REVISED FINAL

PHASE II RCRA FACILITY INVESTIGATION REPORT FOR THE FORMER 724th TANKER PURGING STATION (SWMU 26) FORT STEWART, GEORGIA

REGULATORY AUTHORITY RESOURCE CONSERVATION AND RECOVERY ACT 40 CFR 264, TITLE II, SUBPART C, SECTION 3004; 42 USC 6901 ET SEQ.

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November 1998

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DOCUMENT 5

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List of Abbreviations and Acronyms

amsl	above mean sea level
ASTM	American Society for Testing and materials
AUF	Area Use Factor
BAF	bioaccumulation factor
BCF	bioconcentration factor
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
CAP	Corrective Action Plan

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CERCLA	
CMCOC	Comprehensive Environmental Response, Compensation, and Liability Act
CMCOPC	contaminant migration constituent of concern
COC	contaminant migration constituent of potential concern
COPC	chemical/contaminant of concern
CSM	chemical/contaminant of potential concern
DAF	conceptual site model
	dilution attenuation factor
DPW	Directorate of Public Works
DQO EPA	Data Quality Objective
	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
ESV	ecological screening value
FSMR	Fort Stewart Military Reservation
GEPD	Georgia Environmental Protection Division
GSSL	generic soil screening level
HHRA	human health risk assessment
HI	hazard index
HQ	hazard quotient
IDW	investigation-derived wastes
LOAEL	lowest observed adverse effect level
MCL	maximum contaminant level
NAPL	nonaqueous phase liquid
NOAEL	no observed adverse effect level
PAH	polyaromatic hydrocarbon
PCE	1,1,2,2-tetrachloroethene
PID	photoionization detection
PRE	Preliminary Risk Evaluation
PVC	polyvinyl chloride
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SAIC	Science Applications International Corporation
SQB	sediment quality benchmark
SRC	site-related contaminant/chemical
SSL	Soil Screening Level
SVOC	semivolatile organic compound
SWMU	Solid Waste Management Unit
TCLP	toxicity characteristic leaching procedure
TPH	total petroleum hydrocarbons
TPH-DRO	TPH-diesel range organic
TPH-GRO	TPH-gasoline range organic
TPS	Tanker Purging Station
TRV	toxicity reference value
USACE	U.S. Army Corps of Engineers
UTL	upper tolerance level
VOC	volatile organic compound

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EXECUTIVE SUMMARY

This report summarizes the results of the Phase II Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) for the Former 724th Tanker Purging Station (TPS), Solid Waste Management Unit (SWMU) 26, at Fort Stewart, Georgia. This report has been prepared by Science Applications International Corporation (SAIC) for the U.S. Army Corps of Engineers (USACE), Savannah District, under Contract DACA21-95-D-0022, Delivery Order No. 0007. The RFI sampling was conducted in accordance with USACE guidance EM200-1-3 and the approved Phase II RFI Work Plan.

The Former 724th TPS was located in the western cantonment area, which is in the southern portion of the Fort Stewart Military Reservation (FSMR). The tanker purging station was an area where tanker trailers that carried diesel, JP-4 jet fuel, and mogas were routinely cleaned. During August 1996, the tanker purging station was dismantled, the underground facilities were removed, and approximately 525 cubic yards of contaminated soil were excavated and replaced with clean backfill.

Potential contamination due to fuel leakage at the site was investigated during a Phase I RFI for 24 SWMUs at Fort Stewart in 1993. Analytical results from soil sampling conducted at the Former 724th TPS indicated fuel product and solvent contamination in soil. Based on these findings, the Georgia Environmental Protection Division (GEPD) instructed the Fort Stewart Directorate of Public Works (DPW) to conduct a Phase II RFI.

The objectives of the Phase II RFI for the Former 724th TPS, as defined in the Work Plan approved by GEPD on June 10, 1997, are as follows:

- determine the horizontal and vertical extent of contamination;
- determine whether contaminants present a threat to human health or the environment;
- determine the need for future action and/or no further action; and
- gather necessary data to support a Corrective Action Plan (CAP), if warranted.

SUMMARY OF INVESTIGATION ACTIVITIES

The information provided in this report is based upon data collected previously during the Phase I RFI and data collected as part of the Phase II field sampling and analysis. The scope of the Phase II field work included the following activities:

- Collecting direct-push soil samples using a push probe at a total of 21 locations. Direct-push soil samples were analyzed for volatile organic compounds (VOCs).
- Collecting direct-push groundwater samples using a push probe at a total of 17 locations, including 5 vertical profile probes. Direct-push groundwater samples were analyzed for VOCs.
- Installing five permanent groundwater monitoring wells both upgradient and downgradient of the site. Soil samples were collected from each well borehole and analyzed for VOCs, polynuclear aromatic hydrocarbons (PAHs), and RCRA metals.

- Collecting groundwater samples from the new wells for a total of five samples. Groundwater samples were analyzed for VOCs, PAHs, and RCRA metals.
- Completing aquifer (slug) tests in each of the newly installed wells.
- Collecting surface water and sediment samples at a total of five locations within the swale adjacent to the site and within Mill Creek.

PHYSICAL CHARACTERISTICS OF THE SITE

The former TPS occupied an area approximately 30 feet by 50 feet, located between a fuel truck parking area to the east and a shallow swale to the west. The topography at the site varies between 60 and 70 feet mean sea level (msl). The drainage swale accepts runoff from the site and the adjacent fuel truck parking area, but is not connected to Mill Creek or its tributaries. Mill Creek is the nearest surface water stream to the Former 724th TPS and is located approximately 1200 feet west of the site.

The surficial soils at the site are generally a light gray sand or silty sand up to 15 feet thick. Interbedded clayey sand and sandy clay layers generally underlie these surficial sandy layers to a depth of 15 to 25 feet. A light gray to greenish gray sand and silty sand was encountered beneath these clayey layers and varied from 5 to 15 feet thick. A dark greenish gray silty and clayey sand with shells (typical of the Hawthorn formation) was present in the lower portion of the soil profile to the maximum depth explored (51 feet). Results of geotechnical analyses indicated that the soils tested are generally non-plastic silty to clayey sands, with between 4 and 48 percent by weight fine-grained particles. One soil sample from well MW-1 located northeast of the site consisted of a clayey sand having high plasticity and a low laboratory permeability of 2×10^{-6} cm/sec. Results of aquifer (slug) tests indicated hydraulic conductivities ranging from 2.0 × 10^{-5} to 4.0×10^{-4} cm/sec for the five wells.

The uppermost hydrogeologic unit is the surficial aquifer, which ranges from 55 to 150 feet in thickness at the FMSR. Water levels measured during well development and sampling varied from the shallowest (3 feet) at MW-1, to the deepest (10 feet) at MW-5 located near Mill Creek. Groundwater flow within the water table is to the west-northwest, ultimately discharging to Mill Creek approximately 1,200 feet from the site. The horizontal gradient is approximately 0.01 foot/foot at the site, and approximately 0.0083 between the site and Mill Creek. The calculated groundwater flow velocity averages approximately 3.6 feet/year towards Mill Creek.

Monitoring well MW-4 is screened within the surficial aquifer at a depth of 35 to 45 feet below ground surface. Water levels in MW-4 were compared to those in an adjacent well, MW-2, which is screened at the water table. Water levels in the deeper well MW-4 were 2.87 feet lower than in MW-2, indicating a downward hydraulic gradient of 0.082 foot/foot. The downward gradient may indicate that the clayey sand layers act as a semi-confining unit, restricting downward migration of groundwater.

CONTAMINANT NATURE AND EXTENT

Results of chemical analyses indicate that soils, groundwater, surface water, and sediment at the site contain organic and metal contaminants at concentrations greater than their reference background concentrations. The predominant contaminants in both soil and groundwater are

fuel-related chemicals such as benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds, with secondary contaminants such as acetone, 1,1-dichloroethane, and naphthalene.

Contamination present in surface and subsurface soils is dominated by BTEX and secondary PAH contaminants. Maximum BTEX concentrations reported in soil include benzene (9420 μ g/kg), toluene (27,400 μ g/kg), ethylbenzene (27,100 μ g/kg), and total xylenes (124,000 μ g/kg). BTEX contamination in soil extends to the water table (approximately 6 feet deep) and is greatest immediately north and east of the area where contaminated soils were removed in August 1996. The remaining soil contamination covers an area approximately 60 × 75 feet.

BTEX contamination in groundwater extends to a depth of approximately 20 feet below the water table, although isolated areas of BTEX were found in groundwater to depths up to 40 feet. Maximum concentrations were found at the water table in a direct-push groundwater probe (GP.1) and include benzene (8,090 μ g/L), toluene (4,200 μ g/L), ethylbenzene (2,870 μ g/L), and xylenes (12,100 μ g/L). These concentrations exceed the respective maximum contaminant levels (MCLs) for each chemical. The BTEX contamination covers a plume area approximately 100 feet wide by 160 feet long, extending from the Former 724th TPS facilities to the north and west. Mill Creek is more than 1,000 feet from the leading edge of the BTEX plume and is, therefore, not being impacted by the contamination. Biodegradation of the BTEX is likely occurring, as evidenced by the presence of methane, a breakdown product of BTEX degradation.

Limited metal contamination is present at the site and in the swale immediately west of the site. In surface and subsurface soils at the site, maximum concentrations of cadmium (0.44 mg/kg), chromium (12.9 mg/kg), and mercury (0.06 mg/kg) were reported. In groundwater at the site, maximum concentrations of arsenic (3.5 μ g/L), barium (99.2 μ g/L), mercury (0.3 μ g/L), and silver (4.1 μ g/L), were reported, although concentrations in the upgradient well MW-1 were generally higher than those in the downgradient wells and, therefore, may not be site related. In sediments within the swale, concentrations of barium (29.2 mg/kg), mercury (0.07 mg/kg), and silver (2.6 mg/kg) were reported at levels above reference background criteria for both sediment and soil media; chromium (4.4 mg/kg) and lead (6.6 mg/kg) were both higher than reference background criteria for sediment, but below the criteria for surface soil and, therefore, may not be site-related. In surface water, concentrations of cadmium (1.7 μ g/L), lead (10.8 μ g/L), mercury (0.18 μ g/L), and silver (1.3 μ g/L) were reported at levels above reference background criteria for both surface water and groundwater; arsenic (1.8 μ g/L) was higher than reference background for surface water, but below the criteria for groundwater and, therefore, may not be site related.

Constituents in Mill Creek are not related to the Former 724th TPS, since neither contaminated groundwater nor runoff from the site discharge directly to the creek.

CONTAMINANT FATE AND TRANSPORT

Contaminant fate and transport analysis provided an assessment of the potential migration pathways and transport mechanisms affecting the chemicals at the sites. In particular, the leachability of contaminants from soil to groundwater and their natural attenuation in groundwater was evaluated. Organic compounds have been detected in surface and subsurface soils at concentrations that exceed U.S. Environmental Protection Agency (EPA) Generic Soil Screening Levels and, therefore, could migrate from soils to the water table at concentrations exceeding their respective MCLs. These organics, which include BTEX, acetone, and naphthalene, have already reached the groundwater because of their high mobilities and historically higher soil concentrations. However, groundwater movement off site is very slow (3.6 feet/year) and may take 280 years to reach the receptor location (Mill Creek).

The BTEX compounds are currently observed above their respective MCLs in groundwater. Based on the site conceptual model, these contaminants have likely been leaching from the contaminated soils into the groundwater beneath the site resulting in concentrations above their MCLs, and will likely continue to leach in the future. However, off-site migration of these contaminants will be very limited due to retardation and biodegradation as well as the slow movement of groundwater flow.

Benzene will degrade from its observed maximum of 8,090 μ g/L at the source to a concentration less than its MCL of 5 μ g/L in less than 22 years, based on a conservative benzene biodegradation half-life of 2 years. Traveling at a groundwater flow rate of 3.6 feet/year for those 22 years, groundwater would not be expected to exceed its MCL at a distance of 80 feet from the source. Similarly, ethylbenzene, toluene, and xylene, with higher biodegradation rates, will remain at concentrations much lower than benzene. Therefore, it may be concluded that none of the constituents from the Former 724th TPS site is expected to be of potential concern at the nearest receptor location (Mill Creek), which is located nearly 1,200 feet from the former facility.

HUMAN HEALTH RISK ASSESSMENT

The human health risk assessment included a Step 1 risk evaluation to determine potential human health risks associated with the contaminants. Contaminants of potential concern (COPCs) have been identified as those constituents present at concentrations higher than their reference background criteria and higher than their respective EPA Region III risk-based screening criteria.

In surface soil, there are no COPCs for human health, because no constituent exceeded its respective risk-based screening criterion for exposure to a residential receptor.

In subsurface soil, there are likewise no COPCs for human health as a result of direct exposure; no constituent presents a significant potential risk to receptors. As discussed for fate and transport, acetone, BTEX, and naphthalene have been identified as contaminants in subsurface soil that may leach into groundwater at concentrations that are unacceptable in terms of using groundwater as a drinking water source.

In groundwater, the initial COPCs are acetone, arsenic, 1,1-dichloroethane, 1,2-dichloroethane, chloroform, chloromethane, and BTEX. These constituents present a potential threat to human health as a result of using groundwater as a source of drinking water. However, the maximum concentration of arsenic ($3.5 \ \mu g/L$) was well below its MCL of 50 $\mu g/L$, and was only slightly above its reference background concentration of $3.02 \ \mu g/L$. Arsenic exceeded background in only a single downgradient well (MW-2) and was reported at an even higher concentration in the site-specific upgradient well ($10.1 \ \mu g/L$ at MW-1). Therefore, arsenic in groundwater is not considered site related and is not a COPC.

In addition, use of the surficial groundwater at this site for drinking water is unlikely. Given the shallow depth of the surficial aquifer and the presence of the deeper principal artesian aquifer (a common source of drinking water throughout the region), the use of the surficial aquifer is not considered to be a viable exposure scenario. However, drinking water screening values were used in the absence of more appropriate values.

In surface water and sediment, there are no human health COPCs because no constituent exceeded its respective risk-based criterion for exposure to a residential receptor.

ECOLOGICAL RISK ASSESSMENT

The ecological risk assessment provided a Phase 1 preliminary risk evaluation for potential terrestrial and aquatic receptors at the site. The Preliminary Risk Evaluation for the Former 724th TPS identified ecological COPCs in surface water, sediment, and groundwater based on a comparison of their maximum site concentrations to their EPA Region 4 ecological screening values. Preliminary risk calculations for identified ecological COPCs in Mill Creek surface water were based on a comparison of detected concentrations to toxicity reference values (TRVs) for surrogate species representing ecological receptors.

Chromium was the only chemical detected in surface soil at the Former 724th TPS at concentrations that exceeded both reference background criteria and the TRVs for an ecological receptor (robin). There is uncertainty about whether earthworms from the Former 724th TPS will constitute 20 percent or more of the diet of robins foraging at the site. Thus, robins are unlikely to be at risk from chromium in surface soil.

There is uncertainty about whether ethylbenzene, benzo(b)fluoranthene, and styrene are ecological COPCs in surface soil, because there are no TRVs for these substances. Benzo(b)fluoranthene and styrene were not present in surface soil at the site, but were detected only at MW-5 (adjacent to Mill Creek) at concentrations near their detection limit, and are therefore not site related. Ethylbenzene was detected in surface soil at MW-2 and is related to former releases at the site. However, ethylbenzene in surface soil is unlikely to pose a risk to ecological receptors given the low concentration (0.02 mg/kg) relative to the proposed TRV for ethylbenzene of 8.4 mg/kg, which is one-tenth the TRV total xylenes. There are, therefore, no ecological COPCs in surface soil.

Barium and silver were identified as ecological COPCs in sediment in the drainage swale, but exposure of sediment-dwelling biota to sediment in the swale was judged to be unlikely. The swale is an ephemeral surface water body, as shown by the lack of water at SWS-3 at the time of sampling, and is unlikely to support a community of aquatic sediment-dwelling organisms. Exposure of other types of receptors (e.g., terrestrial animals) to swale sediment by direct contact and ingestion is likely to be minimal. There are, therefore, no ecological COPCs in sediment in the swale.

Cadmium, lead, and silver were detected in surface water in the drainage swale at the Former 724th TPS at concentrations that exceed reference background criteria and also exceed EPA Region 4 ecological screening values for aquatic biota. However, there are no aquatic biota or other ecological receptors of concern in the man-made swale. Maximum surface water concentrations of cadmium and lead do not exceed a published TRV for terrestrial receptors (raccoons) and are, therefore, not of concern. There is uncertainty about whether silver is of

concern because there is no published TRV for silver. There are, therefore, no ecological COPCs in surface water in the swale.

According to EPA Region 4 guidance, groundwater is to be treated as surface water in the ecological preliminary risk evaluation. Treating groundwater as surface water is realistic at the Former 724th TPS site because groundwater may discharge to the drainage swale next to the site during times of high groundwater stage.

Barium, mercury, silver, benzene, and chloromethane are present in groundwater at the Former 724th TPS at concentrations that exceed reference background criteria and also exceed EPA Region 4 ecological screening values for surface water. However, there are no aquatic biota or other ecological receptors of concern in the man-made swale. Maximum groundwater concentrations of barium, mercury, and benzene do not exceed a published TRV for terrestrial receptors (raccoons) potentially ingesting groundwater as surface water; therefore, these metals are not of concern for terrestrial receptors. There is uncertainty about whether silver or chloromethane are ecological COPCs in groundwater because there are no published TRVs for them, so that they are potentially of concern for raccoons, by default. However, silver and chloromethane are higher in the upgradient well and are not considered site related. There are, therefore, no ecological COPCs in groundwater at the site.

In Mill Creek, mercury was identified as an ecological COPC in surface water based on comparison to EPA Region 4 ecological screening values. Mercury is also an ecological COPC in surface water for protection of terrestrial predators (mink, green heron) in Mill Creek based on comparison to their TRVs. In Mill Creek sediment, no ecological COPCs were identified, although there is uncertainty about barium, since there are no published values for barium, making it a COPC by default. Ecological risks in Mill Creek are not related to the Former 724th TPS for the following reasons:

- As concluded in the fate and transport evaluation, off-site migration of contaminants would be very limited because of retardation and biodegradation, as well as the slow movement of groundwater. Mill Creek is the nearest surface water stream to the Former 724th TPS and is located approximately 1,200 feet west of the site. Therefore, migration of contaminants to Mill Creek via groundwater discharge is unlikely, and there is no complete pathway from groundwater to ecological receptors in Mill Creek.
- The drainage swale accepts runoff from the site and the adjacent fuel truck parking area, but is not connected to Mill Creek or its tributaries. Therefore, migration of contaminants to Mill Creek via surface water runoff is also not likely, and there is no complete pathway from the Former 724th TPS to ecological receptors in Mill Creek.

SUPPLEMENTAL GROUNDWATER CHARACTERIZATION

Based upon the results of the original Phase II RFI at the Former 724th TPS, a supplemental characterization was conducted in September 1998 to verify concentrations of metals in groundwater and to provide further evidence that natural attenuation of VOCs is occurring. The scope of work included sampling of the four onsite monitoring wells (MW-1 through MW-4) and analyzing the samples for VOCs, PAHs, RCRA metals, and water quality parameters. Results of this supplemental investigation are presented in Appendix H, and summarized below.

VOCs. Seven individual VOCs were detected in groundwater samples. BTEX compounds were detected only in a single well, MW-2, which is screened at the water table and located in the center of the former facility (i.e., the identified source). During sampling, approximately 1.9 feet of free petroleum product were encountered in MW-2; no free product had been encountered in any of the direct-push groundwater samples or any of the wells during the Phase II RFI in August 1997. Once free product was discovered, a ferret system was installed in MW-2 for recovery of the free product; operation of the ferret system is ongoing.

Benzene (1,350 μ g/L), ethylbenzene (477 μ g/L), toluene (1,540 μ g/L), and total xylenes (2,350 μ g/L) were reported in MW-2. The concentrations of benzene and toluene exceeded their respective MCLs of 5 μ g/L and 1,000 μ g/L. No BTEX constituent was found in any of the other wells, confirming the Phase II RFI conclusions that contaminants have not migrated vertically or laterally from the source at the former facility.

The other VOCs that were detected included chloroform (18.7 μ g/L at MW-2); 1,1-dichloroethane (1.4 μ g/L at MW-3); and 2-hexanone (6.7 μ g/L at MW-3). Chloroform and 2-hexanone are common laboratory contaminants and were not detected in these wells during the Phase II RFI, and are therefore not likely a result of contaminant releases from the former facility. 1,1-Dichloroethane was detected in MW-3 during the Phase II RFI at a concentration of 2.2 μ g/L, and is considered a secondary contaminant within the primary BTEX plume.

PAHs. Naphthalene was the only PAH compound detected in groundwater. Naphthalene was reported at 242 μ g/L at MW-2, which exceeds its EPA Region III risk-based criterion of 150 μ g/L. Naphthalene was also detected in MW-2 during the Phase II RFI. The increase in the concentration of naphthalene is likely due to the presence of the free product found during the supplemental sampling.

RCRA Metals. Four metals were detected in the groundwater samples, including arsenic, barium, chromium, and mercury. These metals were detected above the reference background criteria and in the same wells as detected during the Phase II RFI sampling in August 1997. None of the metals exceeded their respective MCL. Silver, which was detected above background in the original Phase II RFI sampling, was not detected above background in the supplemental sampling.

- Arsenic (maximum 16.4 µg/L) was found at its highest concentration in the upgradient well MW-1, and is therefore not considered site related.
- Barium (maximum 87.9 µg/L) and mercury (maximum 0.59 µg/L) were found at concentrations above background in well MW-4, screened at a depth of 35 to 45 feet. In other wells, barium and mercury were found at or below background. Because these metals do not migrate readily and are only present at depth, they are not likely related to any contaminant plume emanating from the facility.
- Chromium (maximum 6.1 µg/L) was found in MW-2 at a concentration only slightly above background and marginally higher than that found during the Phase II RFI (2.4 µg/L). Chromium was not detected in any of the other wells in the vicinity of the Former 724th TPS, and was detected at a concentration well below its MCL (100 µg/L) and its EPA Region II risk-based criterion (180 µg/L). Therefore, no further action is warranted for chromium in groundwater at the facility.

Other Analytes. Alkalinity varied between 102 and 321 mg/L (lowest at the upgradient well MW-1 and highest in the deeper well MW-4). Sulfate varied between 0.18 and 11.4 mg/L (lowest at well MW-2 and highest at MW-4). These results are consistent with the results of the Phase II RFI and suggest that biodegradation is occurring, resulting in higher alkalinity and sulfate content in the downgradient wells.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations have been made based on the results of the Phase II RFI and the supplemental groundwater investigation:

- 1. Because there are no ecological COPCs at the Former 724th TPS, an Ecological Risk Assessment is not warranted.
- 2. Concentrations of metals found during the Phase II RFI are similar to those found during the supplemental sampling. None of the metal concentrations exceed MCLs or EPA Region III risk-based levels. No further corrective action for metals in groundwater is warranted.
- 3. Free petroleum product was encountered at well MW-2 in the center of the former facility during the supplemental investigation. Free product recovery, which has been undertaken at the site, should be continued.
- 4. BTEX compounds exceed MCLs in the shallow water table aquifer near the source. There is no evidence that contamination has migrated further beyond the source, despite the presence of free product being discovered. Natural attenuation of organics through biodegradation is occurring, as suggested by the presence of higher methane, alkalinity, and sulfate in downgradient wells.
- 5. Due to the presence of free product and BTEX compounds at concentrations in groundwater exceeding MCLs, a CAP will be required to evaluate measures to mitigate the effects of these contaminants. The CAP should evaluate the effectiveness of natural attenuation in remediating VOCs in soil and groundwater by using fate and transport modeling of leaching and biodegradation. The CAP should also address mitigation of naphthalene, which was detected during the supplemental investigation at a concentration exceeding its EPA Region III risk-based level and is likely associated with the free petroleum product.

IDENTIFICATION OF REMEDIAL LEVELS

Remedial levels are presented in Table ES-1 for soil and groundwater. Soil remedial levels are based on leaching from soil to groundwater at levels exceeding MCLs or EPA Region III risk-based values. Groundwater remedial levels are based on MCLs, which take into consideration both human health and technological limitations. In the absence of an MCL, the EPA Region III risk-based values for groundwater were used for deriving remedial levels.

Analyte	Soil Remedial Level (µg/kg)	Groundwater Remedial Level (µg/L)
Arsenic		
1,1-Dichloroethane	-	_b
1,2-Dichloroethane		_ b
Acetone	370	370
Benzene	20	5
Chloroform		0.1
Chloromethane	••••••••••••••••••••••••••••••••••••••	_ <u>_</u> b
Ethylbenzene	3,100	700
Naphthalene	600	150°
Toluene	4,200	1,000
Xylenes, total	31,700	10,000

Table ES-1. Remedial Levels for Soil and Groundwater Former 724th Tanker Purging Station, Fort Stewart

Indicates no remedial action needed for that analyte.

-^a No remedial action is needed for arsenic in groundwater since the maximum concentration for arsenic is below its maximum contaminant level (MCL).

-b No remedial action is needed for 1,1-dichloroethane, 1,2-dichloroethane, or chloromethane since the maximum concentration for these analytes during the supplemental groundwater sampling did not exceed their respective MCLs or U.S. Environmental Protection Agency (EPA) Region III risk-based levels.

