NO: N0486GH0050190	SITE NAME: 9RT LENS	PROJECT MANAGER AND PHONE NUMBER: PAUL CALLIGAN 850 385 9899	LABORATORY NAME AND CONTACT: ACCURA P. KYLE
SAMPLERS (SIGNATURE): K. [illegible]		FIELD OPERATIONS LEADER AND PHONE NUMBER: MERVIN DMIC 904 281-0400	ADDRESS: 6017 FINANCIAL DRIVE
		CARRIER/WAYBILL NUMBER: Fedex	CITY, STATE: NORCROSS, GA 30071

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

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	SW846 8260B *	SW846 8310 PAHs	TOTAL LEAD SW846 6010B	TPH FL-PRO	EDB 504.1				COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)						G	G	P	G	G				
PRESERVATIVE USED						HCL	NONE	HNO3	NaOH	Na2S2O3				
1/7	1330	CEF-9RT-GW-TMW1	GW	G	11	3	2	1	2	3				Cool to 4°C
1/7	0000	CEF-9RT-GW-DUO1	GW	G	11	3	2	1	2	3				* BTEX, MTBE, 1-2 d. chloroethane and VOHs

1. RELINQUISHED BY [illegible]	DATE 1/7/02	TIME 1700	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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

3/99
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER CT0121-010702C | PAGE 1 OF 1

PROJECT NO: N0486GH0050190	SITE NAME: 9RT LENS	PROJECT MANAGER AND PHONE NUMBER: PAUL CALLICAN 850 385-9899	LABORATORY NAME AND CONTACT: ACCUTEX P. KYLE
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: METCV DALIE 904 381-0400	ADDRESS: 6017 FINANCIAL DR
		CARRIER/WAYBILL NUMBER: FEDEX	CITY, STATE: NORCROSS, GA 30071

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

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P G G

PRESERVATIVE USED: HCl, None, HNO3, H_2SO_4, NaO_2SO_4

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: SW846 8260B *	SW846 8310	TOTAL LEAD	SW846 6010B TCLP	EC TRO	EDB 504.1				COMMENTS
1/7	1500	CEF-9RT-GW-TMW2	GW	G	11	3	2	1	2	3					COOL TO 4°C
1/7	1000	CEF-9RT-GW-TMW3	GW	G	11	3	2	1	2	3					
															* BTEX, MTBE, 1-2 DICHLOROETHANE & VOH'S

1. RELINQUISHED BY	DATE 1/7/02	TIME 1200	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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

3/99
FORM NO. TINUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER CTO121-010702P PAGE 1 OF 1

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
N04866H0050190	9RT LEWIS	PAUL CALLEGAN 850 385-9846	ACCUTEX P. KYLE
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER	ADDRESS
		MERV DALE 904-281-0400	6017 FINANCIAL DR
		CARRIER/WAYBILL NUMBER	CITY, STATE
		FEDEX 8311 6072 7586	NORCROSS, GA 30071

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

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: SW846 8260B*	SW846 8310	TOTAL LEAD	SW846 6010B	TPH	EDB 504.1				COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)						G	G	P	G	G					
PRESERVATIVE USED						HCL	NONE	HNO3	H2SO4	NONE					
1/7	1000	CEF-9RT-GW-MD01	GW	G	22	3	4	2	4	6					COOL TO 4°C
															* BTEX, MTBE, 1,2 DICHLOROETHANE & VOH'S

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
	1/7/02	1700			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME
COMMENTS					

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

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FORM NO. TtNUS-001

APPENDIX J

TRPH SOIL LABORATORY REPORT

CT0121
SDG1879
PET

Analytical Report for

Tetra Tech Nus -Tallahassee

Project Name : 9 RT LENS

Project Manager: PAUL CALLIGAN

Lab. Work Order # : 1879
Method: FL_PRO

May 23, 2002

ACCURA Analytical Laboratories, Inc. - 6017 Financial Drive - Norcross,GA 30071
Phone: 770-449-8800 Fax: 770-449-5477

Summary of Analytical Results

Client ID:	CEF-9RT-SU-001-04B	Prep Method:	SW3550	Analytical Method:	FL_PRO
Sample Depth:		Prep Date:	04/29/02	Date Analyzed:	05/01/02
Sample ID	1879-001	Prep Time:	09:35:00	Time Analyzed:	15:54
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Sumathi Mudium
Date Collected:	04/18/2002 12:55	Date Received:	04/19/2002 09:30		

TRPH by Florida PRO Method	Result	Rep Limit	Units	Qualifier
Petroleum Range Organics	79	77	mg/kg	