- No MCL exists for naphthalene; the remedial level for naphthalene is based on its EPA Region III risk-based level.

These soil and groundwater remedial levels are protective of direct exposure to residents by hazardous constituents in groundwater or that may leach from the soil to groundwater. However, it is recognized that groundwater is not used at this site as a source of drinking water. It will take approximately 280 years for groundwater to reach the nearest receptor at Mill Creek, which is 1,200 feet from the former facility. Constituents will naturally attenuate in groundwater through retardation and biodegradation before reaching Mill Creek.

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1.0 INTRODUCTION

This report summarizes the results of the Phase II Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) for the Former 724th Tanker Purging Station (TPS), Solid Waste Management Unit (SWMU) 26, at Fort Stewart, Georgia. This report has been prepared by Science Applications International Corporation (SAIC) for the U.S. Army Corps of Engineers (USACE), Savannah District, under Contract DACA21-95-D-0022, Delivery Order No. 0007. The RFI was conducted in accordance with USACE guidance EM 200-1-3.

The Former 724th TPS was located in the western cantonment area, which is in the southern portion of the Fort Stewart Military Reservation (FSMR). The TPS was an area where tanker trailers that carried diesel, JP-4 jet fuel, and mogas were routinely cleaned. During August 1996 the tanker purging station was dismantled, the underground facilities were removed, and approximately 525 cubic yards of contaminated soil were excavated and replaced with clean backfill.

Potential contamination due to fuel leakage at the site was investigated during a Phase I RFI for 24 SWMUs at Fort Stewart (Rust 1993). Analytical results from soil sampling conducted at the Former 724th TPS in 1993 indicated fuel product and solvent contamination in soil. Based on these findings, Georgia Environmental Protection Division (GEPD) instructed the Fort Stewart Directorate of Public Works (DPW) to conduct a Phase II RFI.

1.1 OBJECTIVES AND SCOPE OF THE INVESTIGATION

The specific objectives of the Phase II RFI for the Former 724th TPS at Fort Stewart, Georgia, as defined in the Phase II RFI Work Plan (SAIC 1997) (approved by GEPD on June 10, 1997), are to:

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- determine the horizontal and vertical extent of contamination;
- determine whether contaminants present a threat to human health or the environment;
- determine the need for future action and/or no further action; and
- gather necessary data to support a Corrective Action Plan (CAP), if warranted.

The information provided in this report is based upon data collected previously during the Phase I RFI and data collected as part of the Phase II field sampling and analysis. The Phase II sampling program incorporated an observational approach to sampling, as defined in the Phase II RFI Work Plan. This observational approach utilized field screening techniques to determine the horizontal and vertical extent of contamination at SWMU 26 and to identify suitable locations for installation of permanent monitoring wells. The scope of the field work included the following activities:

Collection of direct-push soil samples using a push probe at a total of 21 locations.

• Collection of direct-push groundwater samples using a push probe at a total of 17 locations, including 5 vertical profile probes.

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- Installation of five permanent groundwater monitoring wells both upgradient and downgradient of the site.
- Completion of aquifer (slug) tests in each of the newly installed wells.
- Collection of surface water and sediment samples at a total of five locations within the swale adjacent to the site and within Mill Creek.
- Surveying the position of all sample locations.

1.2 REPORT ORGANIZATION

This Phase II RFI Report consists of ten sections. Section 1.0 describes the purpose of this investigation and summarizes the scope of work performed. Section 2.0 discusses the specific site history and conceptual site model for the Former 724th TPS. Section 3.0 summarizes the investigation activities and methodologies used in completing the Phase II RFI field work. Section 4.0 presents the regional setting of the FSMR, including the demographics, topography, regional geology and hydrogeology, surface drainage, soils, and ecology. Section 5.0 describes the results of the investigation and presents an interpretation of the nature and extent of contamination. Section 6.0 identifies site-specific considerations affecting contaminant fate and transport. Section 7.0 presents the human health risk assessment, and Section 8.0 presents the ecological risk assessment, or preliminary risk evaluation (PRE). Section 9.0 summarizes the report conclusions and recommendations for subsequent corrective action. The references are presented in Section 10.0.

This revised final report also contains eight appendices. Appendices A through E contain the same information as presented in the final report (March 1998), including boring logs, monitoring well construction diagrams, aquifer (slug) test results, Quality Control Summary Report, and geotechnical laboratory test results. Appendix F, which contains the background data, has been substantially modified to include additional information collected in conjunction with ongoing RFIs at other SWMUs on the FSMR. Appendix G has been modified to include an explanation of acronyms and validation flags. Appendix H is a new appendix that presents the results of the September 1998 supplemental groundwater sampling.

2.0 SITE HISTORY AND CONTAMINANTS

2.1 INSTALLATION DESCRIPTION

Fort Stewart (then known as Camp Stewart) was established in June 1940 as an anti-aircraft artillery training center. Between January and September 1945, the installation operated as a prisoner-of-war camp. The installation was deactivated in September 1945. In August 1950, Fort Stewart was reactivated to train anti-aircraft artillery units for the Korean Conflict. The training mission was expanded to include armor training in 1953. Fort Stewart was designated a permanent Army installation in 1956, and became a flight training center in 1966. Aviation training at the Fort Stewart facilities was phased out in 1973. In January 1974, the 1st Battalion, 75th Infantry was activated at Fort Stewart. Fort Stewart then became a training and maneuver area, providing tank, field artillery, helicopter gunnery, and small arms training for regular Army and National Guard units. The 24th Infantry Division, which was reflagged as the 3rd Infantry Division in May 1966, was permanently stationed at Fort Stewart in 1975. These activities comprise the installation's primary mission today.

The FSMR is located in portions of Liberty, Bryan, Long, Tattnall, and Evans Counties, Georgia, approximately 40 miles west-southwest of Savannah, Georgia (Figures 2.1 and 2.2). The cantonment, or garrison area, of the FSMR is located within the Liberty County portion of the FSMR on the southern boundary of the reservation. Hinesville, Georgia is the nearest city to the garrison area and is located immediately outside of the reservation boundary.

2.2 SITE LOCATION AND HISTORY

The former TPS was an area where tanker trailers that carried JP-4 jet fuel, diesel, and mogas were routinely cleaned. The Former 724th TPS (SWMU 26) was located in the western cantonment area in the 1800 block of McFarland Avenue, at the western end of the fuel truck parking area. The former TPS occupied an area approximately 30 feet by 50 feet (Rust 1996) located between the chain-link fence at the parking area (western end) and a shallow swale approximately 25 feet to the west (Figure 2.3). The former site facilities included an underground waste oil tank and oil/water separator, an aboveground storage tank that received water after oil/water phase separation, and an underground pump with surface access and pumping controls for pumping water into the aboveground storage tank.

The Former 724th TPS was constructed in 1982 and taken out of service in March 1996. During August 1996 the purging station was dismantled, the underground facilities were removed, and approximately 525 cubic yards of contaminated soil were excavated and replaced with clean backfill. Soil was excavated to the water table at the former facility (approximate depth of 3 to 10 feet) and to a depth of 6 inches in the adjacent swale (Figure 2.4). All equipment, above ground and below ground, was removed from the site during removal activities.

Potentially contaminated materials used or generated at the Former 724th TPS included waste liquids from the purging of fuel tankers. These waste liquids contained assorted petroleum hydrocarbons, such as diesel, JP-4, and mogas (Geraghty and Miller 1992). In addition, various additives, which included CitrikleenTM (Pentebose Corp.), purging fluid MIL-F-38299B AM.2



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Figure 2.2. Location Map for Fort Stewart Military Reservation, Georgia





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Figure 2.4. Location of Phase I Soil Samples

(Exxon Chemicals America), and a petroleum distillate-based purging solution (Continental Chemicals Corp.) were added to the purging water to aid in the cleaning of the fuel tankers.

2.3 PREVIOUS INVESTIGATIONS

A RCRA Facility Assessment (RFA) was submitted to the GEPD in June 1990 that listed 24 SWMUs, including the then active 724th TPS, as requiring further investigation (Geraghty and Miller 1992). A Phase I RFI, completed in April 1996, was performed in response to that submittal. The objective of the Phase I RFI was to determine if releases to the environment had occurred from any of the 24 identified SWMUs.

During the Phase I RFI, eight soil samples were collected at the Former 724th TPS site. Soil samples were collected on September 6 and November 9, 1993 (Rust 1996). Soil samples were collected from six boring locations (Figure 2.4). In addition, two surface soil samples were collected at SB5 and SB6. Soil samples were analyzed for volatile organic compounds (VOCs), toxicity characteristic leaching procedure (TCLP), total petroleum hydrocarbons (TPH), and pH (Rust 1996). Analytical results for the soil samples were compared to then current GEPD guidelines (1993) or to site-specific background concentrations with the following results:

- VOCs. Benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations were reported in soil samples SB3, SB5A, and SB5B at levels up to 2.040 mg/kg. The compound 1,1,2,2-tetrachloroethene (PCE) was detected in soil samples SB3 and SB3 (duplicate) with concentrations of 0.313 mg/kg and 0.092 mg/kg, respectively. Methylene chloride was detected in the surface soil sample SB5A, and acetone was detected in soil samples SB5A and SB5B. Although detected above background, methylene chloride and acetone are common laboratory artifacts.
- TCLP. TCLP metals were not reported above the detection limit in soil samples.
- **TPH.** TPH-gasoline range organic (GRO) concentration in one soil sample SB5B exceeded 100 mg/kg. TPH-diesel range organic (DRO) was reported in soil samples SB3, SB5A, and SB5B at concentrations up to 25,600 mg/kg.
- **pH.** Values of pH in soil ranged from 4.87 to 6.33, indicating slightly acidic, yet natural, conditions.

During a site reconnaissance performed on November 8, 1993, on-site workers stated an approximate hydrocarbon thickness of 2.5 feet was present in a temporary monitoring well located on site. Black-stained soils and vegetation were present near the swale located on the west side of the site. A yellow to orange floating layer (apparent oil/water emulsion layer) was observed within both the swale and the pump controls manhole. A petroleum hydrocarbon odor was noted and appeared to be originating on site (Rust 1996).

A tank tightness test was completed on the underground waste oil tank at the Former 724th TPS. This tank, identified as tank 004A at facility number 1840, failed the tightness test, according to the Tracer Research Corporation report (1994).

2.4 PRELIMINARY CONCEPTUAL SITE MODEL

Based on the results of the Phase I RFI at the Former 724th TPS, a release occurred at this site. Contaminated soils were detected in the immediate vicinity of the former facility to the west and southwest. The results of leak tests demonstrated that the underground tank at the site may have leaked. During excavation of the underground tank, discoloration of groundwater was observed, indicating groundwater contamination at the facility. Petroleum hydrocarbon odors and observations of a floating oil/water emulsion in the swale and former manhole have been reported.

Chemicals of potential concern (COPCs) at this site include diesel, gasoline, and cleaning chemicals (BTEX and TPH). Release of these chemicals may have occurred either through subsurface leakage or surface overflow from the underground tank, piping, or manhole.

The most likely pathways for contaminant migration at this site are (1) via overland flow to the swale and wetland located west of the facility, and (2) via groundwater flow toward Mill Creek, also located west of the facility. Past releases have probably followed these migration pathways and may form a plume of contaminated groundwater emanating from the Former 724th TPS. In addition, contaminated soils at the site may continue to cause leaching to the swale or groundwater.

Potential human receptors include recreational users of the wetlands or Mill Creek who may come into contact with contaminated surface water or sediment, on-site workers or soldiers on maneuvers who may come into contact with contaminated soils or waters, and hypothetical future residents who may ingest groundwater. Because the surficial aquifer is not used as a source of potable water, any ingestion of groundwater by future residents would be accidental. Potential ecological receptors include terrestrial soil-dwelling animals and their predators that may ingest contaminated soil or waters at the site or within the swale west of the site, and aquatic biota in Mill Creek that may ingest contaminated groundwater, surface water, or sediments.

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3.0 SUMMARY OF INVESTIGATION ACTIVITIES

3.1 SAMPLING METHODOLOGIES

This section describes the RFI field investigations conducted at the Former 724th TPS from July 8 through August 11, 1997. The sampling methodologies and types of testing for physical and chemical characterization of the site are also described. Locations of the Phase II sampling stations are shown on Figures 3.1 through 3.3. The sampling strategy included groundwater screening and surface water and sediment sampling along Mill Creek, soil screening and groundwater screening in the vicinity of the Former 724th TPS, installation and sampling of monitoring wells, and sampling of surface water and sediment in the swale next to the Former 724th TPS site.

3.1.1 Soil Sampling

Soil sampling was conducted using two methods: (1) soil sampling using direct-push methods and (2) soil sampling using hollow-stem augers during installation of monitoring wells.

3.1.1.1 Direct-Push Soil Sampling

A total of 21 direct-push soil probes were completed in and around the Former 724th TPS facility. The locations of the direct-push soil probes are shown on Figure 3.2. The locations were selected using a field decision approach to sampling, with results of VOC analysis of initial ("primary") samples used to determine locations of subsequent ("secondary") samples. Primary samples from stations S-1 through S-13 were collected on July 8 and 9, 1997, and secondary samples from S-14 through S-21 were collected on July 14. The direct-push soil probes were made for the following reasons:

- to determine extent of VOC contamination in soil and
- to minimize generation of investigation-derived waste (IDW).

The direct-push soil samples were taken around the area where contaminated soil was removed in August 1996 from the facility. The samples were taken using a 2-foot split-barrel sampler by pushing the sampler from the ground surface down to the water table in continuous 2-foot intervals. Total depth of sampling varied between 4 and 12 feet. Soil samples were field tested for VOCs in the headspace gas using a photoionization detector (PID). The sample from each boring having the highest detected organic vapor concentration in the headspace gas was then sent off site for quantitative laboratory analysis for VOCs with rapid (24-hour) turnaround. If no VOCs were detected in the headspace gas, then the sample from the 2-foot interval directly above the water table was sent for analysis because gasoline-based chemicals of concern (COCs) from diesel, JP-4, and mogas tend to float on the water table interface. These samples served to confirm the presence or absence of contamination using quantitative data. Results of the laboratory VOC analyses are presented in Section 5.0. Boring logs for the direct-push soil probes showing headspace readings and depths sampled are included in Appendix A.



Figure 3.1. Locations of Phase II Sampling Stations Near Mill Creek

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In addition, five direct-push soil samples were sent off site for grain size analysis to aid in selection of monitoring well screen and filter pack materials for subsequent planned monitoring wells. These soil samples were collected from push probes holes S-2, S-4, S-8, S-9, and S-13 using a split-barrel sampler at varying depths.

Samples designated for possible VOC laboratory analysis were collected first from each split-spoon section using a stainless steel spoon and placed into laboratory sample containers. The portion of the remaining sample was then placed into the containers designated for headspace analysis and grain size analysis. The remaining sample was used for field lithologic description.

3.1.1.2 Soil Sampling at Monitoring Wells

Soil samples were also taken during the drilling of boreholes for the installation of monitoring wells using the hollow-stem auger drilling method. The locations of the monitoring wells are shown on Figures 3.1 and 3.3. Auger-drilled soil boreholes were advanced using 4.25-inch inside diameter (ID) hollow-stem augers drilling with either a CME-55 or Ingersoll-Rand A-300 drilling rig. An exception to this procedure is that no soil samples were taken in conjunction with the installation of MW-3, because MW-3 was installed in the same borehole as groundwater screening probe GP-2. The total depth of each of the five boreholes ranged from 14.5 to 51 feet. The borehole samples were collected for the following reasons:

- to collect relatively undisturbed samples for geotechnical testing,
- to obtain lithographic descriptions of the soil profile at each monitoring well,
- to obtain background soil samples and surface soil samples for characterization, and
- to confirm results of the direct soil sampling.

During the drilling of each soil borehole, soil samples were collected with a split-barrel sampler continuously over 5-foot intervals from the ground surface to the water table. The 5-foot core was split into two 2.5-foot sections. A portion of each 2.5-foot section was field tested for VOC headspace gas using a PID. As with the direct-push soil samples, the borehole sample having the highest detected organic vapor concentration in the headspace gas was then sent off site for quantitative laboratory analysis for VOCs, polyaromatic hydrocarbons (PAHs), and RCRA metals. In addition, one soil sample was collected from each borehole and sent off site for laboratory analysis for total organic carbon. If no VOCs were detected in the headspace gas, then the sample from the 2-foot interval directly above the water table was sent for analysis because gasoline-based COCs from diesel, JP-4, and mogas tend to float on the water table interface. In addition, the surface sample taken from a depth of 0 to 1 foot below the ground surface was sent off site for two soil samples was collected from each well borehole for chemical analysis. Results of the chemical analyses are presented in Section 5.0. Boring logs for the drilling of monitoring wells are included in Appendix A.

Decontamination of drilling and down-hole sampling equipment was accomplished in accordance with the procedures specified in the Phase II RFI Work Plan (SAIC 1997). These procedures for sampling equipment included washing with water and phosphate-free detergent, rinsing alternately with water and isopropyl alcohol, and placing the equipment on clean plastic or wrapping in plastic or aluminum foil to prevent cross-contamination. One soil sample from the screened interval in each borehole was analyzed for geotechnical parameters to support contaminant transport evaluation. Bulk soil samples were taken from MW-2, MW-4, and MW-5 directly from the 5-foot split-barrel core and placed into jars. The jar samples were tested for moisture content, plasticity, and grain size distribution. A relatively undisturbed sample was collected from MW-1 for geotechnical analysis using a thin-walled (Shelby) tube sampler. The Shelby tube sampler was inserted into the hollow-stem auger string and hydraulically pushed approximately 2.0 feet. The ends of the Shelby tube sampler were sealed with wax to preserve moisture content in accordance with American Society for Testing and Materials (ASTM) K1587-83, and the tubes were shipped to an off-site laboratory for analysis. The Shelby tube sample was tested for moisture content, Atterberg limits, grain size distribution, soil porosity, and permeability.

3.1.2 Groundwater Sampling

3.1.2.1 Direct-Push Groundwater Sampling

A total of 17 direct-push groundwater probes was made in a broad area around the Former 724th TPS facility. Twelve of the probes obtained a single grab sample of groundwater from the water table. Five of the probes (GP-1, GP-2, LN-2, LE-2, and LS-2) obtained multiple grab samples of groundwater at varying depth intervals to measure the vertical distribution of contamination. The locations of the direct-push groundwater probes are shown on Figures 3.1 and 3.3. The direct-push groundwater probes were taken for the following reasons:

- to delineate the extent of VOC contamination in groundwater,
- to determine the most appropriate location of monitoring wells, and
- to estimate the approximate direction of groundwater flow to determine the most appropriate location of downgradient monitoring wells.

Locations of the direct-push groundwater probes (Figures 3.1 and 3.3) were selected using a field decision approach to sampling, with the results of VOC analysis of initial ("primary") samples used to determine locations of subsequent ("secondary") samples. Primary samples were collected on July 10 and 11, 1997, and secondary samples were collected on July 24 through 27, 1997. Primary samples were taken from the water table, at a depth of approximately 5 to 15 feet. The primary samples were taken at Mill Creek (MC-1 through MC-5) and along two transect lines running through the former facility, one north-south (LN-1 and LS-1) and the other eastwest (LE-1 and LW-1). Because no contamination was found at the Mill Creek stations, a second line of probes (LWC-1 through LWC-3) was made perpendicular to the groundwater flow direction at a point half-way between the site and Mill Creek. Because contamination was found at LW-1, a second probe was made at a point further downgradient (LW-2).

Vertical extent of contamination was investigated by making a primary vertical profile direct-push probe at the facility (GP-1). Because contamination was found to a depth of up to 37 feet in GP-1, secondary vertical profile screening probes were made at a location downgradient (GP-2) of the facility, as well as to the north (LN-2), east (LE-2), and south (LS-2), so as to bound the contamination. Total depths of the secondary screening probes ranged from 45 to 50 feet below ground surface.

The direct-push groundwater samples at the primary screening locations were taken using direct-push sampling techniques (Dietrich Power Punch devices mounted on a Mobil B-47 drilling rig). The sampling device, having a 7/8-inch ID screen/casing, was pushed down to the target depth, and a grab groundwater sample was retrieved using a peristaltic pump. At the vertical profile location (GP-1), separate sample holes were pushed for each sample depth. Refusal was encountered in GP-1 at a depth of 37 feet. The samples were then sent off site for laboratory analysis for VOCs with rapid (24-hour) turnaround. Results of the VOC analyses are presented in Section 5.0.

At the probe screening locations (LWC-1 through LWC-3), samples were taken using hand-held augers because truck-mounted access to the sampling locations was not possible. Water samples were obtained using a stainless steel mini-bailer inserted into the hand-auger hole. A groundwater sample could not be retrieved from LWC-1 because the hole was dry at the maximum depth able to be augered with the hand-held equipment (total of 9 feet deep).

At the remaining secondary probe locations (GP-2, LN-2, LE-2, LS-2, and LW-2), push-probe samples were taken using a Dietrich Power Punch inserted through hollow-stem augers and mounted on a CME-55 drilling rig. Because hollow-stem auger drilling methods were being used, soil boring logs could be prepared for these secondary probe holes based on drill cuttings; boring logs are included in Appendix A. Groundwater samples could not be retrieved from the deeper samples in GP-2, LE-2, and LN-2; therefore, soil probe samples were obtained from the bottom of these probe holes instead.

To assist in estimating the direction of groundwater flow, water levels were measured in temporary piezometers that were set in the primary groundwater push probe. Relative water levels were estimated using 1,100 feet of 0.25-inch flexible tubing filled with blue-dyed water to establish levels between wells. The flow direction obtained by this process was used to locate probe GP-2, set approximately 100 feet downgradient from the site. While GP-2 was being drilled, it was decided (in concert with GEPD) to complete GP-2 as a monitoring well (MW-3) to take advantage of otherwise restrictive access amidst the dense vegetation. The bottom of the borehole at GP-2 was backfilled with grout to a depth of 15 feet prior to constructing MW-3 as a water table monitoring well.

3.1.2.2 Monitoring Well Installation and Development

Monitoring wells were installed at the five locations (MW-1 through MW-5) shown on Figures 3.1 and 3.3 from July 23 through 26, 1997. The wells were constructed of 2.0-inchdiameter Schedule 40 polyvinyl chloride (PVC) with flush-threaded couplings. Well screens were constructed of factory-slotted pipe in 10-foot-long sections. Slot size, determined from the sieve analysis results from the direct-push soil probes and field sieve analyses, was 0.008 inches (No. 8 slot). Filter pack materials consisted of DSI Extra Fine Sand. Well construction diagrams are presented in Appendix B. Well construction details are summarized in Table 3.1.

Well No.	Date Installed	Size/ Type	Coordinates	Total Depth (feet)	Screen Interval Elevation (feet)	Top of Filter Pack Elevation (feet)	Top of Casing Elevation (feet)
MW-1	07-23-97	2-inch PVC	N683378.0 E820832.3	14.5	59.83 - 50.33	60.83	67.08
MW-2	07-24-97	2-inch PVC	N683224.6 E820869.8	15.0	63.92 - 53.72	64.92	70.86
MW-3 ^a	07-24-97	2-inch PVC	N683200.8 E820705.9	51.0	61.01 - 51.51	62.01	67.51
MW-4	07-26-97	2-inch PVC	N683234.6 E820859.6	45.4	33.98 - 24.48	36.18	71.23
MW-5	07-25-97	2-inch PVC	N682482.9 E819879.6	15.0	56.54 - 46.54	57.54	63.10

 Table 3.1. Monitoring Well Construction Summary for

 Former 724th Tanker Purging Station, Fort Stewart

PVC - polyvinyl chloride.

"MW-3 installed in borehole GP-2, total depth 51 feet.

Note: All elevations are NGVD 1929.

Four of the wells (MW-1, MW-2, MW-3, and MW-5) were installed at the water table, to depths of 14.5 to 15 feet. These wells were installed such that the screened interval bisects the water table, so that any free-phase liquid floating on the water table surface could be detected in the well. Because contamination was found at a depth of 37 feet in groundwater push probe GP-1, monitoring well MW-4 was installed to a depth of 45 feet to confirm the vertical extent of contamination. This deep monitoring well was screened at the top of the Hawthorn Clay, characterized by greenish clay with shells.

The wells were developed on July 29 and 30, 1997. Well development was accomplished using a downhole positive displacement pump. A surge block was used to agitate and mobilize particulates around the well screen by rapidly surging the bailer up and down. Well development continued until the well water was clear to the eye, sediment within the well was less than 0.1 foot, a minimum of five times the standing water volume in the well had been removed, and five times the volume of any water added during completion had been removed. In addition, water quality parameters [pH, conductivity, temperature, dissolved oxygen, oxidation-reduction potential (Eh), and turbidity] were measured during well development to verify that they had reached equilibrium, and development continued until turbidity measured less than 10 nephelometric turbidity units (NTUs). Although turbidity in MW-1 remained as high as 75.6 NTUs following well development, final turbidity measured during micropurging dropped to 9.8 NTUs. MW-3 was slower to recharge and took longer (36.5 hours) to remove the minimum volume since 25 gallons had been added during well completion. Well development is summarized in Table 3.2.

Well No.	Date	Total Development Time (hours)	Total Volume Removed (gallons)	Final Turbidity Reading (NTU)
<u>MW 1</u>	7/29 - 7/30/97	11.8	205	75.6°
<u>MW 2</u>	7/29/97	6.3	100	0 1
MW 3	7/29 - 7/31/97	36.5	160	0.1
MW 4	7/30/97	3.3	200	4.81
MW 5	7/29/97	1.2	110	9.10

"Note: during micropurging, final turbidity reduced to 9.8 nephelometric turbidity units (NTUs).
3.1.2.3 Aquifer (Slug) Testing

Aquifer (slug) tests were performed in each of the wells following well development on August 10 and 11, 1997. The slug tests were performed to obtain an estimate of the hydraulic conductivity of the water table aquifer. The slug tests were performed using rising head permeability tests with transducer measurements of the water level rise in the well at intervals varying from 0.3 to 0.6 seconds initially and up to 60 seconds in the latter stages of each test. Results of the aquifer slug tests, showing water level rise (decreasing drawdown) vs. time and the corresponding hydraulic conductivity, are presented in Appendix C.

3.1.2.4 Monitoring Well Sampling

Groundwater sampling was not conducted until at least 14 days after well development, on August 12 through 14, 1997. Prior to installing the sampling pump, the static water level was recorded. Monitoring wells were sampled using low-flow micropurging techniques to minimize the volume of purge water, minimize disturbance of the aquifer, and thereby minimize turbidity in the sample. Field parameters [pH, conductivity, temperature, dissolved oxygen, oxidationreduction potential (Eh), and turbidity] were monitored during micropurging. The purge rate was adjusted, as necessary, to avoid purging any well to dryness and to equal the recharge of the aquifer. Purging was considered complete when the field parameters stabilized within plus or minus 10 percent after a minimum of three readings at 5-minute intervals. Purging times varied, requiring from 8 to 12 hours to purge in order to attain a turbidity less than 10 NTUs. Results of field parameters measurements made at the end of purging in each well are listed in Table 3.3.

		Field Reading at Monitoring Well							
Parameter	Units	MW-1	MW-2	MW-3	MW-4	MW-5			
pН	su	5.95	6.15	6.69	6.87	6.94			
Conductivity	mS/cm	185	577	454	533	441			
Temperature	°C	25.76	23.93	37.21	21.23	21.8			
Turbidity	NTU	9.8	9.4	8.9	9.8	5.5			
DO	mg/L	7.68	15.08	0.33	1.19	1.09			
ORP	mV	2.7	-118.5	-84.2	-89.9	-30.5			
Ferric Iron	mg/L	9.1	8.4	5	2.8	1.6			

 Table 3.3. Field Parameter Measurements During Groundwater Sampling for Former 724th Tanker Purging Station, Fort Stewart

DO - dissolved oxygen

NTU - nephelometric turbidity unit

ORP - oxidation-reduction potential

Note: Sampling event occurred August 12-14, 1997.

Sampling of each monitoring well began immediately after completion of purging, using the same micropurging pump. Groundwater samples were transferred directly into laboratory sample containers, with the portion designated for volatile organic analysis taken first. One filtered groundwater sample was collected from each well by attaching a 0.45-micron filter to the end of the low-flow pump sampling line. A field test kit was used to measure ferric iron. Groundwater samples were then sent off site for laboratory analysis for VOCs, PAHs, RCRA metals, and natural attenuation parameters (nitrate/nitrite, sulfate/sulfide, ethane/ethene, and methane).

3.1.3 Surface Water and Sediment Sampling

Surface water and sediment samples were collected on August 11, 1997, at five stations, as shown on Figures 3.1 and 3.2. Station SWS-1 is an upgradient (background) sample located in Mill Creek approximately 2 miles upstream of the site, where Mill Creek enters the FSMR. Station SWS-2 is also located in Mill Creek approximately 1,200 feet west of the site. Stations SWS-3 through SWS-5 are located in the swale adjacent to the site. Both surface water and sediment samples were taken at each station, except at SWS-3, because there was no surface water present in the swale at the time of sampling. Surface water samples were collected first and then field measurements were taken for pH, specific conductance, temperature, dissolved oxygen, and turbidity. Sediment samples were collected using stainless steel scoops. Samples were then sent off site for laboratory analysis for VOCs, PAHs, and RCRA metals.

3.1.4 Investigation-Derived Waste Management

IDWs were managed in accordance with the procedures specified in the Phase II RFI Work Plan (SAIC 1997). All IDWs were determined to be nonhazardous materials. Solid wastes were disposed of by transporting the material to the Fort Stewart Sanitary Landfill for use as daily cover. Liquid wastes were disposed of at the Fort Stewart industrial waste water treatment system.

3.2 DATA QUALITY ASSESSMENT

Multiple activities were performed to achieve the desired data quality in this project. Data quality objectives (DQOs) were established to guide the implementation of the field sampling and laboratory analysis. A quality assurance (QA) program was established to standardize procedures and to document activities. Upon receipt by the project team, data were subjected to a verification and validation review that identified and qualified problems related to the analysis. These review steps contribute to a final Quality Control Summary Report, Appendix D, which defines that data used in the investigation met the criteria and are employed appropriately.

The QA Program established requirements for both field and laboratory quality control (QC) procedures. In general, field QC duplicates and QA split samples were required for each environmental sample matrix collected at sites being investigated at a frequency of 10 percent; VOC trip blanks were to accompany each cooler containing water samples for VOC determinations, and analytical laboratory QC duplicates, matrix spikes, laboratory control samples, and method blanks were required for every 20 samples of less of each matrix and analyte. The primary goal of the QA program was to ensure that the quality of results for all environmental measurements was appropriate for their intended use. To this end, a Quality Assurance Project Plan (QAPP) and standardized field procedures were compiled to guide the investigation. Through the process of readiness review, training, equipment calibration, QC implementation, and detailed documentation, the project has successfully accomplished the goals set by the QA Program.

Project data quality determines its usability. The evaluation is based on the interpretation of laboratory QC measures, field QC measures, and the project DQOs. Data Quality Control Reports and other field-generated documents such as sampling logs, boring logs, daily health and safety summaries, daily safety inspections, equipment calibration and maintenance logs, and sample management logs were peer reviewed on site. Analytical data generated for this project

have been subjected to a process of data verification, validation, and review. The project implemented the use of data validation checklists to facilitate laboratory data validation. These checklists were completed by the project-designated validation staff and were reviewed by the project laboratory coordinator.

A total of 98 environmental soil, groundwater, and field QC samples were collected with approximately 3,600 discrete analyses (i.e., analytes) being obtained, reviewed, and integrated into the assessment (these totals do not include field measurements and field descriptions). The project produced acceptable results for over 99 percent of the sample analyses performed and successfully collected all required investigation samples.

The overall quality of Former 724th TPS information meets or exceeds the established project objectives. Through proper implementation of the project data verification, validation, and assessment process, project information has been determined to be acceptable for use. Data, as presented, have been qualified as usable, but estimated when necessary. Data produced for this study demonstrate that they can withstand scientific scrutiny; are appropriate for their intended purpose; are technically defensible; and are of known and acceptable sensitivity, precision, and accuracy. A more detailed data quality assessment may be found in Appendix D.

Common Laboratory Contaminants. Common laboratory contaminants were detected in one or more soil samples and include acetone, 2-butanone, 2-hexanone, methylene chloride, and toluene. Results for these common laboratory contaminants are questionable when the results are less than five times the quantitation limit for these constituents or when the result is less than the average concentration detected in the background samples. In such cases, the constituent is not considered a site-related contaminant (SRC), but a likely laboratory artifact. Reference values are listed in Table 3.4.

Parameter	Quantitation Limit	5 × Quantitation Limits	Average Concentration in Background
Acetone	10	50	60.21
2-Butanone	10	50	5.63
2-Hexanone	10	50	5.63
Methylene Chloride	5	25	6.19
Toluene	5	25	10.64

Table 3.4. Common Laboratory Contaminants (Soil)
Former 724th Tanker Purging Station, Fort Stewart

Note: All units in $\mu g/kg$.

Filtered vs. Unfiltered Analyses. RCRA metals analyses were conducted on both filtered and unfiltered groundwater samples from six Burn Pits wells and two wells at the Former 724th TPS. Results for detected analytes are listed in Table 3.5.

As discussed in Appendix C, the results indicate no significant relative percent difference for any of the analytes. Filtered results were somewhat less than the corresponding unfiltered result in most cases, but the differences were not significant relative to the analytical precision. With few exceptions, the results were less than five times the quantitation limit for the analyte. At these low concentrations, the absolute differences between analytical results are not considered

Area	Station	Sample ID	Parameter	Reporting Limit	Unfiltered Result	Filtered Result
724th TPS	MW-4	264411	Barium	200	99.20 J	
724th TPS	MW-5	264511	Barium	200	70.20 J	96.90 J
Burn Pit A	MW-3	4A4311	Barium	200	26,20 J	<u>69.40 J</u>
Burn Pit A	MW-5	4A4511	Barium	200		(2.00 I
Burn Pit B	MW-1	4B4111	Barium	200	66.70 J	62.80 J
Burn Pit C	MW-7	4C4711	Barium	200	21.00 J	
Burn Pit A	MW-3	4A4311	Cadmium	0.5	26.60 J	
Burn Pit E	MW-6	4E4611	Cadmium	0.5	0.36J	
Burn Pit B	MW-1	4B4111	Chromium	10	1.20	0.00.7
Burn Pit B	MW-3	4B4311	Chromium	10	2.40 J 3.70 J	0.88 J
Burn Pit E	MW-6	4E4611	Chromium	10	3.70J 1.70J	0.88 J
Burn Pit A	MW-3	4A4311	Lead	1	1.70J	
Burn Pit A	MW-5	4A4511	Lead	1		
Burn Pit B	MW-1	4B4111	Lead	1	0.82 J	
Burn Pit B	MW-3	4B4311	Lead	1	2.00	0.84 J
724th TPS	MW-4	264411	Мегсигу	0.05	2.20	1.00 J
724th TPS	MW-5	264511	Mercury	0.05	0.58	
Burn Pit A	MW-3	4A4311	Mercury	0.05	0.38	0.052=
Burn Pit B	MW-3	4B4311	Мегсигу	0.05	0.22	0.017
Burn Pit C	MW-7	4C4711	Mercury	0.05	0.28	0.04 J
724th TPS	MW-4	264411	Selenium	5	0.28 0.51 J	0.70 1
724th TPS	MW-5	264511	Selenium	5		0.79 J
Burn Pit A	MW-5	4A4511	Selenium	5	0.78J	1.00.7
724th TPS	MW-4	264411	Silver	0.2	<u>0.70 J</u> 4.10	1.00 J
Burn Pit A	MW-3	4A4311	Silver	0.2		
Burn Pit B	MW-1	4B4111	Silver	0.2	.028 0.39 J	
Burn Pit B	MW-3	4B4311	Silver	0.2	0.39J	0.19J
Burn Pit C	MW-7	4C4711	Silver	0.2	0.14 J	0.11J

Table 3.5. Filtered vs. Unfiltered (μg/L) Groundwater Sample Comparison Former 724th Tanker Purging Station and Burn Pits, Fort Stewart

Note: A blank indicates that analyte was not detected.

J indicates estimated value.

significant if the difference is less than three times the quantitation limit. Therefore, filtered and unfiltered results were comparable, indicating good correlation in results. These results demonstrate that efforts to reduce effects of turbidity in groundwater samples were successful and that any residual turbidity (maximum 86.5 NTU in MW-3 at Burn Pit A) did not adversely affect the groundwater sampling results.

An exception is mercury, where results for four of the eight unfiltered samples exceeded five times the quantitation limit, but results for the corresponding filtered samples did not exceed the quantitation limit. Another exception is silver in one sample from MW-4 at the Former 724th TPS, where the reported unfiltered result also exceeded five times the quantitation limit, but was undetected in the filtered sample. This suggests that mercury and silver may be adhered to soil particles and would be less likely to be transported in the dissolved phase in the groundwater.

4.0 PHYSICAL CHARACTERISTICS OF THE SITE

4.1 DEMOGRAPHICS

The cantonment, or garrison, area of the FSMR is located within Liberty County, Georgia (Figure 2.2). Liberty County occupies 328,768 acres and had a total population of 52,745 in 1990. Forty-one percent of the county population lives in Hinesville, the largest city in Liberty County. The total population of Fort Stewart in 1990 was 13,774, 55 percent of which were employed by the Armed Forces. Forty-one percent of the Fort Stewart population live in group quarters while the remaining population live in households (U.S. Department of Commerce 1990).

4.2 TOPOGRAPHY

The FSMR occupies a low-lying, flat region on the coastal plain of Georgia. Surface elevations range from approximately 20 to 100 feet above mean sea level (amsl) within the FSMR and generally decrease from northwest to southeast across the reservation. The topography is dominated by terraces dissected by surface water drainages. The terraces are remnants of sea level fluctuations. The four terraces present within the FSMR are the Wicomico, Penholoway, Talbot, and Pamlico (Metcalf and Eddy 1996). The Former 724th TPS is situated in the southern portion of the FSMR and is located on the Penholoway Terrace. The elevation of the site is between 60 and 70 feet amsl.

4.3 SURFACE DRAINAGE

The principal surface water body accepting drainage from the FSMR is the Canoochee River, which joins the Ogeechee River (part of the northwestern boundary of the reservation). Canoochee Creek is a tributary of the Canoochee River that drains much of the western portion of the FSMR. Mill Creek, which is a second-order tributary of Canoochee Creek in the watershed of Taylors Creek, is the nearest surface water stream to the Former 724th TPS and is located approximately 1,200 feet to the west (Figure 2.3). A shallow drainage swale is located approximately 25 feet west of the Former 724th TPS that accepts runoff from the site and the adjacent Fuel Truck Parking Area. This swale is not connected to Mill Creek or its tributaries. Standing water occurs at the south end of this swale during much of the year, but the northern section is usually dry. A wetland area of unknown size is located adjacent to the site, between the swale and Mill Creek.

4.4 REGIONAL GEOLOGY

The FSMR is located within the coastal plain physiographic province. This province is typified by nine southeastward dipping strata that increase in thickness from zero feet at the fall line (located approximately 350 miles inland from the Atlantic coast) to approximately 4,200 feet at the coast. State geologic records describe a probable petroleum exploration well (the No. 1 Jelks-Rogers) located in the region as encountering crystalline basement rocks at a depth of 4,254 feet below land surface. This well provides the most complete record for Cretaceous, Tertiary, and Quaternary sedimentary strata. Figure 4.1 presents a geologic column for the Tertiary and Quaternary section in the Fort Stewart area.

The Cretaceous section is approximately 1,970 feet in thickness and dominated by clastics. The Tertiary section is approximately 2,170 feet in thickness and dominated by limestone with a 175-foot-thick cap of dark green phosphatic clay. This clay is regionally extensive and is known as the Hawthorn Group. The interval from approximately 110 feet to the surface is Quaternary in age and composed primarily of sand with interbeds of clay or silt. This section is undifferentiated (Metcalf and Eddy 1996).

State geologic records contain information regarding a well drilled in October 1942, 1.8 miles north of Flemington at Liberty Field of Camp Stewart (now known as Fort Stewart). This well is believed to be an artesian well located approximately one-quarter mile north of the runway at Wright Army Airfield within the FSMR. The log for this well describes a 410-foot section, the lowermost 110 feet of which consisted predominantly of limestone above which 245 feet of dark green phosphatic clay typical of the Hawthorn Group were encountered. The uppermost 55-foot interval was Quaternary-age interbedded sands and clays. The top 15 feet of these sediments were described as sandy clay (Metcalf and Eddy 1996).

4.5 SOILS

Boring logs showing the types of soils encountered during the Phase II RFI at the Former 724th TPS in soil screening probes, groundwater screening probes, and monitoring well boreholes are given in Appendix A. Geological cross-sections of the site are shown on Figures 4.2 and 4.3, and depict the lithology and stratigraphy of the unconsolidated soil deposits beneath the site, as inferred from the soil boring logs. The cross-sections indicate that the soils are highly variable with abrupt changes in soil types over relatively short distances. The surficial materials are generally a light gray sand or silty sand up to 15 feet thick. Interbedded sandy clay and clayey sand layers generally underlie these surficial sandy layers to a depth of 15 to 25 feet. A light gray to greenish gray sand and silty sand were encountered beneath these clayey layers in GP-2/MW-3 and MW-4 and varied from 5 to 15 feet thick. A dark greenish gray silty and clayey sand with shells was present in the lower 20 feet of GP-2/MW-3 and MW-4 to the maximum depth explored (51 feet at MW-3) and likely represents the uppermost portion of the Hawthorn Group.

Geotechnical analyses were conducted on five bulk samples taken from soil screening probes and three bulk samples plus one Shelby tube sample taken from the monitoring well boreholes. The bulk samples from the soil screening probes were analyzed for grain size distribution in accordance with ASTM D422. The samples from the monitoring well boreholes were analyzed for moisture content (ASTM D2216), grain size (ASTM D422), and Atterberg limits (ASTM D4318). In addition, the Shelby tube sample from MW-1 (Sample 261113) was analyzed for specific gravity (ASTM D854), porosity (EM1110-2-1906), and permeability (ASTM D5084). Results of the geotechnical analyses are summarized in Table 4.1. The geotechnical laboratory data sheets are included in Appendix E. These results indicate that tested soils are silty and clayey sands with the proportion of fine-grained particles varying widely from 4 to 48 percent by weight. Soils from the screened intervals in monitoring wells MW-2, MW-4, and MW-5 are non-plastic silty sands. The soil from the screened interval in MW-1 is a clayey sand of high plasticity and low permeability (2×10^{-6} cm/second).

Lithologic Description	Poorty drained soil with sandy surface and loamy underlying layers	Pale grav to white well-corted conde			Argillaceous sands and clays		foraminifera	Massive, fossilferous limestone		Glauconftic dolomite and limestone	Source: Huddleston 1989; Clarke Hacke and Dock 1000-		
Geologic Unit	SURFICIAL SEDIMENTS	UNDIFFERENTIATED	UNDIFFERENTIATED		HAWTHORN GROUP	SUWANNEE LIMESTONE	GLENDON LIMESTONE MARIANNA LIMESTONE	OCALA GROUP		AVON PARK LIMESTONE	Limestone	Control of the stone with Fossils	
Hydrogeologic Unit		SURFICIAL AQUIFER		CONFINING UNIT		UPPER FLORIDAN AQUIFER	(PRINCIPAL ARTESIAN)		CONFINING UNIT	LOWER FLORIDAN AQUIFER	KXXXXXX Limestone	A X M X M X M X	
Approximate Age	RECENT	PLEISTOCENE	PLIOCENE	UPPER MIOCENE	UPPER MIOCENE	OLIGOCENE		EOCENE			Surficial Sediments	Sand Sand with Clay	
	8897 1948	YAANAAT	GUA	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		IBA RANK	V ITABT		\overline{m}	~~			
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Figure 4.1. Geologic and Hydrostratigraphic Column for the Fort Stewart Area

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Table 4.1. Summary of Geotechnical Analyses, Former 724th Tanker Purging Station, Fort Stewart

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				Ath	Atterberg Limits	aits	Grain	Grain Size Distribution	oution			
			Moisture	Liquid	Plastic	Plasticity						
	Depth	Sample	Content	Limit	Limit	Index	Gravel	Sand	Fines	Specific	Soil	Permeability
Station	(feet)	No.	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	Gravity	Porosity	(cm/second)
S-2	2-4	265211	na	ца	na	ца	0	60	40	na	na	, Lu
S4	4-6	265411	ра	na	晤	na	0	85	15	ma	12	en en
S-8	6-12	265811	na	na	ца	Па	0	81	61		1 2	
S-9	6-10	265911	па	na	E	En l	0	82	5			nia 114
S-13	2-4	265D11	na	g	ца	ца	0	72	28			
I-WM	9.5-11.5	261113*	32.8	51	16	35	0	52	48	2.614	0.5218	1 99F-06
MW-2	5-7	261213	21.8	æ	Ê	đŊ	0	62	21	Па	eu	C CL
MW-4	34-36	261413	21.9	đ	đ	Ð	14	63	23	na l	ua l	
MW-5	10-12	261513	24.1	đ	đ	đŊ	0	96	4	ПЗ	EL	
										1	1	

na = not analyzed NP = non-plastic * = indicates Shelby tube sample

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98-177P(XLS)/111397

Aquifer (slug) tests were also conducted in each of the five monitoring wells installed at the site. Results of these tests are summarized in Table 4.2. Estimated hydraulic conductivities range from 2×10^{-5} cm/second at MW-2 to 4×10^{-4} cm/second at MW-5.

Station	Test Date	Hydraulic Conductivity (feet/minute)	Hydraulic Conductivity (cm/second)
MW-1	8-11-97	1.4×10^{-4}	7.0×10^{-5}
MW-2	8-10-97	4.0×10^{-5}	2.0×10^{-5}
MW-3	7-24-97	1.0×10^{-4}	5.0×10^{-5}
MW-4	8-10-97	3.0×10^{-4}	1.5×10^{-4}
MW-5	8-10-97	8.0×10^{-4}	4.0×10^{-4}

Table 4.2. Results of Aquifer (Slug) Tests, Former 724th Tanker Purging Station, Fort Stewart

4.6 HYDROGEOLOGY

The hydrogeology in the vicinity of the FSMR is dominated by two aquifers referred to as the Principal Artesian and the surficial aquifer that are separated by a confining unit (Figure 4.1).

The Principal Artesian aquifer is the lowermost hydrologic unit and is regionally extensive from South Carolina through Georgia, Alabama, and most of Florida, and is regionally known as the Floridan Aquifer. This aquifer is subdivided into upper and lower hydrogeologic units. The upper hydrogeologic unit is composed primarily of Miocene-age argillaceous sands and clays and Oligocene-to-Eocene-age limestones (including the Ocala Group and the Suwannee Limestone, where present) at the top. The upper hydrogeologic unit ranges in thickness from 200 to 260 feet and is most productive where it is thickest and where secondary permeability is most developed. The lower hydrologic unit is comprised of the Eocene-age Avon Park Limestone at the base. The transmissivity of the aquifer in the Savannah area ranges from about 28,000 to 33,000 square feet/day (Krause and Randolph 1989). Groundwater from this aquifer is primarily used for drinking water (Arora 1984). Thirteen groundwater production wells are used for potable water supply on the FSMR, and one additional production well is available for use in fire protection.

The confining layer for the Principal Artesian aquifer is the phosphatic clays of the upper Hawthorn Group. These sediments are regionally extensive and range from 60 to 80 feet in thickness at the FSMR. There are minor occurrences of aquifer material within the Hawthorn Group, however, they have limited utilization (Miller 1990).

The uppermost hydrologic unit is the surficial aquifer, which consists of widely varying amounts of sand, silt, and clay ranging from 55 to 150 feet in thickness. This aquifer is primarily utilized for domestic lawn and agricultural irrigation with wells typically yielding 2 to 180 gallons per minute. The top of the water table ranges from 2 to 10 feet below ground level (Geraghty and Miller 1992).

Water levels were measured on August 10 and 11, 1997, in the five monitoring wells (MW-1 through MW-5) installed at the Former 724th TPS. Depth to water varied from 3 feet (MW-1) to 10 feet (MW-5) below land surface. Figure 4.4 presents a map of the water table contours. Groundwater flow within the water table is to the west-northwest, ultimately discharging to Mill

5.0 CONTAMINANT NATURE AND EXTENT

This section summarizes the results of the chemical laboratory analyses of the soil, groundwater, surface water, and sediment samples collected at the Former 724th TPS site. Complete analytical results for the Phase II chemical data are included in Appendix G of this report. Analytical results for the Phase I chemical data were presented in Appendix U of the Phase I RFI Report (Rust 1996) and are summarized in Section 2.3.1 of this report.

5.1 BACKGROUND DATA ANALYSIS AND SCREENING

The reference background criteria for the Former 724th TPS have been developed based on data from background samples collected from SWMUs across the FSMR. In general, reference background samples were collected in each medium at locations upgradient or upstream of each site so as to be representative of naturally occurring conditions at SWMUs under Phase II investigation. In addition, soil samples collected during the Phase I investigation [i.e., Burn Pits (SMWUs 4A, 4B, 4D, 4E, and 4F), Active Explosive Ordnance Disposal (EOD) Area (SWMU 12A), etc.] were included as reference background samples if they were upgradient of the site and if the data were of sufficient quality to be representative of natural background conditions at the FSMR. A summary of the sample stations, SWMUs, and the source of the data (Phase I or II RFI) is presented in Table 5.1 for each medium.

EPA Region IV methodology (EPA 1996b) was used as guidance for the development of the background data set for screening metals data. In cases where enough samples (e.g., more than 20) are collected to define background, a background upper tolerance level can be calculated. In cases where fewer samples (e.g., less than 20) are collected to define background, background can be calculated as 2 times the mean background concentration (EPA 1996b). Given that fewer than 20 background samples were collected for the FSMR, the latter method was used for calculating reference background concentrations for metals.

Appendix F presents the summary of background data and presents the two-times-mean background concentrations for metals. Given the limited number of reference background samples, the mean concentration of metals for soils in the eastern United States is also presented, for comparative purposes only. The locations of all reference background samples are also shown in Appendix F, on Figures F-1 and F-2.