Summary of Analytical Results

Client ID:	CEF-9RT-SU-002-04B	Prep Method:	SW3550	Analytical Method:	FL_PRO
Sample Depth:		Prep Date:	04/29/02	Date Analyzed:	05/01/02
Sample ID	1879-002	Prep Time:	09:35:00	Time Analyzed:	18:31
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Sumathi Mudium
Date Collected:	04/18/2002 12:45	Date Received:	04/19/2002 09:30		

TRPH by Florida PRO Method	Result	Rep Limit	Units	Qualifier
Petroleum Range Organics	17	72	mg/kg	J

Summary of Analytical Results

Client ID:	CEF-9RT-SU-003-04B	Prep Method:	SW3550	Analytical Method:	FL_PRO
Sample Depth:		Prep Date:	04/29/02	Date Analyzed:	05/02/02
Sample ID	1879-003	Prep Time:	09:35:00	Time Analyzed:	11:13
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Sumathi Mudium
Date Collected:	04/18/2002 12:32	Date Received:	04/19/2002 09:30		

TRPH by Florida PRO Method	Result	Rep Limit	Units	Qualifier
Petroleum Range Organics	3100	1700	mg/kg	

Summary of Analytical Results

Client ID:	CEF-9RT-SU-004-04B	Prep Method:	SW3550	Analytical Method:	FL_PRO
Sample Depth:		Prep Date:	04/29/02	Date Analyzed:	05/01/02
Sample ID	1879-004	Prep Time:	09:35:00	Time Analyzed:	13:17
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Sumathi Mudium
Date Collected:	04/18/2002 12:15	Date Received:	04/19/2002 09:30		

TRPH by Florida PRO Method	Result	Rep Limit	Units	Qualifier
Petroleum Range Organics	0	68	mg/kg	U

Summary of Analytical Results

Client ID:	CEF-9RT-SU-005-04B	Prep Method:	SW3550	Analytical Method:	FL_PRO
Sample Depth:		Prep Date:	04/29/02	Date Analyzed:	05/01/02
Sample ID	1879-005	Prep Time:	09:35:00	Time Analyzed:	14:09
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Sumathi Mudium
Date Collected:	04/18/2002 12:25	Date Received:	04/19/2002 09:30		

TRPH by Florida PRO Method	Result	Rep Limit	Units	Qualifier
Petroleum Range Organics	52	77	mg/kg	J

Summary of Analytical Results

Client ID:	CEF-9RT-SU-DUP-01B	Prep Method:	SW3550	Analytical Method:	FL_PRO
Sample Depth:		Prep Date:	04/29/02	Date Analyzed:	05/01/02
Sample ID	1879-006	Prep Time:	09:35:00	Time Analyzed:	15:02
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Sumathi Mudium
Date Collected:	04/18/2002 00:00	Date Received:	04/19/2002 09:30		

TRPH by Florida PRO Method	Result	Rep Limit	Units	Qualifier
Petroleum Range Organics	16	71	mg/kg	J

Summary of Analytical Results

Client ID:		Prep Method:	SW3550	Analytical Method:	FL_PRO
Sample Depth:		Prep Date:	04/29/02	Date Analyzed:	05/01/02
Sample ID	11617 BLK	Prep Time:	09:35:00	Time Analyzed:	10:16
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Sumathi Mudium
Date Collected:		Date Received:			

TRPH by Florida PRO Method	Result	Rep Limit	Units	Qualifier
Petroleum Range Organics	0	57	mg/kg	U

Analytical Data Package For: Tetra Tech Nus -Tallahassee

Project Name : 9 RT LENS

Client ID	Depth	Accura ID	Mtx	Prep #	Anal #	Received	Collection	Prep Date	Analysis
CEF-9RT-SU-001-04B		1879-001	S	11617	11939	04/19/02	04/18/02	04/29/02	05/01/02
CEF-9RT-SU-002-04B		1879-002	S	11617	11939	04/19/02	04/18/02	04/29/02	05/01/02
CEF-9RT-SU-003-04B		1879-003	S	11617	11939	04/19/02	04/18/02	04/29/02	05/02/02
CEF-9RT-SU-004-04B		1879-004	S	11617	11939	04/19/02	04/18/02	04/29/02	05/01/02
CEF-9RT-SU-005-04B		1879-005	S	11617	11939	04/19/02	04/18/02	04/29/02	05/01/02
CEF-9RT-SU-DUP-01B		1879-006	S	11617	11939	04/19/02	04/18/02	04/29/02	05/01/02
		11617 BLK	S	11617	11939			04/29/02	05/01/02

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER CTO 121-041802 PAGE 1 OF 1