The detected concentrations of organics in background samples were not used to calculate reference background criteria because all organic compounds are considered to be potentially man-made. Organic compounds were not screened against background. All detected organic compounds are considered SRCs. The following sections discuss the background data analysis for each medium.

5.1.1 Surface Soil

Surface soil samples were taken from the ground surface to a depth of 1 or 2 feet below ground surface (bgs) depending on the amount of recovery from the sampling device. Thirteen surface soil samples were used in the development of the surface soil background data set (Table 5.1). The reference background concentration for metals in surface soils was calculated as 2 times the average concentration of these 13 locations. Phase I data from SWMU 12A and SWMU 35 were determined

				Station		
SWMU Number	SWMU Name on Hazardous Waste Permit HW-045	Surface Soil	Subsurface Soil	Groundwater	Surface Water	Sedimen
1	South Central Landfill	SC-M17 ^a	SC-M17	MW10 ^a	NA	NA
2	Camp Oliver Landfill	MW5 ^c	MW5°	MW5°	NA	NA
3	TAC-X Landfill	MW5 ^c	MW5°	MW5°	NA	NA
4A	Burn Pit A		MW1 ^b (Phase I)	MW1 ^d	NA	NA
4B	Burn Pit B		MW3 ^b (Phase I)	MW3 ^d	NA	NA
4C	Burn Pit C	MW7 ^d	MW7 ^d	MW7 ^d	NA	NA
4D	Bum Pit D		MW2 ^b (Phase I)	MW2 ^d	NA	NA
4E	Bum Pit E		MW3 ^b (Phase I)	MW3 ^d	NA	NA
4F	Burn Pit F		MW1 ^b (Phase I)	MW1 ^d	NA	NA
	Active EOD containing Open Detonation Unit and Open Burn Pit	MW1 ^r	MW1 ^f (Phase I)	MW1 ^b	NA	NA
	Old Fire Training Area			MW8 ^b	NA	NA
	DRMO Hazardous Waste Storage Area	MW1⁵	MW1 ^b	MW1 ^b	NA	NA
	Industrial Wastewater Treatment Plant	MW1 ⁶	MW1 ^b	MW1 ⁵	NA	NA
	Former 724th Tanker Purging Station	MW1 ^b	MW1 ^b	MW1 ^b	SWS-1	SWS-1
	Evans Army Heliport POL Storage Facility	MW5⁵	MW5 ⁵	MW5⁵	NA	NA
31	DEH Asphalt Tanks	MW1 ^b	MW1 ⁶	MW1 ^b	NA	NA
	Supply Diesel Tank	MW1 ^b	MW1	MW1 ^b	NA	NA
	DEH Equipment Wash Rack	MW1 ^b	MW1 ^b	MW1 ⁵	NA	NA
5	Wright Army Airfield Bulk Fuel System	HA-05 ⁸ (Phase I)	HA-05 ⁸ (Phase I)	MW9 ^g (Phase I)	NA	NA

Table 5.1. Background Media Summary, Former 724th Tanker Purging Station, Fort Stewart

DEH = Directorate of Engineering and Housing.

DRMO = Defense Reutilization and Marketing Office.

EOD = Explosive Ordnance Disposal.

NA = Not applicable; surface water and sediment background are site specific.

POL = Petroleum Oil and Lubricant.

Bold indicates background groundwater sample collected from the same borehole as sample for soil (i.e., monitoring well was constructed in the borehole).

^aScience Applications International Corporation (SAIC), September 1998. Phase II RCRA Facility Investigation Report for the South Central Landfill (SWMU 1), Fort Stewart, Georgia (Final Report), U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order 0012.

^bRust Environment and Infrastructure, May 1996. Phase I RCRA Facility Investigation Report for 24 Solid Waste Management Units at Fort Stewart, Georgia, Volume I of III (Corrected Final Report), U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-93-D-0029, Delivery Order 0005.

⁶Science Applications International Corporation (SAIC), September 1998. Phase III RCRA Facility Investigation Report for 16 Solid Waste Management Units at Fort Stewart, Georgia, Volume 1 (Draft Report), U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order 0009.

^dScience Applications International Corporation (SAIC), March 1998. *Phase II RCRA Facility Investigation Report for the Burn Pits* (SWMUs 4A - 4F) at Fort Stewart, Georgia (Final Report), U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order 0008.

¹Radian International, LLC, January 1997. Site Characterization Report, Open Burn/Open Detonation Units, Fort Stewart, Georgia (Draft Report), U.S. Army Corps of Engineers, Mobile District.

⁸Metcalf & Eddy, Inc., December 1996. Final Phase I RFI Report for Bulk Fuel Storage System at Wright Army Airfield, Fort Stewart, Georgia, U.S. Army Corps of Engineers, Contract No. DACA21-93-D-0049, Delivery Order 0018.

to be of sufficient quality to include in the background data set. If a chemical was not detected at a site, then one-half the detection limit was used as the concentration in calculating the mean background concentration. The sample results included in the data set are presented in Table F-2, Appendix F. Metals are considered SRCs if their concentrations exceed the calculated reference background concentration. Organics were not screened against background; all organic compounds are considered SRCs if they were detected.

5.1.2 Subsurface Soil

Subsurface soil samples were taken from the interval between a depth of 2 feet bgs and the water table. Eighteen subsurface soil samples were used in the development of the subsurface soil background data set (Table 5.1). Phase I data from SWMUs 4A, 4B, 4D, 4E, 4F, SWMU 12A, and 35 were determined to be of sufficient quality to include in the subsurface soil background set. The reference background concentration for metals in subsurface soil was calculated as 2 times the mean of the chemical detected at the 19 locations. If a chemical was not detected in a sample, then one-half the detection limit was used in calculating the mean background concentration. The sample results included in the background data set are presented in Table F-3, Appendix F. Metals are considered SRCs if their concentrations exceed the calculated reference background concentration. Organics were not screened against background; all organic compounds are considered SRCs if they were detected.

5.1.3 Groundwater

Only groundwater samples collected using low-flow techniques (Phase II RFI) were used in the development of the groundwater background data set. Groundwater samples from 19 SWMUs were used (Table 5.1). The reference background concentration groundwater was calculated as two times the average of these 19 samples. If a chemical was not detected at a site, then one-half the detection limit was used in calculating the mean background concentration. The sample results included in background data set are presented in Table F-4, Appendix F. Metals in groundwater are considered SRCs if their concentrations exceed the calculated reference background concentration. Organics were not screened against background; all organic compounds are considered SRCs if they were detected.

5.1.4 Surface Water/Sediment

Surface water and sediment background samples were collected during the Phase II RFI for the Former 724th TPS and are site specific. The reference background surface water concentration was calculated as two times the average of the data taken at the site-specific background location (SWS-1). If a chemical was not detected at a site, then one-half the detection limit was used as the average background concentration. The sample results comprising the site-specific background data for surface water and sediment are presented in Tables F-5 and F-6, respectively, Appendix F. Metals are considered SRCs if their concentrations exceed site-specific reference background concentration. Organics are considered SRCs if they were detected.

5.1.5 Site-related Contaminants

Inorganics for surface soil, subsurface soil, and groundwater were screened against the reference background criteria. Inorganics for surface water and sediment were screened against site-specific background values. As discussed in the preceding sections, all organics that are detected are considered potential SRCs because organic constituents are considered potentially man-made. Organic analytes that were detected at least once, and those inorganic analytes where at least one sample result exceeded background, are considered SRCs. Only the SRCs are carried through for evaluation under fate and transport (Chapter 6.0), human health PRE (Chapter 7.0), and ecological PRE (Chapter 8.0).

5.2 SURFACE SOIL CONTAMINATION

The nature and extent of surface soil contamination was evaluated using the results from surface soil samples taken from four monitoring well boreholes (MW-1, MW-2, MW-4, and MW-5) at the site. The samples from the monitoring wells were analyzed for VOCs, semivolatile organic compounds (SVOCs), and RCRA metals. Table 5.2 summarizes the analytical results for surface soil samples, and Figure 5.1 shows the distribution of analytes above background. This assessment presents Phase II contaminant data only.

			Analytic	al Results	
Well ID		MW-1 ⁴	MW-2	MW-4	MW-5
Sample ID	Background	261111	261211	261411	261511
Depth (feet)	Criteria	0 to 1	0 to 1	0 to 1	0 to 1
	Volatile Organ	ic Compounds	(µg/kg)		
Acetone	0.00		26.6		
Benzene	0.00		1.4		
Toluene	0.00		22.9		
Ethylbenzene	0.00		19.6		
Xylenes, total	0.00		141		· · · · · · · · · · · · · · · · · · ·
Styrene	0.00				1.9
	Semivolatile Orga	nic Compound	ls (µg/kg)		1.7
Benzo(a)pyrene	0.00		<u></u>		6.1
Benzo(b)fluoranthene	0.00				7.8
	RCRA N	letals (mg/kg)	- ·	<u> </u>	/,0
Arsenic	2.10				
Barium	14.70	0.94	14.1	5,8	9.8
Cadmium	0.18				
Chromium	6.21		6.3	3.9	1.7
Lead	8.81	1.3	5.1	3.2	4.8
Mercury	0.03			0.06	0.05
Selenium	0.41	0.63		0.00	0.00
Silver	0.15			0.07	

Table 5.2. Summary of Analytical Results for Surface Soil Samples, Former 724th Tanker Purging Station, Fort Stewart

"Site-specific background location.

Blank indicates analyte not detected.

Bold indicates concentrations greater than reference background criteria.



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Figure 5.1. Results of Chemical Analyses in Surface Soil

Samples from two soil push probes (S-11 and S-17) were taken from a depth of 0 to 2 feet and analyzed for VOCs only; those results are discussed together with the results of all other direct-push soil sampling.

VOCs. BTEX compounds were reported in the surface soil sample from monitoring well MW-2. Because this location coincides with the location of subsurface soil contamination as well, BTEX contamination is further discussed in combination with subsurface soil in Section 5.3. Acetone was detected in MW-2 at 26.6 μ g/kg. Styrene was detected in MW-5 at 1.9 μ g/kg.

SVOCs. Benzo(*a*)pyrene (6.1 μ g/kg) and benzo(*b*)fluoranthene (7.8 μ g/kg) were detected in the surface soil sample from MW-5, which is located adjacent to Mill Creek, 1,200 feet from the Former 724th TPS facility. These constituents were reported at concentrations near their respective detection limits. Therefore, SVOCs in surface soils are not considered to be related to contaminant releases at the Former 724th TPS.

RCRA Metals. Chromium, mercury, and selenium were detected in surface soils at concentrations exceeding their respective reference background values. Chromium was detected above background at MW-2 (6.3 mg/kg), and mercury was detected above background at MW-4 (0.06 mg/kg) and MW-5 (0.05 mg/kg). Selenium was detected above background at MW-1 (0.63 mg/kg), the site background location. As described above for SVOCs, MW-5 is located adjacent to Mill Creek, 1200 feet from the Former 724th TPS facility, and the barium and mercury results at that station were reported at concentrations near their respective detection limits. Therefore, metals in surface soils at MW-5 are not considered related to contaminant releases at the Former 724th TPS.

5.3 SUBSURFACE SOIL CONTAMINATION

The nature and extent of subsurface soil contamination was evaluated using the results from both direct-push soil samples and discrete soil samples taken from monitoring well boreholes and Phase I soil borings.

5.3.1 Direct-Push Soil Sampling Results

The direct-push soil samples were collected from a total of 24 push-probe stations, including 21 soil push-probe and 3 groundwater push-probe stations. The samples were analyzed for VOCs only. Table 5.3 summarizes the BTEX and acetone analytical results for direct-push soil samples, and Figure 5.2 shows the distribution of VOCs in subsurface soils. Phase I data are shown for locations outside of the area of excavated soils removed in August 1996, for reference. In addition, results of BTEX analyses on subsurface soil samples taken from the Phase II monitoring well boreholes are shown for reference to portray a comprehensive picture of BTEX contamination in soil at the site.

VOCs. BTEX compounds were detected in 20 of the 24 push-probe stations. The highest concentrations were reported in samples from stations S-1, S-3, S-5, and S-16. Maximum concentrations of toluene (27,400 μ g/kg) and xylene (124,000 μ g/kg) were reported in station S-5, and the maximum concentrations of benzene (9420 μ g/kg) and ethylbenzene (27,100 μ g/kg) were reported in station S-3.

			Benzene	Toluene	Ethylbenzene	Xylenes, Total	Acetone
	nce Backgroun	and the second se	0.00	0.00	0.00	0.00	0.00
Station	Depth (feet)	Sample ID					
S-1	4 to 6	265111	510	76.1	2,790	11,400	
S-2	2 to 4	265211	19.2	16.2	50.7	185	
S-3	4 to 6	265311	9,420	8,990	27,100	123,000	
S-4	4 to 6	265411		3.4			1-1-1-1-1
S-5	4 to 6	265511	5,350	27,400	24,200	124,000	
S-6	2 to 4	265611					
S-7	4 to 6	265711		4			34.9
S-8	6 to 12	265811		11.2			
S9	6 to 10	265911		7.6			55.0
S-10	2 to 4	265A11		32.5		······	1,060
S-11	0 to 2	265B11					
S-12	2 to 4	265C11		2.8	2.7	13.8	63
S-13	2 to 4	265D11		22.4		THE REPORT OF A	17.9
S-14	2 to 4	265E11		7.4			
S-15	2 to 4	265F11		8.1			
S-16	4 to 6	265G11	92.5	36.6	314	1,320	
S-17	0 to 2	265H11		3.7			
S-18	2 to 4	265J11					77.3
S-19	5 to 6	265K11					
S-20	4 to 6	265M11		1.6			25.7
S-21	4 to 6	265N11		4.7			
GP-2	45 to 50	265U14		1.5			11.8
LE-2	45 to 50	266815	6.6	1.5	4.7	10.7	13.4
LN-2	45 to 50	266215	13.7	16.7	21.2	101	23.6
MW-1	0 to 2	261111				·····	
MW-1	2 to 3.3	261112		2.6			10.8
MW-2	0 to 2	261211	1.4	22.9	19.6	141	26.6
MW-2	2 to 5	261212		396	750	4,420	
MW-4	0 to 2	261411					
MW-4	12 to 14.5	261412	48.5	40.6	17.2	84.2	27.9
MW-4	44.5 to 45.5	261414		27.9	2.5	8.6	26.8
MW-5	0 to 2	261511					
MW-5	5 to 7.5	261512	-	3.3			

 Table 5.3. Summary of BTEX and Acetone Analyses for Soil Samples,

 Former 724th Tanker Purging Station, Fort Stewart

All values reported in µg/kg.

Blank indicates analyte not detected.

Bold indicates concentrations greater than reference background criteria.

The soil screening results, together with the results of the subsurface soil sampling from monitoring well boreholes, delineate a distinct area of residual BTEX soil contamination, as shown on Figure 5.2. The soil contamination covers an area approximately 60 by 75 feet, extending from the area of the excavated soils removed in August 1996 to the north and east. An area of lesser contamination, predominantly toluene at average concentrations less than 32.5 μ g/kg in background samples, is present to the south and west of the area of excavated soil, and is characterized by stations S-8, S-10,

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VOCs. BTEX compounds were detected in subsurface soils at MW-2 and MW-4 at concentrations above background (Figure 5.2). The maximum concentration of benzene (48.5 μ g/kg) was reported in MW-4, and the maximum concentrations of toluene (396 μ g/kg), ethylbenzene (750 μ g/kg), and xylenes (4420 μ g/kg) were reported at MW-2. The locations of MW-2 and MW-4 coincide with the same area of residual BTEX soil contamination as defined by the screening soil sampling results, thereby confirming the extent of subsurface soil contamination.

Acetone and 2-butanone, although detected in subsurface soil samples at MW-1 and MW-4, were not detected at concentrations above the reference background criteria.

PAHs. Various PAHs were detected in a subsurface soil sample from monitoring well MW-2, which is located within the area of BTEX soil contamination. Anthracene, benzo(*a*)pyrene, naphthalene, and pyrene were detected at concentrations ranging from 8.7 μ g/kg to 4,160 μ g/kg at MW-2.

RCRA Metals. Cadmium and chromium were detected in subsurface soils at MW-4 at levels exceeding their respective reference background criteria. Chromium was detected at 12.9 mg/kg and cadmium was detected at 0.44 mg/kg. Both chromium and cadmium were detected above background in a single soil sample taken at a depth of 44.5 to 45.5 feet at MW-4, and not in any other shallower soil samples and are, therefore, not considered related to contaminant releases from the Former 724th TPS.

5.4 GROUNDWATER CONTAMINATION

A total of 30 direct-push groundwater samples and 5 groundwater monitoring well samples were collected. Direct-push groundwater samples were used to establish groundwater flow direction and extent of contamination for use in locating permanent monitoring wells. Monitoring well samples are used to confirm the types and concentrations of contaminants present in groundwater and to assess risk to human health and the environment.

5.4.1 Direct-Push Groundwater Sampling Results

The direct-push groundwater samples were collected from a total of 17 push-probe stations. The samples were analyzed for VOCs only. The direct-push groundwater focused on the extent of BTEX contamination, the primary indicators of groundwater contamination at the site. Similar to the discussion on direct-push soil sampling results, the results of BTEX analyses on groundwater samples taken from both the direct-push probes and the Phase II monitoring wells are shown in Table 5.5 and Figures 5.4 through 5.7 for reference to portray a comprehensive picture of BTEX contamination in groundwater at the site. This assessment presents Phase II contaminant data only, because no groundwater samples were collected during Phase I.

VOCs. Table 5.5 summarizes the BTEX analytical results for groundwater samples. BTEX compounds were identified at concentrations exceeding reference background criteria and MCLs at four of the 12 push-probe locations (GP-1, LE-2, LW-1, and LW-2). Maximum concentrations were reported at location GP-1 and included benzene (8,090 μ g/L), toluene (3,050 μ g/L), ethylbenzene (2,870 μ g/L), and total xylenes (12,100 μ g/L).

			Benzene	Toluene	Ethylbenzene	Xylenes, Tota
	nce Backgrou	nd Criteria	0.00	0.00	0.00	0.00
MCL	T		5	1,000	700	10,000
Station	Depth (feet)	Sample ID				
	-r	Di	rect-Push Sa	imples (µg/L)	
GP-1	5 to 10	266T11	8,090	3,050	2,870	12,100
GP-1	19 to 20	266T12	206	418	263	1,310
GP-1	29 to 30	266T13	2.1		5.9	28.8
GP-1	32 to 37	266T14	413	642	550	1,940
GP-2	10 to 14	266U11				1,210
GP-2	20 to 24	266U12				
GP-2	30 to 34	266U13				
LN-1	5 to 10	266111				504 MIN
LN-2	10 to 14	266211	1			
LN-2	20 to 24	266212				<u></u>
LN-2	30 to 34	266213	3.1			
LN-2	45 to 50	266215	13.7	16.7	21.2	101
LE-1	6 to 11	266711				
LE-2	30 to 34	266813	2.4		1.4	1.4
LE-2	40 to 42	266814	54.1		21.1	77.1
LE-2	45 to 50	266815	6.6	1.5	4.7	10.7
LS-1	10 to 15	266411				10.7
LS-2	10 to 14	266511				
LS-2	20 to 22.5	266512				
LS-2	30 to 34	266513				
LS-2	50 to 51	266515				
LW-1	5 to 10	266W11	6,070	4,200	2,160	9,000
LW-2	7 to 10	266A11	1,660		588	2,460
LWC-2	7.5 to 9	266E11				
LWC-3	7.5 to 9	266F11				
AC-1	1 to 11	266K11				
AC-2	5 to 15	266M11				
AC-3	5 to 15	266N11				
/IC-4	5 to 10	266P11				
/IC-5	5 to 10	266R11				
			oring Well S	amples (µg/I		
/W-1	4 to 14	264111				
/W-2	4 to 14	264211	329	72.6	62.3	296
1W-3	4 to 14	264311				
1W-4		264411				
1W-5		264511				

Table 5.5. Summary of BTEX Analyses for Groundwater Samples,Former 724th Tanker Purging Station, Fort Stewart

All values reported in µg/L.

Blank indicates analyte not detected.

Bold type indicates concentration above reference background criteria.

Bold outlined box with *bold italics* type indicates concentration above maximum contaminant level.





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Well ID	Reference		MW-1 ^a	MW-2	MW-3	MW-4	MW-5
Sample ID	Background Criteria	MCL	264111	264211	264311	264411	264511
	Va		anic Compo				
1,1 Dichloroethane	0.00				2.2		
1,2 Dichloroethane	0.00	5	•	7.6			
Benzene	0.00	5		329			
Chloroform	0.00	100			1.8		1
Chloromethane	0.00		7.1		110		A
Ethylbenzene	0.00	700		62.3			
Methane	0.00		53.7	4,690	19.1	214	248
Methylene chloride	0.00	5	2.1		2.2	1.9	1.8
Toluene	0.00	1,000		72.6			
Xylenes, total	0.00	10,000		296			
	Semi	volatile Or	ganic Comp	ounds (µg/	'L)		
Naphthalene	0.00			10.5	- <u></u>		<u></u> ,
		RCRA	Metals (µg	/L)			
Arsenic	3.02	50	10.1	3.5	2.5		
Barium	71.72	2,000	50.7	33.9	37.4	99.2	70.20
Chromium	3.56	100		2.4			
Lead	4.69	15	3.3	0.59	0.22		
Mercury	0.14	2	0.2	0.2		0.30	0.58
Selenium	1.90	50	0.62		0.56	0.51	0.78
Silver	1.12		4.9	0.51	3.3	4.1	
		Other /	Analytes (mg	g/L)			
Alkalinity	90.2		45.1	76.3	206	290	244
Nitrate	0.5	10			0.07	0.09	
Sulfate	26.7		3.07	0.55	16.7	4.15	3.01
Sulfide	0.1						0.05

 Table 5.6. Summary of Analytical Results for Monitoring Well Groundwater Samples,

 Former 724th Tanker Purging Station, Fort Stewart

"Site-specific background location.

Bold type indicates concentration greater than reference background criteria.

Bold outlined box with bold italicized type indicates concentration greater than maximum contaminant level.

VOCs. Ten individual VOCs were reported above the detection limit in groundwater samples. Although detected, methylene chloride and chloroform were reported at concentrations 2.2 μ g/L and below. Chloromethane was detected in a single well, MW-1, which is upgradient of the former facility at a concentration of 7.1 μ g/L.

BTEX compounds were detected in MW-2, which is located nearest the former purging station, and represent the highest contamination within the groundwater as measured in monitoring wells at the site. Benzene (329 μ g/L), toluene (72.6 μ g/L), ethylbenzene (62.3 μ g/L), and xylene (296 μ g/L) were detected; of these, only benzene exceeds its respective MCL of 5 μ g/L. No BTEX compounds were detected in the remaining wells, thereby confirming both the horizontal and vertical extent of contamination defined by the direct-push groundwater sampling.

VOC 1,2-dichloroethane was detected in MW-2 at a relatively low concentration (7.6 μ g/L). VOC 1,1-dichloroethane was detected in MW-3 at the downgradient edge of the BTEX plume, at a concentration (2.2 μ g/L) near its detection limit. These constituents are considered secondary contaminants within the primary BTEX plume. Methane is present in the upgradient well MW-1 at a concentration of 53.7 μ g/L and at downgradient locations at concentrations ranging from 19.1 to 248 μ g/L. These concentrations of methane are likely indicative of natural biological activity. Because methane is also a product of breakdown of BTEX, the higher concentration of methane of 4,690 μ g/L at MW-2 located nearest the former facility suggests that biodegradation of organic compounds within the shallow plume at that location is occurring.

SVOCs. Naphthalene was the only PAH compound detected in groundwater. Naphthalene was reported at 10.5 μ g/L in MW-2.

RCRA Metals. Analytical results for RCRA metals were compared to the reference groundwater background concentrations presented in Section 5.1. Only constituents that exceed their respective reference background criteria are considered COPCs. Four metals (arsenic, barium, mercury, and silver) were reported above background levels, as shown on Figure 5.8.

Arsenic (maximum 3.5 mg/L) was found in MW-2 at a concentration near its reference background criterion. Arsenic was found at even higher concentrations (10.1 mg/L) in well MW-1, which is upgradient of the site. Therefore, arsenic is not considered an SRC at the Former 724th TPS site.

Similarly, silver (maximum 4.1 mg/L in MW-4) exceeded its reference background criterion, but was found at even higher concentrations (4.9 mg/L) in background well MW-1. Therefore, silver is not considered an SRC.

Barium and mercury exceed the reference background concentration in MW-4 and MW-4 and MW-5, respectively, and are therefore considered COPCs; however, because MW-4 is located in a deeper hydrogeologic zone and MW-5 is located near Mill Creek, nearly 1,200 feet from the Former 724th TPS, these metals are not likely related to any contaminant plume emanating from the facility. A likely source of contamination in MW-5 is from recharge from Mill Creek during times of high creek stage when groundwater flow may be reversed. Lead was not reported above the reference background criteria and is not considered an SRC.

Other Analytes. Other geochemical parameters, including alkalinity, nitrate, sulfate, and sulfide, were analyzed to assist in geochemical evaluation of contaminant fate and transport. Alkalinity varied from a low of 45.1 mg/L at the upgradient well MW-1 to higher concentrations (up to 290 mg/L at MW-4) downgradient of the site and in the deeper portion of the superficial aquifer. Methane and alkalinity are both elevated at MW-5 next to Mill Creek at the well, suggesting that biodegradation of naturally occurring organic matter is also occurring. Nitrates and sulfates were also slightly higher in the downgradient wells.



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Figure 5.8. Results of Metals Analyses in Groundwater

5.5 SURFACE WATER SAMPLING RESULTS

Four surface water samples, including one background sample, were collected and analyzed for VOCs, PAHs, and RCRA metals (no surface water was present in the swale at station SWS-3 at the time of sampling). Table 5.7 summarizes the analytical results for surface water samples and Figure 5.9 shows their distribution.

No VOCs or PAHs were detected in any of the surface water samples. Results for RCRA metals were compared to the site-specific background criteria results at station SWS-1, located in Mill Creek where the stream enters the FSMR. At stations SWS-4 and SWS-5, located in the swale just west of the Former 724th TPS site, five RCRA metals exceed site-specific background criteria (arsenic, cadmium, lead, mercury, and silver). Of these, cadmium (1.7 μ g/L) and lead (10.8 μ g/L) are notable in that the concentrations exceed both the site-specific surface water background criteria by factors of more than two and their respective reference groundwater background concentrations as well.

At station SWS-2, located in Mill Creek downstream of the Former 724th TPS, mercury exceeded the site-specific reference background criteria. Mill Creek is located more than 1,200 feet from the Former 724th TPS site and does not receive direct runoff from the site. Although Mill Creek may ultimately receive groundwater discharge from the facility, mercury was not detected in groundwater at elevated concentrations near the facility. Therefore, contaminant migration from the Former 724th TPS to Mill Creek is not indicated by these data. The presence of mercury in Mill Creek is, therefore, presumed not to be related to former activities at the Former 724th TPS.

5.6 SEDIMENT SAMPLING RESULTS

Five sediment samples were collected at the same locations as surface water samples and were analyzed for VOCs, PAHs, and RCRA metals. Table 5.7 summarizes the analytical results for sediment samples and Figure 5.9 shows their distribution.

VOCs. BTEX compounds were detected in the sediment in the swale immediately west of the Former 724th TPS site and are likely indicators of contamination from the facility. Toluene was detected in SWS-3 at 158 μ g/kg and xylenes were detected in SWS-4 at 1.2 μ g/kg. Methylene chloride was detected in a single sample (SWS-3) at a concentration (2.6 μ g/kg) below its method quantitation limit (5 μ g/kg) and below its reference background criterion in soils (6.2 μ g/kg). Methylene chloride is a common laboratory contaminant and is therefore not likely related to contamination at the Former 724th TPS.

SVOCs. No PAHs were detected in any of the sediment samples.

RCRA metals. Results for RCRA metals were compared to the site-specific reference background criteria. Five metals exceeded background criteria, with maximum values reported as barium (29.2 mg/kg), chromium (4.4 mg/kg), mercury (0.07 mg/kg), and silver (2.6 mg/kg) at station SWS-3, and lead (6.6 mg/kg) at station SWS-4. These sections are located in the swale immediately west of the Former 724th TPS site. Of these, barium and mercury were also detected above background in surface soils at the site, and barium and chromium were detected above background in subsurface soils. Lead was also detected in surface water in the swale and could be associated with past releases of leaded fuel from the Former 724th TPS.

		SURFACE	WATER	· · · · · · · · · · · · · · · · · · ·		
Station	Reference Background	SWS-1 ^ª	SWS-2	SWS-3	SWS-4	SWS-5
Sample ID	Criteria	263111	263211	263311	263411	263511
		RCRA Meta	ls (µg/L)			
Arsenic	0.94					1.8
Barium	44.8	22.4	26.4		7.3	26,3
Cadmium	0.2					1.7
Lead	5.2	2.6	· ·		0.46	10.8
Mercury	0.18	0.09	0.4		0.18	0.08
Silver	0.3	0.15	0.24		1.3	0.29

Table 5.7. Summary of Analytical Results for Surface Water and Sediment Samples, Former 724th Tanker Purging Station, Fort Stewart

		SEDIM	ENT			
Station Sample ID	Reference Background Criteria	SWS-1 ⁴ 262111	SWS-2 262211	SWS-3 262311	SWS-4 262411	SWS-5 262511
	Volat	ile Organic Co	mpounds (µg/	kg)		
Methylene chloride	0.00		<u>_</u>	2.6		1
Toluene	0.00				158	
Xylenes, total	0.00			1.2		
		RCRA Metals	s (mg/kg)			
Barium	3.0	1.5	15.3	29.2	17	2.9
Chromium	0.37			4.4	4	
Lead	1.38	0.69	2.6	5.9	6.6	1.2
Mercury	0.02			0.07		1
Silver	0.17		0.8	2.6	1	0.91

"Site-specific background location.

Blank indicates analyte not detected.

Bold indicates concentration above site-specific background criteria.

5.7 SUMMARY AND CONCLUSIONS OF THE NATURE AND EXTENT OF CONTAMINATION

The following summarizes the significant findings of Phase II RFI sampling and analysis:

- Contamination is present in both soil and groundwater at the site, dominated by BTEX compounds, with secondary contaminants such as 1,1-dichloroethane.
- BTEX contamination in soil extends to the water table (approximately 6 feet deep) and is greatest immediately north and east of the area of excavated soils removed in August 1996. The soil contamination covers an area approximately 60 by 75 feet.
- BTEX contamination in groundwater extends to a depth of approximately 20 feet below the water table, although isolated areas of BTEX were found in groundwater to depths up to 40 feet. The BTEX plume is more than 1,000 feet from Mill Creek and is, therefore, not impacting Mill Creek. Contamination in Mill Creek is not related to the Former 724th TPS.



Figure 5.9. Results of Surface Water and Sediment Sampling

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- Biodegradation of the VOCs is likely occurring, as evidenced by the presence of methane, a breakdown product of BTEX degradation.
- Some metals (principally mercury and chromium) are present in soil, sediment, and surface water and are present in the swale immediately west of the site.

A summary of the SRCs by medium and their maximum concentrations are presented in Table 5.8. SRCs include all organics that are detected and inorganics detected above reference background criteria. These SRCs are carried through for evaluation under fate and transport, human health PRE, and ecological PRE.

			Ground	water		
	Surface	Subsurface	Monitoring	Direct	Surface	ļ
Analyte	Soil	Soil	Wells	Push	Water	Sediment
	V	olatile Organic	Compounds (us	o/ko)		
	(µg/kg)	(µg/kg)			(µg/L)	(µg/kg)
Acetone	26.6	1,060	ND	1,450	ND	ND
Benzene	1.4	9,420	329	8,090	ND	ND
2-Butanone	ND	5.1	ND	2.8	ND	ND
Chloroform	ND	ND	1.8	ND	ND	ND
Chloromethane	ND	ND	ND	27.7	ND	ND
1,1-Dichlorethane	ND	ND	2.2	125	ND	ND
1,2-Dichlorethane	ND	ND	7.6	ND	ND	ND
Ethylbenzene	19.6	27,100	62.3	2,870	ND	ND
2-Hexanone	ND	ND	ND	3.2	ND	ND
Methane	ND	ND	4,690	NA	ND	ND
Methylene chloride	ND	ND	2.2	ND	ND	2.6
Styrene	1.9	ND	ND	ND	ND	ND
Toluene	22.9	27,400	72.6	4,200	ND	158
Xylenes, total	141	124,000	296	12,100	ND	1.2
		Semivolatile Org	zanic Compoun	ds		
	(µg/kg)	(µg/kg)	(μg/L)	(µg/L)	(µg/kg)
Anthracene	ND	2,860	ND	NA	ND	ND
Benzo(a)pyrene	6.1	8.7	ND	NA	ND	ND
Benzo(b)fluoranthene	7.8	ND	ND	NA	ND	ND
Naphthalene	ND	4,160	10.5	NA	ND	ND
Pyrene	ND	256	ND	NA	ND	ND
		RCRA	Metals			
	(mg/kg)	(mg/kg)	(µg/L)	(µg/L)	(mg/kg)
Arsenic	ND	ND	3.5	NA	1.8	ND
Barium	BRC	BRC	99.2	NA	BRC	29.2
Cadmium	ND	0.44	ND	NA	1.7	ND
Chromium	6.3	12.9	BRC	NA	ND	4.4
Lead	BRC	BRC	BRC	NA	10.8	6.6
Mercury	0.06	BRC	0.58	NA	0.4	0.07
Selenium	ND	BRC	BRC	NA	ND	ND
Silver	BRC	BRC	4.1	NA	1.3	2.6

 Table 5.8. Summary of Site-related Contaminants from Nature and Extent of Contamination,

 Former 724th Tanker Purging Station, Fort Stewart

BRC = Below background reference criteria.

NA = Not analyzed.

ND = Not detected.

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6.0 CONTAMINANT FATE AND TRANSPORT

6.1 INTRODUCTION

This chapter describes the potential migration pathways and mechanisms for transport of chemical substances found in surface and subsurface soils, surface water, and groundwater at the Former 724th TPS. Based on the information presented in previous sections, the refined site conceptual model is developed in this chapter. Simple analytical methods were used to define contaminant movement from source areas to receptor locations. The overall objectives of these analyses are to evaluate potential future impact to human health and the environment.

Section 6.2 discusses the persistence, mobility, and other physical and chemical properties of the organics and metals found at the Former 724th TPS. Section 6.3 presents a conceptual model for potential contaminant migration pathways and describes contaminant release mechanisms through primary transport media (groundwater). Section 6.4 discusses the fate and transport of the contaminants at the Former 724th TPS with respect to their leachability and natural attenuation in the groundwater. Section 6.5 summarizes the conclusions drawn from the results of the analyses and discusses the uncertainties associated with the analyses. Section 6.6 identifies the target remediation levels for soils due to leaching from soil to groundwater.

6.2 PHYSICAL AND CHEMICAL PROPERTIES

The fate and transport of organic compounds and metals are functions of both site characteristics and the physical/chemical properties of the contaminants. Such properties include solubility in water, tendency to transform or degrade (usually described by a half-life or an environmental half-life in a given media), and chemical affinity for solids or organic matter (usually described by a partitioning coefficient K_d , K_{oc} , or K_{ow}). These properties and how they affect inorganic and organic contaminant behavior are described below.

6.2.1 Metals

Inorganic SRCs at the Former 724th TPS site for soils include barium, chromium, and lead. These metals are subject to movement with soil moisture, and may be transported through the vadose zone to groundwater. Metals do not degrade, although some metals can transform to other oxidation states in soil, reducing their mobility and toxicity. Metals also react with soils or other solid surfaces by ion exchange, adsorption, precipitation, or complexation. Such reactions are affected by pH, oxidation-reduction conditions, and the type and amount of organic matter, clay, and hydrous oxides present. In general, these reactions are reversible and cause an element's mobility to be retarded. The retardation factor (R_d) describes numerically the extent to which the velocity of the contaminant relative to water is slowed. The R_d is largely derived from the partitioning coefficient (K_d), expressed by the following relation:

$$R_d = 1 + K_d \cdot \rho_b / \theta$$

where: ρ_b = the soil bulk density (g/cm³), θ = soil moisture content. K_d for the metals at this site may vary by large ranges. It has been found that K_d can even vary by orders of magnitude between samples from the same site. The range of K_d values [obtained from EPA (1996)] and the corresponding range of calculated R_d for the Former 724th TPS SRCs are presented in Table 6.1.

Site-related Analytes	K _d Range ^a (mL/kg)	R _d Range ^b
Arsenic	25 to 31	60 to 75
Barium	11 to 52	27 to 126
Cadmium	15 to 4300	37 to 10,320
Chromium	14 to 31	35 to 75
Lead	19 to 1405	25 to 3370
Mercury	0.04 to 200	1.1 to 480
Selenium	2.2 to 18	6.3 to 44
Silver	0.1 to 110	1.2 to 265

Table 6.1. List of Distribution Coefficients (Kd) Used to Describe the Retardation Factors (Rd) for the Inorganic Site-related Contaminants at the Former 724th Tanker Purging Station, Fort Stewart

^aThe K_d-ranges represent the pH-dependent values for metals developed for soil screening level application (EPA 1996). ^bThe R_d-ranges represent calculated values using the K_d-range and site-specific parameters.

6.2.2 Organic Compounds

The organic compounds detected in soils at the Former 724th TPS site include VOCs and SVOCs. These contaminants may be degraded in the environment by various processes, including hydrolysis, oxidation/reduction, photolysis, or biodegradation. Half-lives of organic compounds in various media can vary from minutes to years, depending on the chemical and on environmental conditions. Degradation may either enhance or reduce the toxicity of a chemical. The biodegradation rates for the organic compounds are presented in Table 6.2. These values are based on the biodegradation half-lives taken from the *Handbook of Environmental Degradation Rates* (Howard et al. 1991). Although a range of values is presented in this book, only the lowest biodegradation rates corresponding to the highest half-lives are presented here to ensure conservatism in discussing contaminant loss through degradation/decay.

The mobility of an organic compound is affected by its volatility and its partitioning behavior between solids and water, water solubility, and concentration. The Henry's Law constant value (K_H) for a compound is a measure of the ratio of the compound's vapor pressure to its aqueous solubility. The K_H value can be used to make general predictions about the compound's tendency to volatilize from water. Substances with K_H values less than 10⁻⁷ atm/m³/mol will generally volatilize slowly while compounds with K_H greater than 10⁻³ atm/m³/mol will volatilize rapidly. Vapor pressure is a measure of the pressure at which a compound and its vapor are in equilibrium. The value can be used to determine the extent to which a compound would travel in air, as well as the rate of volatilization from soils and solution. In general, compounds with vapor pressures lower than 10⁻⁷ mm Hg will not be present in the atmosphere or soil air in significant amounts, while compounds with vapor pressures higher than 10⁻² mm Hg will exist primarily in the air. Unless the soil is saturated, VOCs will exist primarily in the atmosphere and soil air. PAHs and other SVOCs will exist in both the air and the soil. The air diffusion coefficient is a

											Biodegradation	
		Solubility	s, ®		Vapor	Henry's	К . Ø	Air Diff.		Calculated	Rate Constant	
	Mol.	°,	Temp.	Kow	Pressure	Constant (K _b)	Temp.	Coeff.	Koc	አ	۲	
Constituents	Wt	(mg/L)	ູບ	(Iml/ml)	(tor @ *C)	atm.m ³ /mol	ပ့	cm²/s	g/Tmi,	(mL/g)	1/day	Log (Kow)
					Volatile Organ	Volatile Organic Compounds						
1,1 Dichloroethane	99.0	5.06E+03		6.17E+01	234 @ 25	5.45E-03	ห	0.074	53.4	2.67E-01	1.13E-03	1.79
1,2 Dichloroethane	9.66	8.52E+03		2.81E+01		1.10E-03	25	0.104	38	1.90E-01	9.63E-04	2.09
2-Butanone	72.1	2.75E+05		1.82E+00	100 @ 25	6.61E-07	25ª	0.092 ^b	1.15	5.73E-03	2.48E-02	0.26
Acetone	58.1	1.00E+06		5.75E-01	270 @ 30	5.14E-07	25*	0.11 ^b	0.575	2.88E-03	2.48E-02	-0.24
Benzene	78.1	1.78E+03	20	1.35E+02	95@25	5.55E-03	25	0.0932 ^b	62 ^c	3.10E-01	9.63E-04	2.13
Chloroform	119.4	9.30E+03	25	9.33E+01	160 @ 20	3.39E-03	25	9.091 ⁶	53°	2.65E-01	3.85E-04	1.97
Chloromethane	50.5	6.36E+03	ន្ត	8.13E+00	3800 @ 20	8.82E-03	52	0.11	5.12	2.56E-02	6.19E-03	16.0
Ethylbenzene	106.2	1.52E+02	ន	1.41E+03	10 @ 25.9	6.44E-03	25	0.075	204°	1.02E+00	3.04E-03	3.15
Methylene chloride	84.9	1.67E+04	ห	1.78E+01	429 @ 25	3.19E-03	ม	0.1037	10°	5.00E-02	6.19E-03	1.25
Styrene	104.1	3.00E+02	20	1.45E+03	5@20	2.28E-03		0.0071 ⁵	912°	4-56E+00	3.30E-03	3.16
Toluenc	92.1	5.15E+02	2	4.90E+02	28 @ 25	5.92E-03	25	0.087	140 ^c	7.00E-01	3.30E-03	2.69
Xylene	106.2	2.00E+02	_	5.89E+02	5@20	5.25E-03	25	0.073	196 ^c	9.80E-01	1.93E-03	2.77
					Semivolatile	Semivolatile Organic Compounds	spund					
Anthracene	178.2	1.29E+00	25	2.82E+04	1.95E-4 ⁴	8.60E-05	52	0.042	23493 ^c	1.17E+02	3.77E-04	4.45
Benzo (a) pyrene	252.3	3.80E-03	25	9.55E+05	5E-9@21	4.90E-07	ม	0.043	968774 ⁶	4.84E+03	3.27E-04	5.98
Benzo (b) fluoranthene	252.3	1.00E-03	ه	3.72E+06	SE-7'	2.94E-07	25ª	0.0442	2340000	1.17E+04	2.84E-04	657
Napthalene	128.2	3.00E+01	ম	2.34E+03	0.082 @ 25	4.83E-04	ม	0.059	,1611	5.96E+00	2.69E-03	3.37
Pyrene	202.3	1.60E-01	26	1.51E+05	2.5 @ 200	5.10E-06	52	0.051	67992 ^c	3.40E+02	9.12E-05	5.18

Table 6.2. Physical and Chemical Properties of Organic Site-related Contaminants at Former 724th Tanker Purging Station, Fort Stewart

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Solubilities, Henry's Constant and Log (K...) have been taken from RREL Treatability Data Base (EPA 1994) except otherwise indicated.

Biodegrdation half-lives are based on biodegradation half-lives taken from Hand Book of Environmental Degradation Rates (Howard et. al. 1991) except otherwise indicated.

Air diffusion coefficients are obtained from EPA 1987, except otherwise indicated. STF Data Base (EPA 1991) indicates Shen et. al 1993 as the source

^c = measured Koc values (EPA 1996)^d = Source from EPA 1995 ^c = EPA (1996)

K4 = K20 + f20 where foc is fraction of organic carbon content with a site average value of 0.005 obtained from site measurements

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measure of the rate of spontaneous mixing, presented in units of $cm^2/second$, of one substance with another when in contact or separated by a permeable membrane. The rate of diffusion is proportional to the concentration gradient of a substance, increases with temperature, and is inversely related to density and pressure. In soil systems, the principal type of diffusion is from a region of high concentration to a region of low concentration. Diffusion occurs most readily in gases, to a lesser extent in liquids, and least in solids.

Water solubility and the tendency to adsorb to particles or organic matter can correlate with retardation in groundwater transport. The adsorption coefficient/partition coefficient (K_d) of an organic compound is related to the organic carbon/water partition coefficient (K_{oc}) by

where:

$$K_d = f_{oc} \times K_{oc}$$

 f_{oc} = fraction of soil organic carbon content.

Chemical-specific K_{oc} values may be obtained from literature or may be calculated using empirical formulas relating the octanol-water partitioning coefficient (K_{ow}) to the K_{oc} . The K_{ow} (mL/mL) is the ratio of a contaminant's concentrations in a system containing water and octanol. The most commonly used formula to relate K_{ow} to K_{oc} is given by (Mills et al. 1985):

$$K_{oc} = 0.63 \times K_{ow}$$

Chemicals with relatively high water solubilities and low adsorption coefficients (e.g., acetone, methylene chloride, etc.) are expected to remain primarily as dissolved phases and be transported at the same rate as the groundwater flow. Chemicals with lower water solubilities and higher adsorption coefficients (e.g., PAHs) are expected to remain primarily adsorbed to the surface of the soils; their transportation with the groundwater would be very limited and at a much slower rate. Table 6.2 presents the solubility, Henry's Law constant (K_H), vapor pressure, air diffusion coefficients, and biodegradation rate constants for the organic compounds detected in soils and groundwater at the Former 724th TPS. Log K_{ow} , K_{ow} , K_{oc} , and K_d for these compounds are also presented in this table.

6.3 CONCEPTUAL MODEL

The conceptual site model (CSM) is a statement of expected site conditions that serves as a paradigm against which observations can be compared and within which predictions can be made. The predictive function of the CSM, of primary importance to contaminant fate and transport analysis, relies on known information and informed assumptions about the site. The better the information and the greater the accuracy of the assumptions, the more accurately the CSM describes the site resulting in more reliable predictions.

The CSM presented in this section summarizes the hydrogeologic components (presented in Section 2.0) and the distribution of contaminants in the subsurface soils and groundwater (presented in Section 5.0). Contaminant migration pathways and release mechanisms are also based on the information presented in Section 5.0. The CSM for contaminant fate and transport at the Former 724th TPS is diagrammatically illustrated in Figure 6.1. The summary of the model elements follows.



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6.3.1 Water Balance Components

The potential for contaminant transport begins with precipitation. The actual amount of rainwater available for flow is highly variable and dependent upon soil type and climatic conditions. A water balance calculation can be used as a tool to quantitatively account for all the components of the hydrologic cycle at the Former 724th TPS. The components of a simple steady-state water balance model include: precipitation (P), evapotranspiration (ET), surface runoff (Sr), and groundwater recharge or percolation (Gr), and is defined as follows:

or

 $\mathbf{P} = \mathbf{E}\mathbf{T} + \mathbf{S}\mathbf{r} + \mathbf{G}\mathbf{r}$

Rain water available for flow = Sr + Gr = P - ET

The annual average water balance estimates for the Fort Stewart area indicate an evapotranspiration of 65.5 percent (31.4 inches) of total precipitation (48 inches) as compared to 34.5 percent (16.6 inches) for rain water available for flow. Of this 34.5 percent (16.6 inches), groundwater recharge (percolation) accounts for 30.7 (14.7 inches) percent and surface runoff accounts for the remaining 3.8 percent (1.8 inches). The water balance estimations were based on HELP model (EPA 1994) calculations using precipitation and temperature data for the years 1974 through 1978 at Savannah, Georgia.

6.3.2 Contaminant Release Mechanisms and Migration Pathways

Past pathways were:

- Purge liquids disposed of to the oil/water separator at the Former 724th TPS overflowed or were spilled during operations. These liquids infiltrated the soil and contaminated soil and groundwater below the Former 724th TPS.
- Overflow or spilled purge liquids disposed at the Former 724th TPS flowed overland to the nearby ditch contaminating the surface water and sediments.
- The groundwater plume spread to its current extent.
- After removal of the Former 724th TPS facilities and most of the contaminated site soils, BTEX compounds in groundwater and probably in soil have been biologically degrading, producing elevated methane in groundwater at the Former 724th TPS and elevated methane and alkalinity in groundwater downgradient of the Former 724th TPS.

Current pathways are:

- Rainwater percolating through contaminated soil below the Former 724th TPS leaches contaminants and transports contaminants to the water table.
- Contaminants migrate in groundwater along the flow path by advection towards Mill Creek.
- Organic compounds in groundwater and probably in soil are being biologically degraded.
- Organic compounds in soil and probably in groundwater are being volatized.
Release Mechanisms. Purge liquids were spilled during operations or overflowed the oil/water separator in the past, contaminating both groundwater and soils. The seasonal fluctuation of the local water table has spread contaminants from 4 to 10 feet bgs. These contaminated soils and groundwater may be continuously cross-contaminating each other as the elevation of the water table changes. Another important release mechanism at the Former 724th TPS site is infiltration of rain water with leaching to groundwater. Precipitation that does not leave the site as surface runoff infiltrates into the subsurface. Some of this infiltrating water leaves the subsurface environment via evapotranspiration after little or no subsurface flow. The remainder of the water percolates into the subsurface flow system. The rate of percolation is controlled by soil cover, ground slope, saturated conductivity of the soil, and meteorological conditions. As discussed previously, the rate of percolation at this site is quite high (14.7 inches/year).

Water infiltrating through contaminated surface and subsurface soils are leaching contaminants into the groundwater. The factors that affect leaching rate include a contaminant's solubility and partitioning coefficient (K_d) and the amount of percolation. Whether it is the contaminant's partition coefficient or solubility that controls leaching depends on whether leaching is solubility controlled or sorption controlled. Insoluble compounds will precipitate out of solution in the subsurface or remain in their insoluble form with little leaching. Those contaminants with a small K_d will be leached more effectively than those with a larger K_d .

Another factor that affects the persistence of a contaminant is the contaminant's rate of decay. Most of the organic compounds decay or breakdown at characteristic rates that are described by the substance's half-life. For a given percolation rate, those contaminants with long half-lives have a greater potential for contaminating groundwater than do those contaminants with shorter half-lives. Organic contaminants with shorter half-lives and higher K_{oc} s will be completely degraded before reaching the water table.

Release by gaseous emission and airborne particulates is an important mechanism although it is not significant at the Former 724th TPS. VOCs in surface soil are emitted to air via vaporization. The rate of emission is controlled by the vapor pressure of the organic compounds and decreases rapidly over a short period of time as the volatiles are depleted by release to the atmosphere. VOCs in the subsurface soils are emitted to the atmosphere via vertical diffusion through soil pores. Depending on how extensively diffusion has occurred, gaseous emissions from subsurface soils may be significant. In the Former 724th TPS, concentrations of contaminants in the surface soil are relatively insignificant so gaseous emissions to the atmosphere would be minor. However, volatilization of subsurface contaminants could be an important mechanism for redistributing volatile compounds in the subsurface.