PROJECT NO: N0486GH0050120	SITE NAME: 9RT Leas	PROJECT MANAGER AND PHONE NUMBER: PAUL CALLIGAN 813/806-0202	LABORATORY NAME AND CONTACT: ACCURA P. KYLE
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER AND PHONE NUMBER: MERU DALE 904/281-0400	ADDRESS: 6077 FINANCIAL DR
		CARRIER/WAYBILL NUMBER: FED-EX 8329 0239 8377	CITY, STATE: NORCROSS, GA 30071

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

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED:

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TRPH-FLO-PRO	~~BTEX + MTBE~~ ~~NA-300.0~~ ~~9056~~						COMMENTS
4/18	1255	CEF 9RT-SU-001-04B	SO	G	1	X							Cool to 4°C
4/18	1245	CEF 9RT-SU-002-04B	SO	G	2	X							
4/18	1232	CEF 9RT-SU 003-04B	SO	G	1	X	X MS						RELEASE #
4/18	1215	CEF 9RT-SU 004-04B	SO	G	1	X							FLOR-N0486-
4/18	1225	CEF 9RT-SU 005-04B	SO	G	1	X							P377 (DW)
4/18	0000	CEF-9RT-SU-DUP-04B	SO	G	1	X							And
		~~CEF-9RT MS/MSD-003-04B~~	~~SO~~	~~G~~		~~X~~							WR-121_N0486

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
[signature]	4/18/02	1600			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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

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FORM NO. TtNUS-001

APPENDIX K

TPHCWG SOIL LABORATORY REPORT

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C2-05632
Received: 31 MAY 02
Reported: 11 JUN 02

Mr. Paul Calligan
Tetra Tech NUS, Inc.
661 Anderson Drive
Pittsburgh, PA 15220

Client PO. No.: N3996-WR13-MOD 1

Requisition: N3996J60050235

Project: 9RT LENS, NAS CECIL FIELD, FL
Sampled By: Client
Code: 165020625

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05632-1	CEF-9RT-SU-003-O4C	05-30-02/12:40

PARAMETER	05632-1
TPH-WG-ALI (TPHCWG)	
>/= C6-C8 Aliphatics, mg/kg dw	<65
>C8-C10 Aliphatics, mg/kg dw	<65
>C10-C12 Aliphatics, mg/kg dw	<65
>C12-C16 Aliphatics, mg/kg dw	<65
>C16-C21 Aliphatics, mg/kg dw	<65
>C21-C35 Aliphatics, mg/kg dw	<65
Dilution Factor	1
Prep Date	06.04.02
Analysis Date	06.04.02
Batch ID	GES050
Prep Method	TPHCWG
Analyst	KA
Quantitation Factor	1.3

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C2-05632
Received: 31 MAY 02
Reported: 11 JUN 02

Mr. Paul Calligan
Tetra Tech NUS, Inc.
661 Anderson Drive
Pittsburgh, PA 15220

Client PO. No.: N3996-WR13-MOD 1

Requisition: N3996J60050235

Project: 9RT LENS, NAS CECIL FIELD, FL
Sampled By: Client
Code: 165020625

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
05632-1	CEF-9RT-SU-003-04C	05-30-02/12:40

PARAMETER	05632-1
TPH-WG-ARO (TPHCWG)	
>C5-C7 Aromatics, mg/kg dw	<65
>C7-C8 Aromatics, mg/kg dw	<65
>C8-C10 Aromatics, mg/kg dw	<65
>C10-C12 Aromatics, mg/kg dw	<65
>C12-C16 Aromatics, mg/kg dw	<65
>C16-C21 Aromatics, mg/kg dw	<65
>C21-C35 Aromatics, mg/kg dw	<65
Dilution Factor	1
Prep Date	06.04.02
Analysis Date	06.04.02
Batch ID	GES050
Prep Method	TPHCWG
Analyst	KA
Quantitation Factor	1.3
Percent Solids	77

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C2-05632
Received: 31 MAY 02
Reported: 11 JUN 02

Mr. Paul Calligan
Tetra Tech NUS, Inc.
661 Anderson Drive
Pittsburgh, PA 15220

Client PO. No.: N3996-WR13-MOD 1

Requisition: N3996J60050235

Project: 9RT LENS, NAS CECIL FIELD, FL
Sampled By: Client
Code: 165020625

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
05632-2	Method Blank	
05632-3	Spike Amount Added, LCS/LCSD	
05632-4	Lab Control Standard % Recovery	
05632-5	LCS Accuracy Control Limit (%R)	
05632-6	Spike Amount Added, MS/MSD	

PARAMETER	05632-2	05632-3	05632-4	05632-5	05632-6
Total TPH at >/= C6-C35 (TPHCWG), mg/kg dw	<5.0	850	90 %	60-140	850
Dilution Factor	1	---	---	---	---
Prep Date	06.04.02	---	---	---	---
Analysis Date	06.04.02	---	---	---	---
Batch ID	GES050	GES050	GES050	GES050	GES050
Prep Method	TPHCWG	---	---	---	---
Analyst	KA	---	---	---	---
Quantitation Factor	1.0	---	---	---	---

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C2-05632
Received: 31 MAY 02
Reported: 11 JUN 02

Mr. Paul Calligan
Tetra Tech NUS, Inc.
661 Anderson Drive
Pittsburgh, PA 15220

Client PO. No.: N3996-WR13-MOD 1

Requisition: N3996J60050235

Project: 9RT LENS, NAS CECIL FIELD, FL
Sampled By: Client
Code: 165020625

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
05632-7	Matrix Spike % Recovery	
05632-8	Matrix Spike Duplicate % Recovery	
05632-9	Precision (%RPD) MS/MSD	
05632-10	MS/MSD Accuracy Advisory Limit (%R)	
05632-11	MS/MSD Precision Advisory Limit (%RPD)	

PARAMETER	05632-7	05632-8	05632-9	05632-10	05632-11
Total TPH at >/= C6-C35 (TPHCWG), mg/kg dw	105 %	85 %	21	60-140	30
Batch ID	GES050	GES050	GES050	GES050	GES050

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.
Data from any samples that do not meet client, federal, or state sample acceptance criteria (collection, preservation, or holding time) will be flagged, or noted on a corrective action form or case narrative, or addressed on the Project Sample Inspection Form (PSIF).

Lance Larson, Project Manager

Final Page Of Report

TETRA TECH NUS, INC. NAS CECIL FIELD CHAIN OF CUSTODY | NUMBER 9RT-053002 | PAGE 1 OF 1

PROJECT NO: N3996J60 050235	SITE NAME: 9RT LENS	PROJECT MANAGER AND PHONE NUMBER: PAUL CALLIGAN 813 806 0202	LABORATORY NAME AND CONTACT: STL LANCE LARSON
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: MERV BALL 904 2810400	ADDRESS: 3355 McLemore Dr.
		CARRIER/WAYBILL NUMBER: fedex	CITY, STATE: PENSACOLA, FL 32514

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

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: None

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TPHC WG							COMMENTS
5/30	1240	CEF-9RT-SU-003-WC	So	G	1	1							Cool to 4°C
													N3996-WRB Mod 1

1. RELINQUISHED BY	DATE 5/30/02	TIME 1600	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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