Particulate matter from contaminated surface soil can become airborne as a result of wind erosion. This process is controlled by vegetative cover, wind speed, moisture and other fluids, and soil grain size in the surface soils. Wind erosion is not likely to be significant at the Former 724th TPS because of the vegetative cover.

Migration Pathways. The most likely pathways of contaminant migration at this site are (1) via overland flow to the ditch located west of the facility, and (2) via groundwater flow toward Mill Creek located west of the facility. In the saturated zone, the contaminants are carried either in solution or adsorbed to fine particulates (colloids) laterally to the hypothetical receptor locations. The horizontal hydraulic conductivity, which controls the flow rate, is a function of soil grain size and the pressure gradient. Saturated hydraulic conductivities for Former 724th TPS site

range from 2.0×10^{-5} to 4.1×10^{-4} cm/second with an overall average of 1.4×10^{-4} cm/second (Section 4.0). The average horizontal hydraulic gradient at the site is 0.0083 with groundwater flow predominantly to the west. Assuming an effective porosity of 0.33 [based on specific yield of fine sands (Mills et. al. 1985)], the groundwater velocity is calculated to be approximately 3.6 feet/year towards the creek. Therefore, it is expected to take 280 years for the site groundwater to reach Mill Creek, located approximately 1,000 feet from the Former 724th TPS. Contaminants that are sorbed onto surface soils can be released by desorption in surface runoff or captured with particulate matter by sheet erosion during a storm event. However, there is not much runoff from the Former 724th TPS and surrounding area because of dense grass cover. A multi-day storm may cause sheet flow. Sheet flow becomes shallow concentrated flow. When the shallow concentrated flow becomes channelized, it may quickly drain contaminants to the ditch.

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6.4 FATE AND TRANSPORT ANALYSIS

6.4.1 Soil Leachability Analysis

Contaminant fate and transport analysis at this site involves a series of screening steps to define the contaminant migration constituents of potential concern (CMCOPCs). The CMCOPCs are defined as the constituents that may pose the greatest problem if they migrate from the site source. Once CMCOPCs were developed through the screening process, they were further evaluated using a simple analytical approach for lateral migration in the saturated zone, to the receptor locations to contaminant migration constituents of concern (CMCOCs). The screening steps are discussed in the following sections.

The first step of the screening process represents the development of the SRCs. The SRCs were selected by comparing the maximum detected concentrations of all the analytes measured in surface and subsurface soils with their respective background criteria. The background criteria represent the average site background concentration multiplied by a factor of two. If the maximum concentration of an analyte in the soil exceeds its reference background criterion, then that analyte is selected as an SRC.

The second step of the screening process involves comparing the maximum concentrations of all the SRCs, developed in the previous step, with EPA generic soil screening levels (GSSLs). The GSSLs are set for Superfund Sites for the migration to the groundwater pathway (EPA 1996). For conservatism, a default dilution attenuation factor (DAF) of 1 as applicable based on source area and depth to water table was applied to the GSSLs for the organics. A DAF of 1 is appropriate for organic chemicals because organic constituents are not easily adsorbed to the sandy inorganic soils present above the water table at the Former 724th TPS Site and because the depth to the water table is less than 8 feet. However, for the metals, because of their higher retardation factor, a DAF of 20 was used. The GSSL is defined as the concentration of a contaminant in soil that represents a level of contamination below which there is no concern under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), provided conditions associated with soil screening levels (SSLs) are met. Generally, if contaminant concentrations in soil fall below the GSSL, and there are no significant ecological receptors of concern, then no further study or action is warranted for that area. However, it should be noted here that the purpose of this screen is not to identify the contaminants that may pose risk at a downgradient location but to target those contaminants that may pose the greatest problem if they migrate from the site. The results of this screening are presented in Table 6.3.

SRCs	Maximum Concentration	GSSL	Is Maximum Concentration >GSSL?
	Metal	s (mg/kg)	
Cadmium	0.44	8	No
Chromium	12.90	38	No
Mercury	0.06	0.4	No
	Volatile Organic	Compounds (µg/kg)	
2-Butanone	5.10	38.4	No
Acetone	1,060	800	Yes
Benzene	9,420	2	Yes
Ethylbenzene	27,100	700	Yes
Styrene	1.90	200	No
Toluene	27,400	600	Yes
Xylenes	124,000	10,000	Yes
	Semivolatile Organ	ic Compounds (µg/kg)	
Anthracene	2,860	590000	No
Benzo(a)pyrene	8.70	400	No
Benzo(a)fluoranthene	7.80	200	No
Naphthalene	4,160	4,000	Yes
Pyrene	256	210,000	No

Table 6.3. Contaminant Migration Constituents of Potential Concern Based on Soil Screening for
Former 724th Tanker Purging Station, Fort Stewart

GSSL = generic soil screening level

6.4.2 Natural Attenuation of the CMCOPCs

The CMCOPCs at the Former 724th TPS include acetone, BTEX, and naphthalene. These contaminants may be degraded in the environment by various processes, including hydrolysis, oxidation/reduction, photolysis, or biodegradation. As already discussed in Section 6.2, environmental half-lives of organic compounds in various media can vary from minutes to years, depending on the chemical and on environmental conditions. Organic chemicals with differing chemical structures will biodegrade at different rates. Primary biodegradation consists of any biologically induced structural change in an organic chemical, while complete biodegradation is the biologically mediated degradation of an organic compound into carbon dioxide, water, oxygen, and other metabolic inorganic products. The biodegradation rate of an organic compound is proportional to the concentration:

$$-dC/dt = kC^n$$

where:

C = concentration,

k = biodegradation rate constant = 1/t Ln (a/[a-x]),

t = time,

- a = initial concentration,
- x = change in concentration with time,
- n = reaction order, n=1 for first order kinetics.

The half-life $(t_{1/2} = Ln2/k)$ is the time necessary for half of the chemical concentration to react. The biodegradation rate of an organic chemical is generally dependent on the presence and population size of soil micro-organisms, capable of degrading the chemical. Based on the above equation and the maximum concentrations of these constituents, a simple first-order correlation can be obtained between the constituent's half-lives and the time required to degrade the contaminant to the concentration equal to its MCL. These correlations indicate that benzene, with its current maximum concentration of 8,090 ppb at the Former 724th TPS groundwater will degrade to its MCL value in less than 10.7 times its half-life, whereas xylene, with its maximum concentration of 12,100 ppb will degrade to its MCL in less than 0.3 times its half-life. Using a conservative half-life of 2 years as reported in the literature, the concentration of benzene will degrade to its MCL value in less than 22 years. This time frame is an order of magnitude less than the 280 years that is expected for the site groundwater to reach the receptor location (Mill Creek). It should be further noted here that this analysis does not account for attenuation due to adsorption and dispersion making the analysis highly conservative.

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6.5 SUMMARY AND CONCLUSIONS

Based on site characterization and monitoring data, organics and a few metals are detected in groundwater beneath the Former 724th TPS site. However, the metals are not considered SRCs, mainly due to their low concentrations in the soils. Organics in the site soils that exceed EPA GSSLs include BTEX, acetone, and naphthalene. These organics, except naphthalene, due to their high mobilities and historically higher soil concentrations, have already reached the groundwater. However, groundwater movement off site is very slow (3.6 feet/year) and may take 280 years to reach the receptor location (i.e, Mill Creek).

The BTEX compounds are currently observed above their respective MCLs in groundwater. Based on the site conceptual model, although these contaminants have likely been leaching (and will likely continue to leach in the future) from the contaminated soils into the groundwater beneath the site with concentrations above their MCLs, off-site migration of these contaminants will be very limited due to retardation and biodegradation as well as the slow movement of groundwater flow.

Benzene will degrade from the observed maximum of 8,090 μ g/L at the source to a concentration less than its MCL of 5 μ g/L in 22 years, based on a conservative benzene biodegradation half-life of 2 years. Traveling at a groundwater flow rate of 3.6 feet/year for those 22 years, groundwater would not be expected to exceed its MCL at a distance of 80 feet from the source. Similarly, ethylbenzene, toluene, xylene, and acetone with higher biodegradation rates will remain at concentrations much lower than benzene. Therefore, it may be concluded that none of the constituents from the Former 724th TPS site are expected to be of potential concern at the nearest receptor location [i.e., Mill Creek (1,200 feet from the source)].

6.6 IDENTIFICATION OF SOIL REMEDIAL LEVELS

Remedial levels for contaminant migration COPCs in soil were identified based on transport modeling. For soils that are above the water table, an unsaturated zone contaminant transport model (SESOIL) was used to predict the concentration of contaminants in the percolating rainwater before reaching the water table. The SESOIL results were then converted into likely average groundwater concentrations by using dilution factors (DFs). DFs were developed by using the hydraulic analysis method (EPA 1996), which involves calculating the rate of flow through the aquifer system and the rate of rainwater percolating into the aquifer. The rate of percolation (14.7 inches/year) and the groundwater flow velocity (3.6 feet/year) were estimated from the CSM. The zone of mixing within the aquifer was assumed to be 20 feet deep. The site was modeled as a single unsaturated soil layer 7 feet thick. Soil contamination was assumed to cover a total area of 4,500 square feet, with 60 feet parallel to groundwater flow. Using these parameters, the DF was calculated to be 1.33. Geotechnical parameters used by the model are bulk dry density = 1.25 grams/cm³, disconnectedness index = 10, porosity = 52 percent, and organic carbon content = 0.24 percent. The SESOIL results, showing the predicted maximum groundwater concentrations beneath the site, are presented in Table 6.4.

Soil remedial levels were calculated based on the ratio of the MCL to the predicted maximum groundwater concentration for a given analyte. Because there is no MCL for naphthalene, a risk-based concentration equal to the EPA Region II Risk-Based Criteria was used. The soil remedial level is then calculated by multiplying this ratio by the maximum observed concentration of that analyte in soil at the Former 724th TPS facility. The resulting soil remedial levels, based on leaching from soil to groundwater, are presented in Table 6.4.

СМСОРС	Maximum Soil Concentration (μg/kg)	Target Groundwater Concentration (MCL) (μg/L)	Predicted Maximum Groundwater Concentration (µg/L)	Soil Remedial Level (µg/kg)
Acetone	1,060	370	1,060	370
Benzene	9,420	5	2,320	20
Ethylbenzene	27,100	700	6,210	3,100
Naphthalene	4,160	150 ^a	1,040	600
Toluene	27,400	1,000	6,600	4,200
Xylenes	124,000	10,000	39,200	3,200

Table 6.4. Soil Remedial Levels Based on Leaching to Groundwater	
Former 724th Tanker Purging Station, Fort Stewart	

CMCOPC = contaminant migration constituent of potential concern

^a - Target groundwater concentration for naphthalene is EPA Region III risk-based level, since no maximum contaminant level exists for naphthalene.

These soil remedial levels are protective of direct exposure to residents by hazardous constituents leaching from the soil to groundwater. However, it is recognized that groundwater is not used at this site as a source of drinking water. It will take approximately 280 years for groundwater to reach the nearest receptor at Mill Creek, which is 1,200 feet from the former facility. Constituents will naturally attenuate in groundwater through retardation and biodegradation before reaching Mill Creek.

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7.0 HUMAN HEALTH RISK ASSESSMENT

This human health risk assessment (HHRA) uses a Step 1 risk evaluation, based on guidance from the GEPD. This will be done to determine if there are potential risks to human health associated with contamination detected at the Former 724th TPS. This process involves the following steps:

- for inorganics, compare detected concentrations to naturally occurring background levels to determine if detected inorganics are naturally occurring or are associated with past activities at the site;
- identify potential migration and exposure pathways associated with the site and identify potential exposure scenarios in order to identify appropriate action levels;
- identify available risk-based action levels for each contaminant detected above background levels or develop levels if they do not exist; and
- compare sample concentrations to action levels to determine if site conditions warrant further evaluation.

Chemicals that exceed action levels will be identified as contaminants of potential concern and will be evaluated in a baseline risk assessment.

7.1 DATA EVALUATION

The objective of this evaluation is to develop a set of chemical data suitable for use in the HHRA. The data for the Former 724th TPS were evaluated to establish (1) which data are of sufficient quality for use in the quantitative risk assessment and (2) which detected chemicals are believed to be site related.

The data used in the risk assessment were verified and validated using the methodology described in the QAPP. Data qualified during the validation as rejected data ("R") were not used in the risk assessment.

Detection limits achieved during sample analysis were reviewed to ensure that the required detection limits were met. Typically, detection limit requirements are established to ensure that characterization has occurred to levels that are low enough to determine if chemicals are present at hazardous levels. These levels are chemical-specific and related to each chemical's toxicity. Required detection limits are presented in the QAPP. In some cases recommended detection limits cannot be achieved by a laboratory, e.g., if matrix or chemical interference requires that a sample be diluted.

An organic chemical was removed from further consideration if it was a common laboratory contaminant and the reported sample concentration was less than ten times the concentration in an associated quality control sample (i.e., trip blank, field blank, equipment rinsate, or laboratory blank). Common laboratory contaminants include acetone, 2-butanone, methylene chloride,

toluene, or phthalate esters. Other organic chemicals were not included if results were less than five times the highest concentration detected in an associated quality control sample.

The analytical results for the various environmental media were compared to the appropriate background concentrations to identify SRCs. This was previously done in Section 5.0 (Contaminant Nature and Extent). The reader is referred to this section for the discussion on the selection of SRCs.

7.2 EXPOSURE EVALUATION

The objective of this exposure evaluation is to identify potential human populations that may be exposed to site-related chemicals at the Former 724th TPS under current and future land use conditions. A complete exposure pathway consists of five elements: (1) a potential receptor population, (2) a source of contamination, (3) a transport or retention medium, (4) a point of contact for a receptor, and (5) a route of exposure (ingestion dermal absorption, or inhalation) at the point of contact through which the chemical may be taken into the body. When all of these elements of an exposure pathway are present, an exposure of a receptor population can take place. The assessment considers both on-site and off-site receptors and their relationship to the potential migration pathways and exposure pathways and points of exposure for site-related chemicals.

7.2.1 Receptor Assessment

This section identifies those populations that may be exposed to site-related chemicals. The receptor populations are identified under both current and future conditions. Potential changes in land use are evaluated to determine whether this may result in the presence of more sensitive receptor populations in the future.

Generally, receptor populations are divided into two groups: on-site and off-site receptors. On-site receptors are those individuals who may be present within the site boundaries and come into direct contact with contaminants present. The exposure of an off-site receptor requires a migration pathway that transports a contaminant off-site to a point of exposure of the potential receptor.

The Former 724th TPS is located within an industrialized area of the FSMR; however, the site is not currently in use and has open access, i.e., no institutional controls are in place. Base personal may come on site on a regular basis for lawn maintenance such as grass cutting, etc. Given the open access to the site, a trespasser (e.g., Base worker crossing the site) may visit the site. The adult trespasser is likely to be an occasional event, given that the industrial areas near the site are fenced and an adult trespasser would have little purpose in coming onto the site. The site is located within an industrial/military operational area. No children are allowed in this area; therefore, a juvenile trespasser is not a viable receptor population at this site. Construction work may take place at the site, but given the knowledge of the contamination present, personnel involved in excavation, construction, or similar activity will be required to wear the appropriate protective gear. Therefore, this type of receptor is unlikely to be exposed to contaminants. Under current land-use conditions, the on-site receptors would be represented by a groundskeeper.

The land use in the area surrounding the site consists primarily of industrial operations with undeveloped areas west of the site. Off-site receptors at greatest potential risk to exposure would be individuals working in those areas adjacent to the site.

Given the location of the site within an industrialized area, it will probably remain an industrial area (Master Plan). The land use at the site may remain unchanged. Given this scenario, the future receptor populations would remain the same as those identified as current receptor populations. However, the site may be developed for military/industrial use. Should this occur, construction workers or similar contract labor would be working on the site, in addition to Base personnel working on site. If the site is returned to industrial usage, the area is likely to be secured by a fence, similar to the current areas in use. Therefore, the presence of an on-site juvenile trespasser is unlikely. For the purposes of this risk analysis, it is assumed that the site will be developed for industrial use. The potential risks associated with no changes in current land use would not be different from current risks.

Future off-site receptor populations would be the same as the current receptor populations, namely, nearby base workers. Because Mill Creek is located in an undeveloped area, potential future receptors could also include children playing in Mill Creek, who may be at potential risk from exposure to air-borne contaminants or direct exposure to contaminants in surface water. Because this risk evaluation is designed to determine if no further action is a potential option, the risk-based action levels used in the evaluation are based on a land use that assumes no controls are in place, e.g., a residential land use.

Potential receptor populations for the Former 724th TPS are:

- Current on site Groundskeeper.
- Current off site Base worker.
- Future on site Base worker and construction worker.
- Future off site Base worker and juvenile playing in Mill Creek.

7.2.2 Migration Pathway Analysis

This section describes the potential pathways related to chemical transport that may result in potential exposure points for humans. In general, the major routes of migration from this site are volatilization into air, wind erosion resulting in fugitive dust, surface water runoff, and leaching of contaminants into groundwater. The site is currently covered by vegetation. Therefore, the migration of contaminants into the atmosphere via fugitive dust is not a viable migration pathway, under current conditions. However, activities in the future may result in the surface cover being removed from the site, resulting in wind erosion.

Soils. Contaminants in soils may migrate via runoff, leaching into groundwater, or volatilizing into air. Runoff may transport contaminants adsorbed to soil particles via erosion. This would result in an increase of the surficial area of contamination and may transport contaminants to sediments in the swale west of the site. Runoff may also result in the transport of particulate-bound water soluble compounds to surface waters in the swale. Groundwater is less than 10 feet bgs at this site and leaching of contaminants into subsurface soils and then into groundwater is likely to be a significant migration pathway. Volatilization into the air may occur, but this pathway would be limited to volatile organics.

Groundwater. Migration of soil contaminants to groundwater could occur from infiltration and percolation of rainwater through the soil. The extent of contaminant migration depends primarily on the amount of rainfall, evaporation, solubility of the chemical in water, absorption coefficient, and distance to the groundwater. In general, VOCs travel more easily through soils than SVOCs, such as high-boiling point fuel hydrocarbons. Solubility of metals is dependent on the metal species and is difficult to generalize. Groundwater at the site discharges into Mill Creek located approximately 1,000 feet west of the site. However, given the low groundwater flow rate, organic contaminants are likely to have attenuated through biodegradation before reaching Mill Creek (Section 5.0). Inorganics, which are less mobile than organics, are likely to be significantly diluted in the groundwater. Therefore; exposure via discharge of groundwater in Mill Creek is expected to be insignificant.

Surface waters. Two surface waters exist near the site, the drainage swale and Mill Creek. The surface water in the swale does not discharge into any other surface water features. The swale collects surface water runoff, which likely percolates into groundwater over time. During times of high groundwater stage, groundwater may discharge into the swale.

The surface water in Mill Creek feeds into the Canoochee River that drains much of the western portion of the FSMR. Mill Creek is unlikely to be a significant migration pathway for contaminants, because of the low potential for contaminants migrating to Mill Creek in significant quantities.

Sediment. Sediments at this site include those within the swale and Mill Creek. However, as previously discussed above, contaminant migration to Mill Creek is not considered to be significant; therefore, exposure via sediment is not considered to be a viable pathway. The sediments within the swale are not constantly covered by water. Therefore, the migration pathways for sediments in the swale would be the same as those given for surface soils.

7.2.3 Identification of Exposure Pathways

Potential human exposure may occur by primary pathways (e.g., dermal contact, inhalation, or inadvertent ingestion of soil), or through secondary pathways involving the transfer of site-related chemicals into food sources (i.e., crops, livestock, and game). The potential exposure pathways will be addressed for each of the potential receptor populations previously identified (Section 7.2.1).

Current and future on-site worker. The current on-site worker may be exposed to contaminants in surface soils and sediments. Potential exposure pathways for surface soils and sediments include incidental ingestion of soils and inhalation of volatile organics. An on-site worker is not likely to come in direct contact with surface waters in the swale given that his activity is primarily limited to mowing the grass, etc. Therefore, exposure to contaminants in surface waters is unlikely.

The future on-site worker is likely to be exposed via all the previously discussed pathways in addition to exposure to volatile organics in groundwater via inhalation. It is unlikely that the surficial groundwater would be used as a source of drinking water, but it may be used for watering purposes, e.g., a lawn sprinkler system, irrigation system for ornamental plants, etc. The on-site worker may be exposed to chemicals in groundwater as a result of volatile organics being released from the groundwater being used to water the lawns, etc.

There are few jobs which would require a site-worker to come in contact with surface waters at the site. Although accidental exposure may occur, these events are likely to be limited to one-time events and the potential exposure would be insignificant.

Current and future off-site worker. Current off-site worker may be exposed to volatile organics released into the air from the soil. This receptor population would be exposed via fugitive dust if the soils are uncovered and the current vegetation is removed. The future off-site receptor may also be exposed to volatiles in groundwater as a result of using groundwater for lawn sprinkler system, etc.

Future scenario with a juvenile playing in Mill Creek. Children playing in Mill Creek may be exposed via inhalation of fugitive dust and direct exposure to contaminants in surface water. However, exposure via inhalation of fugitive dust is likely to be significantly lower than for on-site receptors. Contaminants in groundwater are not expected to migrate to Mill Creek in significant concentrations. Therefore, the child playing in Mill Creek is not considered to be a viable scenario given that the only significant exposure pathway, inhalation of fugitive dust, will be addressed using other receptors, which have a higher exposure rate and potential risk.

Future construction worker. The construction worker is exposed to surface and subsurface soils as a result of excavation. Incidental ingestion, inhalation of contaminants, and dermal absorption are complete exposure pathways for this receptor.

The risk-based screening values are based on a residential receptor population. The potential exposure pathways addressed in deriving the screening values for soils include soil ingestion, inhalation of fugitive dust and volatiles, and ingestion of contaminants leaching into groundwater from soils. Exposure pathways for groundwater include ingestion and inhalation of volatiles during showering. The residential exposure scenario does address all of the potential exposure pathways, although none of the potential receptor populations would be exposed via all of the pathways addressed under a residential exposure scenario. The derivation of the risk-based screening values is discussed further in the following section.

7.3 SELECTION OF SCREENING VALUES

Screening values represent concentrations that are easily available and, due to their conservative nature, can be used with a high degree of confidence to indicate sites for which no further action is required. Screening levels inherently incorporate assumptions about land use. In identifying COPCs, it is generally accepted that screening levels will reflect any potential future land uses, and thus usually reflect a conservative residential use scenario (EPA 1991, 1996b; ASTM 1995).

If risk-based values are not available, it generally reflects (1) that the chemical is not considered to be toxic except perhaps at extremely high concentrations (e.g., aluminum, sodium, etc.); (2) no dose-response data indicate a toxic effect; or (3) EPA is currently reviewing toxicity information and no reference dose or cancer slope factor currently is available.

Soil screening values were used for sediment because the sediments present at the Former 724th TPS are not constantly covered by water, and exposure pathways for this environmental media are the same as surface soils.

Risk-based screening values for surface water could not be found in the available literature. Therefore, screening values for groundwater will be used for surface waters. This is a conservative approach given that groundwater screening values are designed to be protective of a drinking water source, and incidental ingestion of surface water would be significantly less.

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7.3.1 Screening Values for Soils and Sediment

The EPA Region III risk-based screening values for ingestion of soils were used for screening values for soils and sediments (EPA 1996c). The risk-based values were adjusted to reflect a potential incremental lifetime cancer risk of 1×10^{-6} or a hazard index of 0.1. The risk-based values are given for residential and industrial land use. Residential land use is unlikely to occur at this site. However, as a conservative measure, residential land use values were used to screen surface soil and sediment samples. Exposure of subsurface soils would be limited to a person working within an excavation, i.e., an industrial exposure scenario. Therefore, the industrial land use values were used to screen the subsurface soil values.

Step 1 screening levels generally reflect residential land uses; use of these levels in the first step of the risk process ensures that no chemical will be screened from consideration prematurely. The EPA does provide guidance and default parameter values for developing screening levels that reflect industrial land-use assumptions. These levels are developed using equations and default values from EPA (1991). Residential land use is unlikely to occur at the Former 724th TPS given it is located within an industrial area.

The default residential exposure assumptions for soil are as follows:

- Soil ingestion for noncarcinogens, where the receptor is a child (age 1 to 6) who ingests 200 mg soil/day for 6 years; for carcinogens the soil ingestion rate is age-adjusted over a time period of birth until age 30, assuming an adult ingests 114 mg/day (EPA 1996a).
- Inhalation of volatiles or fugitive dust, where a resident is exposed to airborne contaminants for 30 years (EPA 1996a).
- Leaching of contaminants to groundwater, with subsequent ingestion of groundwater (EPA 1996a).

The potential exposure pathways for soils present at the Former 724th TPS include soil ingestion of surface soils, ingestion of subsurface soils (construction worker), inhalation of volatiles, and inhalation of fugitive dust for future land-use scenarios. For those chemicals detected, the screening values for soil ingestion are lower (i.e., more conservative) than the risk-based inhalation values; therefore, the soil ingestion values were selected.