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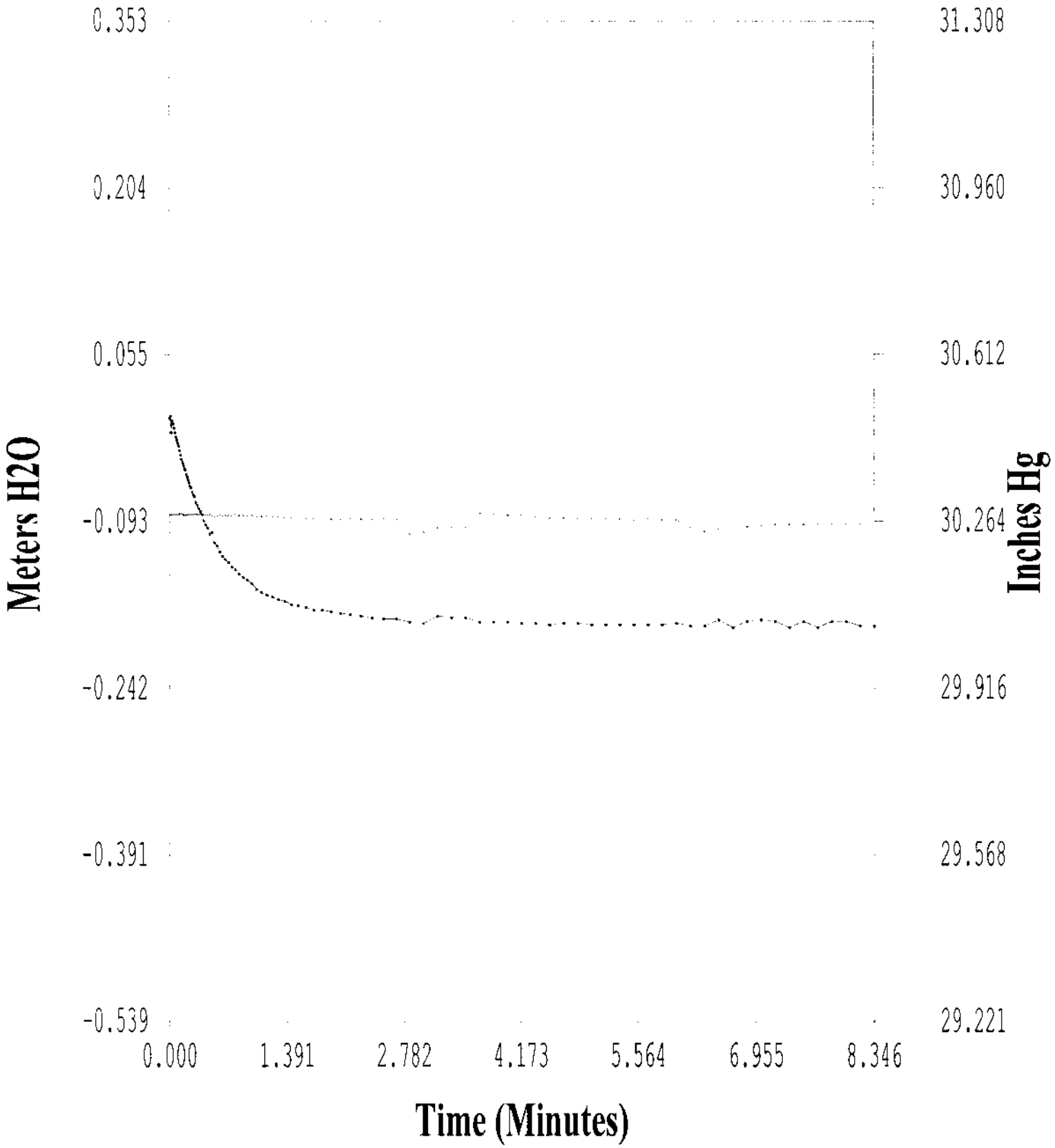
APPENDIX L