Chromium may exist in two valence states, trivalent (Cr+3) and hexavalent (Cr+6) chromium. The hexavalent chromium is significantly more toxic than Cr+3, and Cr+6 is more mobile in the environment. However, Cr+6 is not naturally occurring and is unstable in the environment, oxidizing to the trivalent state. The risk-based screening values for residential soils include both trivalent and hexavalent chromium. It is unlikely that the chromium present is hexavalent chromium, given there is no likely source for Cr+6. In addition, the value given represents the total chromium present which includes the naturally occurring trivalent chromium. As a conservative assumption the hexavalent chromium value will be used for the screening value.

7.3.2 Screening Values for Groundwater

The groundwater screening values reflect the use of groundwater as a source of drinking water (EPA 1996b, 1996d). These values include the Region III screening values for tap water, based on a cancer risk of 10⁻⁶ and a hazard index (HI) of 0.1. As previously discussed, groundwater at this site is unlikely to be used as a drinking water source, but may be used as a source of water for irrigation or watering in the future. The drinking water screening values are considered to be health protective values given the conservative assumptions used.

The default residential exposure assumptions for groundwater are as follows:

- Groundwater ingestion. For noncarcinogens the receptor is an adult who ingests 2 L groundwater/day; for carcinogens the water ingestion rate is age-adjusted over a time period of birth until age 30, assuming a child age 1 to 6 ingests 1 L/day (EPA 1996a, 1996c).
- Inhalation of volatiles during showering.

Region III risk-based screening values for arsenic include values for carcinogenic and noncarcinogenic effects. The carcinogenic value for arsenic will be used because exposure via drinking water is a chronic exposure. However, it should be noted that the drinking water scenario is not applicable at this site and is being used in absence of a more appropriate screening value.

7.3.3 Screening Values for Surface Water

Risk-based screening values were used for screening values for surface water. These screening values include EPA Region IV Water Quality Standards for Human Health - Water and Organism Ingestion, EPA Region III risk-based criteria for tap water, and EPA Action Levels for drinking water. The different criteria as designed to be protective of human health depending on the types of exposure. The EPA Region IV Water Quality Standards for Human Health - Water and Organism Ingestion represent the maximum concentrations of contaminants in water that will not present an unreasonable risk to human health if the waters are treated and used as a drinking water source or if aquatic life is harvested from the waters and consumed. The risk-based criteria for tap water and EPA Action Levels are values applied to water coming from the tap within a home where the water is used for drinking, bathing, cooking, etc.

Exposure to contaminants in the swale are generally limited to dermal contact resulting from someone stepping in the water or accidentally falling into the water. The swale does not support aquatic populations that could be harvested for food, because the swale is ephemeral. The water quality standards are not appropriate for surface water in the swale would not be used as a source of water for a water treatment plant, and it does not support aquatic populations that can serve as a source of food. Given that the potential exposure pathway for surface water in the swale is dermal exposure, the screening values for tap water (EPA Region III risk-based criteria for tap water and EPA Action Levels for drinking water) are more appropriate screening values, given that these values address possible dermal exposure in addition to other exposure pathways, (e.g., ingestion of water).

The chemicals detected above background in Mill Creek will be screened using the EPA Region IV Water Quality Standards for Human Health - Water and Organism Ingestion. Fish may be harvested from the creek, so these criteria are more appropriate than criteria for tap water.

7.4 RISK EVALUATION

The risk evaluation compares the maximum value detected in each media with its respective screening value. Exceeding the screening value does not infer that a potential risk to human health exists at the site. It does mean that a risk may exist and that those chemicals exceeding their respective screening values should be evaluated more carefully. Contaminants identified as COPCs will be evaluated further in a baseline risk assessment.

The selection of COPCs for each environmental media (surface soil, subsurface soil, groundwater, sediment, and surface water) is addressed below. The selection process involves two steps. The initial step is the comparison of the maximum concentrations to the appropriate screening values. Given the conservative nature of the screening values, a weight-of-evidence analysis of those chemicals which exceed their respective screening values will be done to determine if those chemicals selected should be analyzed further in a baseline risk assessment.

The potential risks associated with exposure to chemicals are not quantified. However, toxicity values and associated data (reference doses, target organs, cancer slope factors, etc.) are presented in Appendix I for informational purposes.

7.4.1 Surface Soils

All of the contaminants detected in surface soils were below their respective screening concentrations (Table 7.1). There are no COPCs for surface soils at this site.

7.4.2 Subsurface Soils

All of the contaminants detected in subsurface soils were below their respective screening concentrations (Table 7.2). There are no COPCs for subsurface soils at this site.

7.4.3 Groundwater

Acetone, arsenic, four chlorinated solvents (1,1-dichloroethane, 1,2-dichloroethane, chloroform, and chloromethane), and BTEX exceeded their respective screening criteria for groundwater (Table 7.3). The COPCs for groundwater are acetone, arsenic, benzene, chloroform, chloromethane, 1,1-dichloroethane, 1,2-dichloroethane, ethylbenzene, toluene, and xylenes.

7.4.4 Sediment

None of the contaminants in sediments is likely to present a potential human health threat to receptors coming into direct contact with these contaminants (Table 7.4). There are no COPCs for sediment.

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					EPA III		
	;	Frequency	Minimum	Frequency Minimum Maximum	Residential	HH	
Analyte	Units	of Detects	Detect	Detect	(¥)	COPC ?	Justification
Chromium	mg/kg	3/3	1.7	6.3	390	No	Max Detect < All
							Screening Criteria
Mercury	mg/kg	2/3	0.05	0.06	2.3	No	Max Detect < All
							Screening Criteria
Benzo(a)pyrene	mg/kg	1/3	0.0061	0.0061	0.088	No	Max Detect < All
							Screening Criteria
Benzo(b)fluoranthene	mg/kg	1/3	0.0078	0.0078	0.88	No No	Max Detect < All
							Screening Criteria
Acetone	mg/kg	1/5 .	0.0266	0.0266	780	°N N	Max Detect < All
							Screening Criteria
Benzene	mg/kg	1/5	0.0014	0.0014	22	°N N	Max Detect < All
							Screening Criteria
Ethylbenzene	mg/kg	1/5	0.0196	0.0196	780	No No	Max Detect < All
ł	,						Screening Criteria
Styrene	mg/kg	1/5	0.0019	0.0019	1,600	Νo	Max Detect < All
							Screening Criteria
l oluene	mg/kg	2/5	0.0037	0.0229	1,600	Ňo	Max Detect < All
	1						Screening Criteria
Aylenes (total)	mg/kg	1/5	0.141	0.141	16,000	°N N	Max Detect < All
							Screening Criteria
EPA = [1].S Environmental Protection Acanet	Protectic	n Årenov					

EPA – U.S. Environmental Protection Agency HHCOPC – human health contaminant of potential concern

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					EPA III		
		Frequency	Minimum	Minimum Maximum	Industrial	HH	
Analyte	Units	of Detects	Detect	Detect	(A)	COPC ?	Justification
Barium	mg/kg	4/4	1.1	13.3	14,000	°N N	Max Detect < All Screening Criteria
Cadmium	mg/kg	1/4	0.44	0.44	100	δN	Max Detect < All Screening Criteria
Chromium	mg/kg	3/4	5.4	12.9	1,000	No N	Max Detect < All Screening Criteria
Anthracene	mg/kg	1/4	2.86	2.86	61,000	No	Max Detect < All Screening Criteria
Benzo(a)pyrene	mg/kg	1/4	0.0087	0.0087	0.78	°N	Max Detect < All Screening Criteria
Naphthalene	mg/kg	1/4	4.16	4.16	8,200	Ňo	Max Detect < All Screening Criteria
Pyrene	mg/kg	1/4	0.256	0.256	6,100	οN	Max Detect < All Screening Criteria
2-Butanone	mg/kg	1/29	0.0051	0.0051	100,000	No	Max Detect < All Screening Criteria
Acetone	mg/kg	12/29	0.0118	1.06	20,000	No	Max Detect < All Screening Criteria
Benzene	mg/kg	8/29	0.0066	9.42	200	°N	Max Detect < All Screening Criteria
Ethylbenzene	mg/kg	11/29	0.0025	27.1	20,000	°N	Max Detect < All Screening Criteria
Toluene	mg/kg	26/29	0.0015	27.4	41,000	٥N	Max Detect < All Screening Criteria
Xylenes (total)	mg/kg	11/29	0.0086	124	100,000	No	Max Detect < All Screening Criteria

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EPA – U.S. Environmental Protection Agency HHCOPC – human health contaminant of potential concern

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Table 7.3. Contaminant Screening of Groundwater Results to Action Levels at Former 724th Tanker Purging Station, Fort Stewart

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<u>Anglute</u>	T Twite:	Frequency of	Minimum	Maximum	EPA Region III	Federal	НН	
Arsenic	ure/L	2/4	2 5		Kusk-Based (A)	MCL (B)	<u>e:</u>]	Justification
Daritur					C+0.0	nc	Yes	Max Detect >= A
Danum	μg/L	4/4	33.9	99.2	260	2,000	°N N	Max Detect < All Screening Criteria
Mercury	µg/Г	3/4	0.2	0.58	1.1	2	٥N	Max Detect < All Screening Criteria
Silver	μg/L	3/4	0.51	4.1	18		°N	Max Detect < All Screening Criteria
Methane	μg/L	4/4	19.1	4,690	I		No	Max Detect < All Screening Criteria
Naphthalene	цg/L	1/4	10.5	10.5	150		°N N	Max Detect < All Screening Criteria
1,1-Dichloroethane	μg/L	4/32	2.1	125	81		Yes	Max Detect ≥=A
1,2-Dichloroethane	μg/L	1/32	7.6	7.6	0.12	5	Yes	Max Detect >= AB
2-Butanone	μg/L	1/32	2.8	2.8	190		°Z V	Max Detect < All Screening Criteria
2-Hexanone	μg/L	2/32	3.2	18.4	1		ů	Max Detect < All Screening Criteria
Acetone	μg/L	13/28	6.7	1,450	370		Yes	Max Detect >= A
Benzene	μg/L	11/32	-	8,090	0.36	5	1	Max Detect >= A
Chloroform	μg/L	2/32	1	1.8	0.15		Yes	Max Detect >= A
Chloromethane	µg∕L	1/32	27.7	27.7	1.4		Yes	Max Detect >= A
Ethylbenzene	μg/L	9/32	1.4	2,870	130	700	Τ	Max Detect >= A
Methylene chloride	μg/L	3/32	1.8	2.2	4.1	5		Max Detect < All Screening Criteria
Toluene	μg/L	5/31	72.6	4,200	75	1,000	Yes	Max Detect >= A
Xylenes, total	7∖8ेत	9/32	1.4	12,100	1200	10,000	Yes	Max Detect >= A

EPA – U.S. Environmental Protection Agency HHCOPC – human health contaminant of potential concern MCL – maximum contaminant level

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		Results >			FPA Revinn		
		Detection	Minimum Maximum	Maximum	Residential	нн	
Analyte	Units	Limit	Detect	Detect	(¥)	COPC?	Inctification
Barium	mg/kg	4/4	2.9	29.2	550	Ŋ	May Detect < All Screening City
Chromium	mg/kg	2/4	4	4.4	30	No.	May Detect / All Same Cilleria
Lead	mg/kg	4/4	1.2	6.6	40	or on	Max Detect > All Screening Criteria
Mercury	mo/ko	1/4	20.0	200	2		Max Detect > All Screening Unteria
0:1				10.0	C.2	No	Max Detect < All Screening Criteria
SUVET	mg/kg	4/4	0.8	2.6	39	No	Max Detect < All Screening Criteria
Methylene chloride	mg/kg	1/4	0.0026	0.0026	85		May Default < All Second of the
Toluene	mg/kg	1/4	0.158	0.158	1.600		May Detect / All Concerning Citlena
Xylenes (total)	mg/kg	1/4	0.0012	0.0012	16,000		Max Detect < All Screening Criteria
Mathylana ahla-ida io a						7	

^aMethylene chloride is a common laboratory contarninant and is not considered related to contaminant releases from the Former 724th TPS. EPA – U.S. Environmental Protection Agency HHCOPC – human health contaminant of potential concern

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7.4.5 Surface Waters

The mercury concentration in the surface water sample collected downstream of the site in Mill Creek exceeded its respective screening concentration (Table 7.5). As previously discussed in Section 6.5. (Contaminant Fate and Transport – Summary and Conclusions), Mill Creek does not receive contaminated groundwater discharge or direct runoff from the site. Mercury was not detected in groundwater at elevated concentrations. Therefore, the source of mercury in Mill Creek is not from the Former 724th TPS.

Cadmium and lead in surface water in the swale exceeded their respective screening values (Table 7-5), based on exceedance of the State of Georgia water quality criteria for freshwater streams. The maximum concentrations of cadmium and lead did not, however, exceed EPA drinking water criteria. The possible dose that an industrial worker may receive from intermittent dermal exposure to surface water would be substantially less than the dose that might be received from drinking water. Therefore, drinking water criteria are considered protective of the industrial worker. Neither cadmium nor lead should be considered as a COPC in surface water in the swale.

7.5 CONCLUSIONS OF THE HUMAN HEALTH PRELIMINARY RISK EVALUATION

Based on the results of the screening and the weight-of-evidence analysis, there are no COPCs in surface soils, subsurface soils, sediment, or surface waters. There are COPCs identified for groundwater.

Cadmium and lead were identified as possible COPCs for surface water in the drainage swale as a result of exceeding State of Georgia water criteria. However, maximum concentrations of these metals did not exceed EPA drinking water criteria. The possible dose an industrial worker may receive from intermittent dermal exposure would be substantially less than from drinking water. Cadmium and lead are therefore not considered human health COPC in surface water in the swale.

In Mill Creek, mercury is a COPC in surface water. However, Mill Creek does not receive contaminated groundwater discharge or direct runoff from the site. Therefore, mercury is not a human health COPC in surface water at the 724th Tanker Purging Station.

The initial COPCs for groundwater were identified because they present a potential threat to human health as a result of using groundwater as a source of drinking water. The initial COPCs for groundwater are acetone, arsenic, 1,1-dichloroethane, 1,2-dichloroethane, chloroform, chloromethane, and BTEX.

It should be noted that given the shallow depth of the surficial aquifer and the presence of the deeper Principal Artesian aquifer, a common source of drinking water throughout the region, the use of the surficial aquifer is not considered to be a viable exposure scenario. However, drinking water screening values were used in the absence of more appropriate values.

In conclusion, there are human health COPCs in groundwater based on using the surficial aquifer as a source of drinking water, which is unlikely. Because concentrations of BTEX exceed their respective MCLs, a CAP should be prepared to address measures to mitigate these COPCs. The CAP should present human health cleanup goals using viable future use scenarios. A Baseline Risk Assessment is, therefore, not warranted.

						The second stand of the second standard standard standard steward		s guignus i	tanon, Fo	rt Stewart
Analyte	Units	Frequency of Detects	Minimum Detect	Maximum Detect	Background Criteria	Water Quality Criterio (A)	<u>ଇ</u> . କ	Federal	НН	
		ľ	Surface Wat	er Former 724	Surface Water Former 724th Tanker Duras Stations David	Continue (A)		MCL(C) COPC?	COPC?	Justification
Arsenic	1/011	2				In Diminous-Dimi	nage Duch			
	7 294	212	1.8	I.8	0.94	50	0.045	SO NA	ſ	May Detect
Cadmium	L/311	1/2	17	5			2	2		INIAX LUCIECT < A
Yand					7-0	0.74	18	<u>v</u>	5 Yes	Max Detect > A
rcau	<u>д и в</u>	2/2	0.46	10.8	5.2	1 30				
Silver	10/1	6/6				j		IJ Y CI		Max Detect > A
	2	1	67.0	5.1	0.3		180		No	Max Detect < R
			Surface W	ater Former	urface Water Former 724th Tanker Purge Stations-Mill Creek	urge Stations-M	ill Creek			2
Mercury	μg/L	1/1	0.4	0.4	0.18	0.0124		10		
						77.22		7	Z Yes	Max Detect > A
, C										

Table 7.5. Contaminant Screening of Surface Water Results to Action Levels at Former 724th Tanker Purging Station, Fort Stewart

^a Georgia Department of Natural Resources Quality Control, Chapter 391-36, for freshwater streams ^b U.S. Environmental Portection Agency (EPA) Region II risk-based criteria for tap water
 ^c EPA action level for drinking water HHCOPC - human health contaminant of potential concern MCL - maximum contaminant level

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7.6 IDENTIFICATION OF REMEDIAL LEVELS

Because there are no human health COPCs for surface soil, subsurface soil, surface water, or sediment, remedial levels were not developed in this section.

Remedial levels for groundwater may include both risk-based concentrations and regulatory levels, such as MCLs. Given that MCLs take into consideration both human health and the limitations of technology to remove contaminants from water, these regulatory levels have been selected for remedial levels for groundwater (Table 7.6). Acetone, 1,1-dichloroethane, and chloromethane did not have MCLs. In the absence of a MCL, the EPA Region III risk-based values for groundwater were used for remedial levels.

The maximum concentration for arsenic is below the Federal MCL, 3.5 μ g/L as compared to a MCL of 50 μ g/L (Table 7.6). Therefore remedial action to reduce the concentration of this contaminant is not required.

Analyte	Units	Maximum Detect	Federal MCL	EPA Region III Risk-Based
Arsenic	μg/L	3.5	50	-
1,1-Dichloroethane	μg/L	125	NA	81
1,2-Dichloroethane	μg/L	7.6	5	-
Acetone	μg/L	1,450	NA	370
Benzene	μg/L	8,090	5	-
Chloroform	μg/L	1.8	0.1	**
Chloromethane	μg/L	27.7	NA	1.4
Ethylbenzene	μg/L	2,870	700	-
Toluene	μg/L	4,200	1,000	-
Xylenes, total	μg/L	12,100	10,000	-

 Table 7.6. Remedial Levels for Chemicals of Concern in Groundwater at

 Former 724th Tanker Purging Station, Fort Stewart

EPA – U.S. Environmental Protection Agency MCL – maximum contaminant level NA – not available

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8.0 ECOLOGICAL RISK ASSESSMENT

The State of Georgia requires that all RCRA facilities choosing to set remediation levels based on an assessment of risk to human health and the environment prepare risk assessment documentation and propose remediation levels according to the *Guidance for Selecting Media Remediation Levels at RCRA Solid Waste Management Units* (GEPD 1996). GEPD (1996) guidance is based on the guidance contained in EPA Region 4 Bulletins, *Supplemental Guidance to RAGS, Ecological Risk Assessment* (EPA 1996a) and a 1994 draft of *Ecological Risk Assessment for Superfund, Process for Designing and Conducting Ecological Risk Assessments* (EPA 1997). The EPA has also proposed guidelines for conducting ecological risk assessments (EPA 1996b). The GEPD guidance document takes precedence over EPA Region 4 guidance and RAGS.

Risk is the likelihood of experiencing adverse effects. Ecological risk assessments identify and evaluate the risk to biota exposed to chemical contaminants and physical and biological hazards. The ecological risk assessment for the Former 724th TPS focuses on evaluating the potential of harmful effects on ecological receptors as a result of exposure to chemicals.

The assessment of risk for ecological receptors at the Former 724th TPS is being conducted in a phased approach according to GEPD guidance (1996). As shown in the flowchart of the GEPD ecological risk assessment process (Figure 8.1), the two phases are:

- Preliminary Risk Evaluation (PRE) and
- Ecological Risk Assessment (ERA).

The PRE compares measured concentrations of SRCs to conservative ecological screening values for one or more ecological receptors. SRCs are identified in Section 7 (Tables 7.1 through 7.5). Only those SRCs that are indicated to be potential hazards in the PRE are evaluated as ecological COPCs in an ERA if one is required. The basic approach to ERAs is similar to that of the PRE, but site-specific data are used to quantify exposure and evaluate effects in the ERA (GEPD 1996). Appropriate site-specific data include concentrations of contaminants in animals and plants (tissue residues) and toxicity tests (EPA 1997). Remediation levels for protection of ecological resources will be developed and proposed only for those COPCs that are identified as ecological COCs in the ERA.

Both terrestrial and aquatic habitats present at the Former 724th TPS are evaluated in this PRE. Media of concern to ecological receptors are surface soil, sediment, and surface water. These media can be contacted directly by ecological receptors, or their presence in these media can result in the accumulation of contaminants in plants and animals, which can cause ecological receptors ingesting biota to be exposed. Groundwater at the Former 724th TPS is also evaluated because it can potentially discharge to sediments, seeps and surface water (EPA 1996a).

8.1 PRELIMINARY RISK EVALUATION

The purpose of the PRE is to identify substances detected at the facility that pose a potential hazard to ecological receptors. Ecological COPCs are those substances that are detected at the Former 724th TPS at concentrations exceeding ecological screening values.



Figure 8.1. General Process for Assessing Risk and Selecting Remedial Levels for Ecological Receptors (GEPD 1996)

According to GEPD (1996), the PRE consists of five steps:

- i. Ecological screening value comparison,
- ii. Preliminary problem formulation,
- iii. Preliminary ecological effects evaluation,
- iv. Preliminary exposure estimate, and
- v. Preliminary risk calculation.

As shown in the flowchart of the GEPD ecological risk assessment process (Figure 8.1), all SRCs are screened as ecological COPCs by comparing the maximum detected concentration to the ecological screening values (ESVs). The PRE compares the maximum detected concentrations of analytes directly to conservative screening values for those substances. This approach assumes that the most sensitive receptors are those that live in direct contact with the medium and are exposed by multiple pathways to contaminants. If no ecological COPCs are identified based on the screening (Step i), then no further evaluation is required. If ecological COPCs are identified based on the screening, then they are evaluated further (Steps ii through v). Because there are no ESVs for surface soil, all SRCs in surface soil at the Former 724th TPS are evaluated further in PRE Steps ii through v.

8.1.1 Ecological Screening Value Comparison (Step i)

ESVs to identify ecological COPCs at the Former 724th TPS are EPA Region 4 screening values for hazardous waste sites. These are given in Tables 8.1 and 8.2. Screening values for analytes without Region 4 ESVs are proposed based on other methods and data obtained from published sources (e.g., Clayton and Clayton 1981) and toxicological data bases (e.g., Hazardous Substances Data Bank, Integrated Risk Information System). Screening values are conservative to prevent elimination of any contaminant that may pose ecological risk (EPA 1997). If no data are available to support the development of an ESV for an analyte, the analyte is an ecological COPC by default (GEPD 1997a).

Chemicals detected in surface water and sediment from two locations at the Former 724th TPS are screened: Mill Creek and the drainage swale. Mill Creek has two sampling stations (Figure 8.2); one is upgradient of the Former 724th TPS (SWS1) and one is 1,000 feet west of the facility (SWS2). These two stations are screened separately. The drainage swale is represented by samples from three stations, SWS3, SWS4, and SWS5 (Figure 8.2). To screen surface water and sediment in the drainage swale at the Former 724th TPS, the maximum detected concentration from these three stations is compared to the ESV.

For surface water and groundwater, EPA Region 4 ESVs are chronic ambient water quality criteria for the protection of aquatic life, such as aquatic plants, invertebrates, and fish, or similarly derived values (EPA 1996a). There are no EPA Region 4 ESVs for 1,1-dichloroethane, and xylenes, so proposed ESVs for these analytes are identified from published data sources. (Suter and Tsao 1994; Clayton and Clayton 1981).

Groundwater concentrations are screened against surface water ESVs per GEPD guidance because (1) there are no groundwater ESVs and (2) shallow groundwater at the site could discharge to the adjacent swale during times of high groundwater stage, so that ecological receptors in the swale could become exposed to contamination in groundwater. As discussed in Section 6.0, none of the constituents from the Former 724th TPS are expected to be of concern in Mill Creek (located 1200 feet from the source) due to retardation and biodegradation.

	Deferre		Mill	Creek	Drainag	ge Swale ^e
Analyte	Reference Background Criterion	ESV (μg/L)	SWS1* (µg/L)	SWS2 (μg/L)	SWS4 (µg/L)	SWS5 (µg/L)
Arsenic	0.94	190*	nd	nd		
Cadmium	0.20	0.66 ^d	nd		nd	1.8 J
Lead	5.20	1.32		nd	nd	1.7
Mercury			2.6	nd	0.46 J	10.8 J
	0.18	0.0123	0.09	0.4	0.18	0.08
Silver	0.30	0.012	0.15	0.24	1.3	0.00

Table 8.1. EPA Region IV Ecological Screening Value Comparison for Analytes Detected Above Background in Surface Water at the Former 724th Tanker Purging Station, Fort Stewart

* Upgradient station.

J = Estimated.

U.S. Environmental Protection Agency (EPA) Region IV Ecological Screening Values (EPA 1996) and, where indicated, ESV = alternative values for analytes without Region IV ESVs.

Station SWS3 had no water at time of sampling. =

Ь = Arsenic III.

c OSWER AWQC or Tier-II value (Suter and Tsao 1996). = đ

= Hardness dependent, assumes 50 mg/L CaCO3.

nd = not detected

Detected concentrations exceeding ESVs are in boldface font.