DRAWDOWN AND RECOVERY GRAPHS

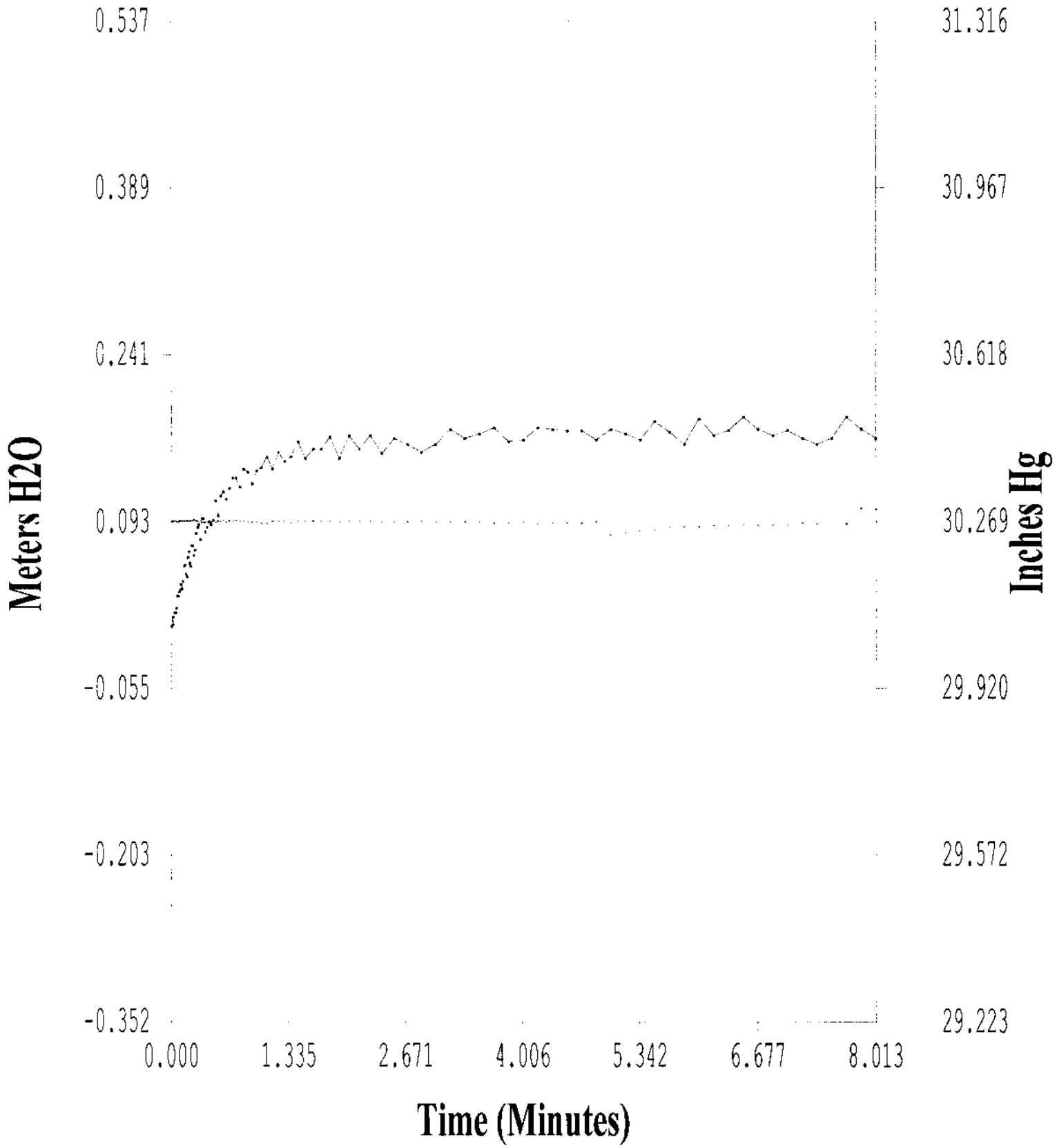
~~REC~~-9RT-TMW2

MWA DR



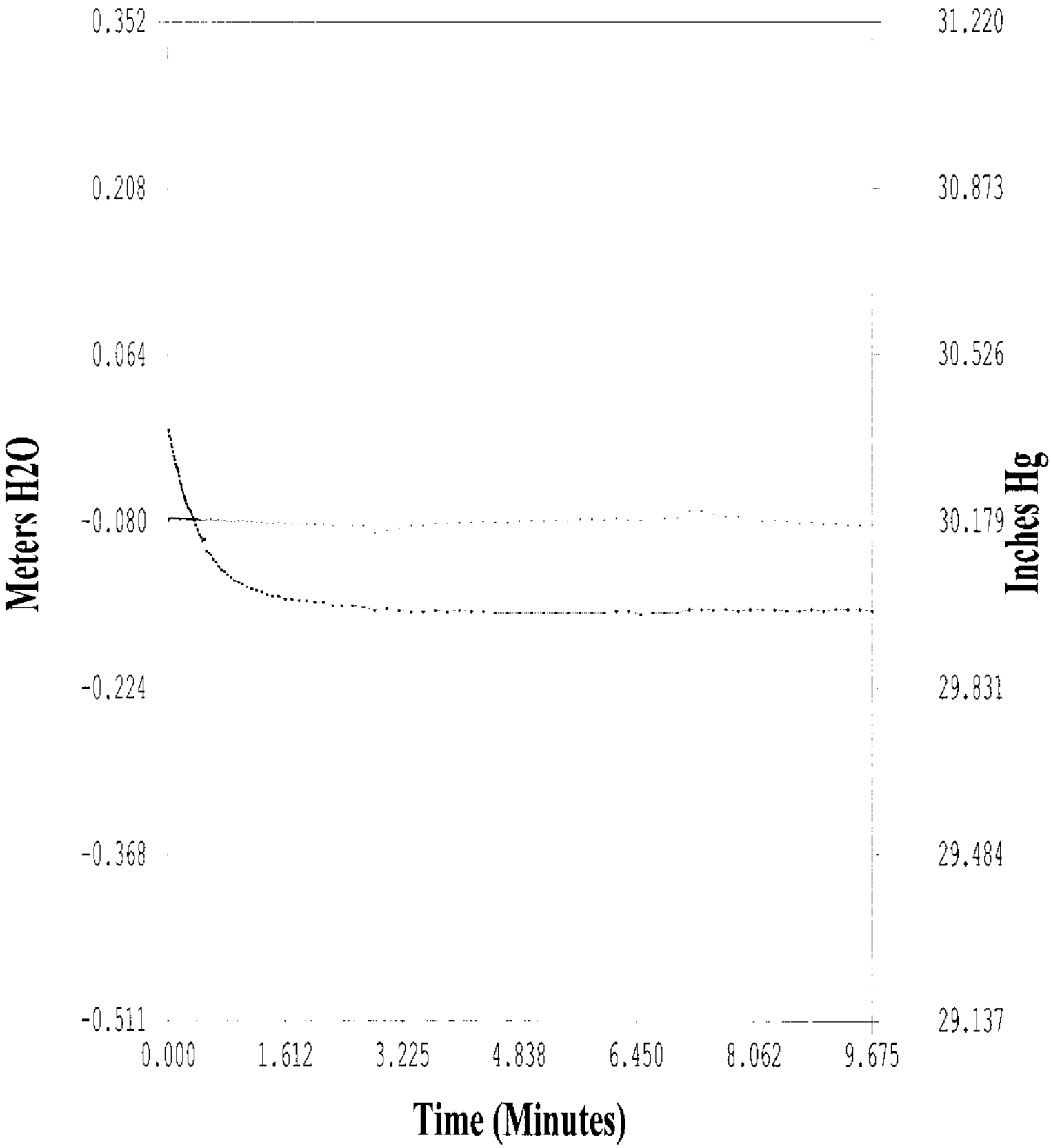
~~DR~~-9RT-TMW2

MWD REC



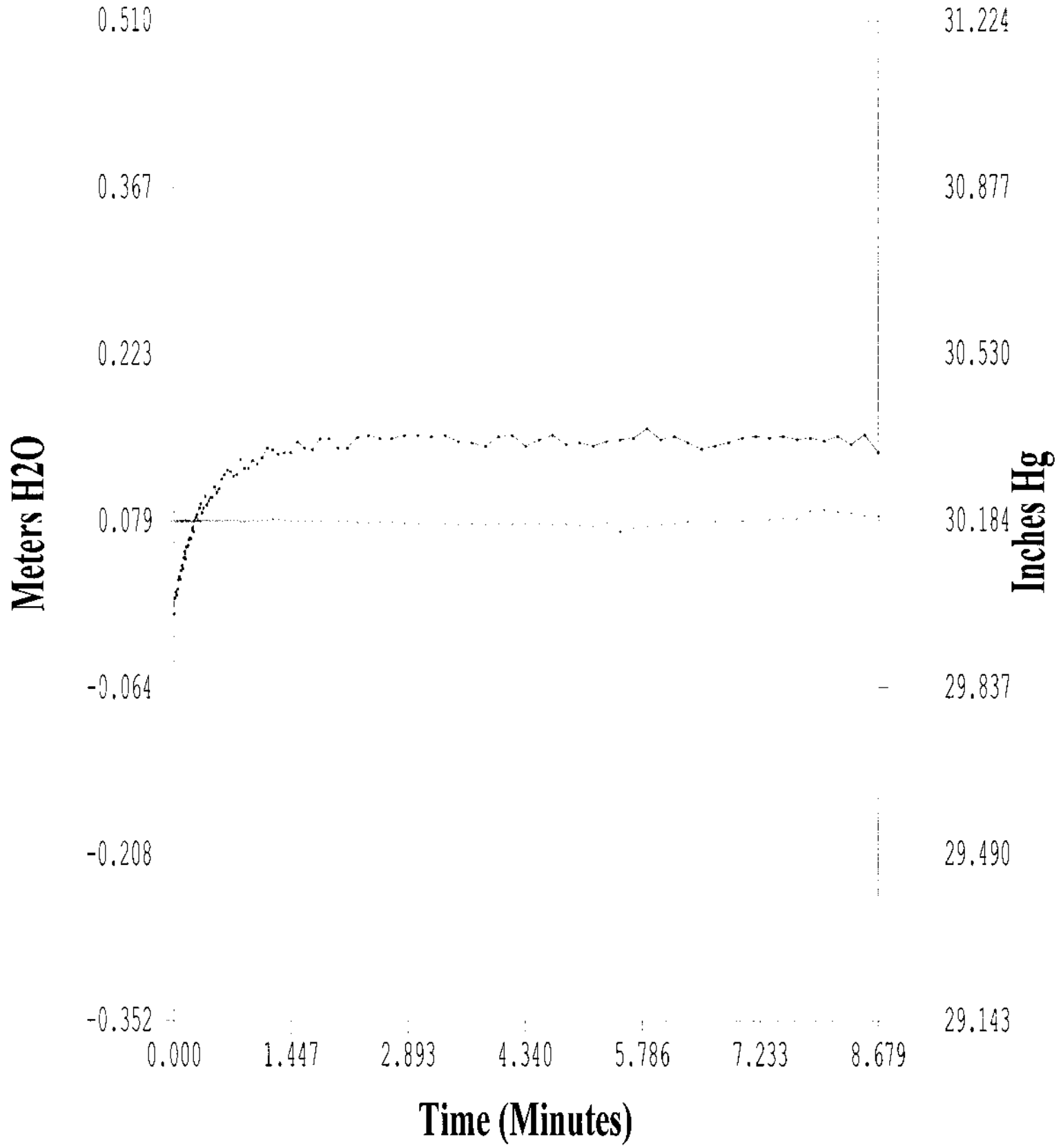
~~REC~~-9RT-TMW3

MWD DR



~~DR~~-9RT-TMW3

MWS REC



APPENDIX M

SPECAP INPUT AND OUTPUT DATA

CEF-9RT-TW2

Well diameter = 2 inches

Static water level = 6.31 feet

Drawdown = 0.187 meter at Elapsed time = 6.346 minutes

Depth to water during test = Static water level + drawdown = 6.35 ft + 0.6135 ft = 6.92 ft

Drawdown = 0.187 m x 3.281 ft/m = 0.6135 ft

Length of test = 6.346 min x 1 hour/60 min = 0.1058 hour

Pumping rate = 900 ml/min = 0.238 gpm

900 ml/min = 900 cm^3/min x 3.531E-5 ft^3/1 cm^3 x 1 min/60 sec

x 4.488 E+2 gpm/1 ft^3/sec = 2.377E-1 gpm = 0.238 gpm

Thickness of aquifer = Depth to bedrock - average water level = 87 ft - 5 ft = 82 ft

Open interval = 5 ft

Storage coefficient = 0.15

Well loss coefficient = 1

****
DETERMINATION OF AQUIFER PROPERTIES BASED ON ANALYSIS OF
SPECIFIC CAPACITY TESTS
****

Copied from: Bradbury, K. R. and Rothschild, E. R., 1985. A computerized technique for estimating the hydraulic conductivity of aquifers from specific capacity data, Ground Water, 23(2), pp. 240-246.

WELL NUMBER CEF-9RT-TW2

WELL DIAMETER (IN) =	2	
STATIC WATER LEVEL (FT) =	6.31	
DEPTH TO WATER DURING TEST (FT) =		6.92
THE LENGTH OF THE TEST (HR) =		.1058
PUMPING RATE (GPM) =	.238	
THICKNESS OF AQUIFER (FT) =		82
OPEN INTERVAL (FT) =	5	
STORAGE COEFFICIENT =	.15	
WELL-LOSS COEFFICIENT =	1	

SPECIFIC CAPACITY (GPM/FT) = .3901641

TRANSMISSIVITY: (FT*FT/SEC) = 9.889619E-03
(FT*FT/DAY) = 854.4631
(GAL/DAY/FT) = 6391.811

$T = bK \quad K = T/b$

$$K = \frac{854.4631\ ft^2/day}{82} = 10.42\ ft/day$$

CEF-9RT-TW3

Well diameter = 2 inches

Static water level = 6.0 feet

Drawdown = 0.159 meter at Elapsed time = 4.675 minutes

Depth to water during test = Static water level + drawdown = 6.0 ft + 0.522 ft = 6.52 ft

Drawdown = 0.159 m x 3.281 ft/m = 0.522 ft

Length of test = 4.675 min x 1 hour/60 min = 0.0779 hour

Pumping rate = 900 ml/min = 0.238 gpm

900 ml/min = 900 cm^3/min x 3.531E-5 ft^3/1 cm^3 x 1 min/60 sec

x 4.488 E+2 gpm/1 ft^3/sec = 2.377E-1 gpm = 0.238 gpm

Thickness of aquifer = Depth to bedrock - average water level = 87 ft - 5 ft = 82 ft

Open interval = 5 ft

Storage coefficient = 0.15

Well loss coefficient = 1

****
DETERMINATION OF AQUIFER PROPERTIES BASED ON ANALYSIS OF
SPECIFIC CAPACITY TESTS
****

Copied from: Bradbury, K. R. and Rothschild, E. R., 1985. A computerized technique for estimating the hydraulic conductivity of aquifers from specific capacity data, Ground Water, 23(2), pp. 240-246.

WELL NUMBER CEF-9RT-TW3

WELL DIAMETER (IN) =	2	
STATIC WATER LEVEL (FT) =	6	
DEPTH TO WATER DURING TEST (FT) =		6.52
THE LENGTH OF THE TEST (HR) =		.0779
PUMPING RATE (GPM) =	.238	
THICKNESS OF AQUIFER (FT) =		82
OPEN INTERVAL (FT) =	5	
STORAGE COEFFICIENT =	.15	
WELL-LOSS COEFFICIENT =	1	

SPECIFIC CAPACITY (GPM/FT) = .4576926

TRANSMISSIVITY: (FT*FT/SEC) = 1.158932E-02
(FT*FT/DAY) = 1001.317
(GAL/DAY/FT) = 7490.355

$T = bK \quad K = T/b$

$$K = \frac{1001.317\ ft^2/day}{82\ ft} = 12.21\ ft/day$$