Table 8.2. EPA Region IV Ecological Screening Value Comparison for Analytes Detected
Above Background in Sediment at the Former 724th Tanker Purging Station, Fort Stewart
a sub-ground in Beament at the Former 724th Tanker Purging Station, Fort Stewart

	Reference		Mill	Creek		Drainage Swale	
Analyte	Background Criteria	ESV (mg/kg)	SWSI* (mg/kg)	SWS2 (mg/kg)	SWS3 (mg/kg)	SWS4 (mg/kg)	SWS5 (mg/kg)
		RC	RA Metals (m	g/kg)			<u>(</u>
Barium	3.00	none	1.5	15.3	29.2	17	2.0
Chromium	0.37	52.3	nđ	nd	4.4	4	2.9
Lead	1.38	30.2	0.69 J	2.6 J	5.9 J		nd
Mercury	0.02	0.13	nd	nd	0.07	<u>6.6 J</u>	1.2 J
Silver	0.17	2	nd	0.8 J		nd	nđ
			ganic Compou		2.6 J	11	0.91J
Methylene chloride	_	0.394	nd	nd nd	0.0026 J		
Toluene		0.87"	nd			nd	nd
Xylenes, total		112.5"		nd	nd	0.158	nd
		112.0	nd	nd	0.0012 J	nd	nď

* Upgradient station.

J. = Estimated.

U.S. Environmental Protection Agency (EPA) Region IV Ecological Screening Values (EPA 1996) and, where indicated, ESV =alternative values for analytes without Region IV ESVs. nd =

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not detected

Detected concentrations exceeding ESVs are in **boldface** font.

= Sediment quality benchmark (SQB) = surface water ESV (mg/l) × f_{cc} × K_{cw} .

= Fraction organic carbon, assumed to be 1%. f_{oc} For calculation of SQBs:

.			
	Kow	Surface water ESV (mg/L)	Source of ESV
Methylene chloride Toluene Xylenes, total	19.95 501.2 1585	1.93 0.175	EPA Region IV screening value EPA Region IV screening value
stylenes, total	1292	7.1	EPA Region IV screening value



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Figure 8.2. Surface Water, Sediment, and Groundwater Sample Locations Evaluated in Preliminary Risk Evaluation for the Former 724th Tanker Purging Station, Fort Stewart For sediment, screening values are based on observations of direct toxicity to aquatic organisms (EPA 1996a). EPA Region 4 ESVs for sediment were not available for barium, methylene chloride, toluene, and xylenes. For the organic compounds, proposed ESVs are sediment quality benchmarks (SQBs) calculated from the K_{ow} of the compound and the EPA Region 4 ESV for surface water, assuming equilibrium partitioning between the sediment and overlying water and a sediment organic carbon fraction of 1 percent per EPA (1993a). No ESV is proposed for barium.

The results of the screening value comparisons for surface water are presented in Table 8.1. In surface water at the upgradient station in Mill Creek (SWS1), lead and mercury were detected at concentrations that exceed the ESVs for surface water. In surface water at the Mill Creek station adjacent to the Former 724th TPS (SWS2), only mercury was detected at concentrations exceeding the ESV. In surface water from the three swale sampling stations (SWS3-SWS5), the maximum detected concentrations of cadmium (1.7 μ g/L), lead (10.8 μ g/L), and silver (1.3 μ g/L) also exceed the ESVs for those analytes. Thus, four chemicals (cadmium, lead, mercury, and silver) exceed surface water ESVs.

The results of the screening value comparisons for sediment at the Former 724th TPS are presented in Table 8.2. In sediment at the upgradient station in Mill Creek (SWS1), barium and lead were detected. There is no ESV for barium. The maximum detected concentration of lead did not exceed the sediment ESV for lead. In sediment from Mill Creek nearest to the Former 724th TPS (SWS2), barium, lead, and silver were detected. The maximum concentrations of lead and silver do not exceed the ESVs. In sediment samples from the drainage swale at the Former 724th TPS (SWS3-SWS5), barium, chromium, lead, mercury, silver, methylene chloride, toluene, and xylenes were detected. Only the concentration of silver at Station SWS3 in the drainage swale (2.6 mg/kg) exceeds the ESV; the sediment ESV for silver is 2 mg/kg. Thus, two chemicals are identified as ecological COPCs: barium by default of no ESV and silver by slight exceedance of the ESV.

Groundwater samples from the five (monitoring well) locations at the Former 724th TPS (Figure 8.2) are screened separately because of their different depths and locations relative to the facility. The results of the ecological screening for chemicals detected in groundwater at the Former 724th TPS are presented in Table 8.3.

At the upgradient monitoring well (MW-1), barium, mercury, silver, and chloromethane concentrations exceed the surface water ESVs. Because MW-1 is upgradient of the site, these contaminants may be indicative of naturally occurring levels of constituents. Where detected in the remaining four monitoring wells (MW-2 through MW-5), barium, mercury, and silver exceed the ESVs for those analytes. Benzene in MW-2 (329 μ g/L) also exceeded its respective ESV of 53 μ g/L. Thus, five chemicals (barium, mercury, silver, benzene, and chloromethane) exceed the ESVs and did not pass the screen. Chloromethane was detected only in MW-1 upgradient of the site and is, therefore, not site-related. Barium, mercury, silver, and benzene in groundwater near the Former 724th TPS (MW-2) are ecological COPCs. Barium and mercury are ecological COPCs in groundwater near Mill Creek (MW-5).

The ecological COPCs in surface water, sediment, and groundwater at the Former 724th TPS (excluding upgradient samples) are summarized in Table 8.4. There are one or more ecological COPCs identified in surface water from both the drainage swale at the Former 724th TPS and from Mill Creek downgradient (SWS2) from the facility. The ecological COPCs in surface water at the Former 724th TPS are cadmium, lead, and silver; the only ecological COPC in surface water in Mill Creek is mercury. There are no ecological COPCs identified in sediment from Mill

	1	ľ		TPS	Facility		Mill Creek
Analyte	Reference Background Criteria	ESV	MW-1"	MW-2	MW-3	MW-4	MW-5
		-	RCRA Meta	ls (ug/L)			
Arsenic	3.0	190*	10.1	3.5 J	2.5J	nđ	nd
Barium	71.7	3.9 ^e	50.7 J	33.9 J	37.4 J	99.2 J	70.2 J
Mercury	0.14	0.0123	0.2	0.2	nđ	0.3	0.58
Silver	1.12	0.012	4.9	0.51	3.3	4.1	nd
		Volatii	le Organic Co	mpounds (µg/L)		
Benzene	-	53	nd	329	nd	nd	nd
Chloroform	_	289	nd	nd	1.8 J	nd	1 J
Chloromethane		5.5	7.1	nđ	nd	nd	nđ
1,1-Dichloroethane	-	47°	nd	nd	2.2	nd	nd
1,2-Dichloroethane	-	2000	nd	7.6	nð	nd	nd
Ethylbenzene		453	nd	62.3	nd	nd	nd
Methane	—	No ESV	53.7	4690	19.1	214	248
Methylene chloride	-	1920	2.1	nd	2.2	1.9 J	1.8 J
Naphthalene	-	62	nd	10.5	nd	nđ	nd
Toluene	-	175	nd	72.6	nd	nd	nď
Xylenes, total	-	7100 ^d	nd	296 J	nd	nd	nd

Table 8.3. EPA Region IV Ecological Screening Value Comparison for Analytes Detected Above Background in Groundwater at the Former 724th Tanker Purging Station, Fort Stewart

J = Estimated concentration.

ESV = U.S. Environmental Protection Agency (EPA) Region IV Ecological Screening Values (EPA 1996) and where indicated alternative values for analytes without Region IV ESVs.

nd = not detected

- = no value

Detected concentrations exceeding ESVs are in boldface font.

MW-1 is upgradient monitoring well.

b = Arsenic III.f = Office of Sol

- = Office of Solid Waste and Emergency Response ambient water quality criteria or Tier-II value (Suter and Tsao 1996).
- ^d = LC₀ salmonid (Clayton and Clayton 1981).

Table 8.4. Summary of Ecological COPCs Identified in EPA Region IV Ecological Screening Value Comparison for Surface Water, Sediment, and Groundwater at the Former 724th Tanker Purging Station, Fort Stewart

	Surfa	ce water	Sed	iment	Ground	water
	Drainage swale	Mill Creek*	Drainage swale	Mill Creek*	TPS facility*	Mill Creek
Concentration exceeds ESV	Cadmium Lead Silver	Mercury	Silver		Barium Mercury Silver Benzene	Barium Mercury
No ESV			Barium	Barium	Methane	Methane

*Excludes upgradient sample.

Creek based on comparison to ESVs. Silver is the only ecological COPC identified for sediment in the drainage swale at the Former 724th TPS. Barium may be an ecological COPC in sediment at the Former 724th TPS by default because there is no ESV for barium. Barium, mercury, silver, benzene, and chloromethane are identified as ecological COPCs in groundwater at one or more sampling stations at the Former 724th TPS. Thus, a number of ecological COPCs require further examination in PRE Steps ii through v.

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A preliminary problem formulation (Step ii), preliminary ecological effects evaluation (Step iii), preliminary exposure estimate (Step iv), and preliminary risk calculation (Step v) are conducted for those detected analytes identified in the PRE screening (Step i) as ecological COPCs and for SRCs in surface soil and surface water in the man-made drainage swale at the Former 724th TPS. These four steps go beyond the ecological screening value comparison to evaluate the potential for risk from ecological COPCs to categories of receptors potentially occurring at the facility.

8.1.2 Preliminary Problem Formulation (Step ii)

The preliminary problem formulation (Step ii) qualitatively identifies categories of potential ecological receptors and the SRCs that may pose a risk to those receptors in the environmental setting of the Former 724th TPS. Preliminary assessment endpoints, ecological receptors, and surrogate species representative of ecological receptors are selected for evaluation in the preliminary risk calculation.

GEPD (1996) specifies that the PRE develop "risk characterization for a model ecological receptor." Developing risk characterization for multiple ecological receptors, e.g., mammals and birds, is allowable for sites where more than one type of potentially hazardous chemical is detected (GEPD 1997a). Characterizing the risk to multiple receptors, where each is more sensitive to one or more chemical contaminant, can make the PRE more protective of ecological resources. The risk characterization for surface soil and surface water in Mill Creek at the Former 724th TPS considers both mammals and birds as ecological receptors. The risk characterization for water in the man-made swale at the Former 724th TPS considers only terrestrial mammals.

Environmental Setting

The Former 724th TPS is located on the northwestern edge of the base motor pool system and is bordered by forest to the north, south, and west. East of this facility are paved surfaces, manmade structures, and additional motor pools. The motor pool facility and truck parking area are surrounded by a standard sized chain-link fence. Surface water features are present in the form of standing pools in swales, wetlands, and Mill Creek, approximately 1,200 feet west of the facility (Figure 8.2).

The terrestrial habitat in the vicinity of the Former 724th TPS consists primarily of palmetto-pine flatwoods forest. Loblolly pine (*Pinus taeda*) and long-leaf pine (*P. palustris*) comprise the forest canopy. The understory is thick with saw-palmetto (*Serenoa repens*) and is managed by controlled burning, as evidenced by the presence of fire breaks at the forest edges and burn marks on the mature trees. A stand of mature hardwoods is located at the western edge of the forest along Mill Creek.

A man-made swale parallels the forest edge on the western side of the Former 724 TPS facility. This swale is located within 5 to 10 feet of the forest edge and is at the base of the fill material that the facility is constructed upon (Figure 8.2). At the time of the investigation, the southernmost end of the swale contained a pool of standing water approximately 35 square feet. Wetland macrophytes bordered the edges of the pool, and various species of frogs (*Rana spp.*) and the southern toad (*Bufo terrestris*) were present in multiple life stages. There was evidence of petroleum contamination in the swale when sediment samples were collected; sampling personnel noted petroleum staining and strong odor in the sediment below 3 inches in depth.

A wetland area is located along the south end of the fence, within the forest (Figure 8.2). This feature was observed from the trail that borders the facility and was not thoroughly investigated. Aquatic macrophytes and hydric soils were observed. This wetland area was considerably larger than the pool previously described, but has not been delineated. Although technically classified as a wetland (i.e., soil borings conducted by licensed USACE personnel) the area adjacent to the Former 724th TPS has not been known to hold standing water.

Additional surface water features include Mill Creek and a ditch that drains into Mill Creek located beyond the forest approximately 900 feet to the south of the Former 724th TPS Facility (Figure 8.2). This ditch was approximately 3 feet wide at its base and 6 to 8 feet deep and contained no flowing water during the investigation. A few small pools of standing water were observed, and crayfish holes were present in the steep banks.

Mill Creek is the only lotic surface water feature associated with the Former 724th TPS facility. The creek bottom is smooth and sandy, and sediments are orange-red in color. The creek is approximately 15 feet wide at its base and has steeply banked sides. Shoreline development is minimal due to the steep banks, and aquatic vegetation is scarce. Primary vegetation are managed grasses which cover the banks and the flat to the tree line on either side of the creek. Approximately 50 feet separate the forest from the creek bank on either side. Minnows were abundant in Mill Creek as were the southern toad (*B. terrestris*) along its edges. There was no evidence that surface water from the Former 724th TPS facility drained into Mill Creek. No swales were present that linked the Former 724th TPS facility to any flowing body of water.

In addition to the aquatic and herpetofauna described above, numerous mammals and birds were noted by SAIC field personnel in the vicinity of the Former 724th TPS either through observation, hearing a call, or seeing scat or tracks. The red-headed woodpecker (Melanerpes eryhrocephalus) and the turkey vulture (Cathartes aura) were observed in the area on numerous occasions. Scat or tracks of white-tailed deer (Odocoileus virginianus), armadillo (Dasypus novemcinctus), and raccoon (Procyon lotor) were noted by SAIC field personnel.

Surface Soil at Former 724th TPS

The PRE for surface soil (0 to 2 feet) at the Former 724th TPS evaluates the potential for risk to ecological receptors from ecological COPCs detected at soil sampling locations near the actual Former 724th TPS facility: sampling locations MW-1, MW-2, and MW-4 (Figure 8.2). Soil samples from the Mill Creek monitoring well location (MW-5) are discussed below along with surface water, sediment, and groundwater sampled in or near Mill Creek.

The categories of ecological receptors that are potentially directly exposed to substances in surface soil at the Former 724th TPS are soil bacteria and fungi, vegetation, and animals that come in direct contact with or ingest soil, e.g., soil-dwelling invertebrates. Other categories of receptors are potentially exposed indirectly to soil contaminants that are taken up and stored in the cells or tissues of those organisms directly exposed. Herbivorous invertebrates (e.g., insects)

and vertebrates (e.g., birds and mammals) are potentially indirectly exposed when they ingest vegetation growing in contaminated soil. Carnivorous animals are potentially exposed when they ingest animals that are directly or indirectly exposed to contaminated soil such as soil-dwelling invertebrates (e.g., earthworms).

Seven chemicals were detected above background in surface soil samples from near the Former 724th TPS: two RCRA metals and five VOCs. Based on the greater amount of published data on the effects of these eight substances on vertebrate wildlife, mammals and birds in particular. The proposed ecological receptors for surface soil at the Former 724th TPS are carnivorous small mammals and birds that prey upon soil-dwelling invertebrates.

The preliminary assessment endpoint for surface soil at the Former 724th TPS is protection of small mammals and bird populations from adverse effects. The surrogate species to represent the ecological receptors are the short-tailed shrew (*Blarina brevicauda*) and the American robin (*Turdus migratorius*). The home range of the shrew is small, and robins are territorial during the spring mating season. Earthworms and other soil-dwelling invertebrates potentially represent a large percentage of both species' diets. The life history and behavior of these two species ensure a conservative estimate of risk.

Surface Water, Sediment, and Groundwater at the Drainage Swale

The PRE for the drainage swale at the Former 724th TPS evaluates the potential for risk to ecological receptors from exposure to surface water sampled from the drainage swale and groundwater which potentially emerges as surface water in the drainage swale. For both surface water and groundwater, the same ecological receptor and surrogate specie are used to evaluate the potential risk over the same exposure pathway.

Groundwater from four sampling locations at the Former 724th TPS (MW-1, MW-2, MW-3 and MW-4) is evaluated as a potential source of surface water in the swale. Groundwater from sampling location MW-4 was collected from a depth of 35 feet and is unlikely to be transported up into the drainage swale because the available data indicate the direction of movement is strongly downward (Section 6.0). Groundwater from the Mill Creek sampling location (MW-5) is not evaluated as a source of surface water in the drainage swale because it is distant and downgradient from the swale. The groundwater sampling location (MW-5) is evaluated as part of Mill Creek.

Sediment in the drainage swale is not evaluated further in the PRE because the swale does not support a community of aquatic sediment-dwelling organisms. The swale is an ephemeral surface water body, as shown by the lack of water at sampling station SWS3 at the time of sampling. Exposure of other types of receptors, e.g., terrestrial animals, to substances in swale sediment by direct contact and ingestion is likely to be minimal.

The ecological receptors that are potentially directly exposed to substances in surface water in the drainage swale at the Former 724th TPS are terrestrial animals that come in direct contact with or ingest surface water in the swale. The drainage swale does not always have water in it and does not support a typical aquatic biota community. Amphibians potentially use the swale for breeding during the Spring when the swale is more likely to hold water, but are not ecological receptors for the PRE. Fort Stewart does not consider the man-made drainage swale to be significant to amphibians as a potential breeding habitat because higher quality breeding habitats are abundant in the areas surrounding the Former 724th TPS. Other terrestrial animals potentially use the swale as a watering hole when there is water in the swale. Because the swale does not support an aquatic community throughout the year, terrestrial predators of aquatic biota, such as piscivorous birds and mammals, are also unlikely to be indirectly exposed intermittently to contaminants in surface water in the swale through ingestion of aquatic prey. Therefore, only terrestrial mammals ingesting water in the drainage swale are ecological receptors for the PRE.

Four metals detected in surface water samples from the drainage swale at the Former 724th TPS are ecological COPCs: cadmium, lead, mercury, and silver. Barium, mercury, silver, benzene, and chloromethane are COPCs in groundwater at the three shallow upgradient monitoring well locations: MW-1, MW-2, and MW-3. Based on the ecological COPCs, the habitat, and potential exposure pathways at the drainage swale, the proposed ecological receptors for surface water and groundwater are terrestrial mammals. Thus, the preliminary assessment endpoint for surface water in the drainage swale at the Former 724th TPS is protection of terrestrial mammal populations from adverse effects.

The surrogate species to represent the generic ecological receptor is the raccoon (*Procyon lotor*). The raccoon is common to the coastal plain in Georgia. Raccoons drink water from shallow surface water bodies, and ingest more water per unit body weight than do larger mammals such as the white-tailed deer (*Odocoileus virginianus*); 0.082 g/g/d (EPA 1993) vs. 0.065 g/g/d (Sample and Suter 1994). Thus, the life history and behavior of the raccoon ensure a conservative estimate of risk.

Soil, Surface Water, Sediment, and Groundwater at Mill Creek

The potential for risk to ecological receptors from exposure to surface soil, surface water, sediment, and groundwater in or near Mill Creek is evaluated further in the PRE for the Former 724th TPS. There is some question as to the source of contamination at Mill Creek sampling stations and the existence of migration pathways from the Former 724th TPS to Mill Creek (Section 6.0). No evidence of any mechanism or pathway by which to transport contaminated surface soil, surface water, sediment, or groundwater from the Former 724th TPS to Mill Creek was observed during the field sampling in support of the PRE. The site hydrological data indicate that groundwater transport from the Former 724th TPS to Mill Creek is unlikely for inorganics (Section 6.0). Furthermore, the drainage swale is a physical barrier to the transport of soil by overland flow from the Former 724th TPS to Mill Creek.

Barium, mercury, and three SVOCs are the SRCs in surface soil at Mill Creek (MW-5). Based on the ecological COPCs, the habitat, and the potential exposure pathways at Mill Creek, the proposed ecological receptors for surface soil are carnivorous small mammals and birds that prey upon soil-dwelling invertebrates. The ecological COPC in surface water in Mill Creek (SWS2) is mercury and those in surface water at the upgradient location (SWS1) are lead and mercury. Barium is the only ecological COPC in Mill Creek sediment. The ecological COPCs in groundwater from the MW-5 sampling location near Mill Creek are barium and mercury. The proposed ecological receptors for surface water and groundwater are aquatic biota, terrestrial mammals ingesting surface water, and terrestrial fish-eating mammals and birds.

The preliminary assessment endpoint for soil at Mill Creek is protection of small mammals and bird populations from adverse effects. The surrogate species to represent the ecological receptors are the short-tailed shrew and the American robin. The preliminary assessment endpoints for surface water from Mill Creek are protection of aquatic biota, protection of terrestrial mammal populations from adverse effects of drinking surface water, and protection of fish-eating mammals and bird populations from adverse effects from ingesting fish and other aquatic biota. The surrogate species to represent the ecological receptors are the raccoon (*Procyon lotor*), the mink (*Mustela vison*), and the green heron (*Butorides striatus*).

These species are potentially found at Fort Stewart (GEPD 1997b) and potentially use Mill Creek as a source of nourishment. Mink and herons ingest fish and other aquatic biota living in streams. Mink are particularly vulnerable to mercury in aquatic systems because of the potential for mercury to occur as methyl mercury, which bioaccumulates greatly in fish tissue. Thus, the life history and behavior of these species ensure a conservative estimate of risk per EPA (1997) guidance.

8.1.3 Preliminary Effects Evaluation (Step iii)

The preliminary ecological effects evaluation (Step iii) identifies TRVs for use in the preliminary risk calculation. TRVs are derived from no observed adverse effect levels (NOAELs) from laboratory toxicity studies on test species. In the PRE for the Former 724th TPS, TRVs are required for shrews and robins ingesting contaminated biota exposed to soils near the facility, raccoons ingesting contaminated water from the drainage swale and Mill Creek, and fish-eating mammals and birds ingesting contaminated biota exposed to surface water in Mill Creek.

For all receptors in the PRE for the Former 724th TPS, which are exposed directly or indirectly by ingestion, TRVs are expressed as threshold concentrations of the contaminant in the abiotic medium (i.e., soil or water). The TRVs for water and soil are calculated from dietary concentrations corresponding to the NOAEL doses (Tables 8.5 and 8.6, respectively). Dietary and drinking water limit concentrations (mg/kg for solids, μ g/L for liquids) are calculated from the NOAELs (mg/kg/d) by multiplying by the body weight (kg) and dividing by the ingestion rate (kg/d for solids, L/d for liquids) and converting from mg to μ g where necessary. That is,

dietary limit = NOAEL × body weight/ingestion rate.

For shrews and robins, which are exposed indirectly by ingestion of biota, the maximum detected soil concentration is compared to the threshold soil concentration (i.e., the TRV), which is calculated as the dietary concentration associated with the NOAEL dose divided by the unitless bioaccumulation factor (BAF) for the contaminant in the tissue of the ingested soil-dwelling biota. That is,

TRV (mg/kg) = dietary limit (mg/kg)/BAF.

For raccoons, which are exposed directly to COPCs in surface water, the maximum detected concentration in surface water is compared to the TRV calculated as the dietary concentration for ingested water. That is,

TRV (μ g/L) = drinking water limit (μ g/L).

Table 8.5. Derivation of Toxicity Reference Values for Ecological COPCs in Surface Water and Groundwater at the Former 724th Tanker Purging Station, Fort Stewart

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		NO/ (mg/kg	NOAEL g/kg BW/d)		Raccoon	Dietarv limit (mo/ka)	nit (ma/ka)		F,	TRV
					•					<u> (1)</u>
Analyte	Red fox	Raccoon	Mink	Urear blue heron	drinking water limit (ue/L) ^b	Minke	Green heron ^d	Fish Pore	Mint	Green
				X	RCR4 Mente		101211	54	MIINK	neron
Cadmium	0.500	0 614	120							
	2222	+10-0	V. /4	1.45	6422	5.42	7.6	50	108	151
Lead	4.22	4.26	6.15	1.13	52 247	0 11	6.0		0.71	121
Maranuf						Ì	<i>v.</i> c	00£	000	19.6
INTELCED &	0.09	0./0	0.02	0.01	8706	0.11	0.03	63 000	0.0017	0.000
Silver	1	ł	1	1				22,220	/ 100.0	0000
							1	7	1	I
				Volatile (Volatile Urganic Compounds	ds ds				
Benzene	7.50	7.58	11	1	253 40	1 08		~ ~ ~	2020	
Chloromethane						1.20	1	25	2003	ı
	- -	1	1	1	1	I	I	ł	1	1
										1

NOAEL = No observed adverse effect level from NOAELs for test species (Sample et al. 1996) unless otherwise noted. BW = Body weight. ²Raccoon NOAEL = Red Fox NOAEL × (BW_{fox}/BW_{necon})^{0.25}, where BW_{fox} = 4.5 kg., and BW_{necon} = 4.31 kg. ^bDrinking water limit = Raccoon NOAEL × 1000 (µg/mg) × BW (kg)/water ingestion rate (L/d). See Table 8.7. for BW and water ingestion rate.

^cSample ct al. (1996). ^dDietary limit = NOAEL × BW/food ingestion rate, where green heron NOAEL = great blue heron NOAEL (Sample et al. 1996). See Table 8.7. for BW and water ingestion rate.

Assumed to be methyl mercury for mink and green heron.

TRV = toxicity reference value = dictary limit × 1000 (µg/mg)/BCFtat. *Fish BCFs from HAZWRAP (1994). - = No toxicity information.

	NOA			y limit ^{a,b}			
	(mg/kg l		(mg/kg	g BW/d)	Earthworm	TRV (r	ng/kg)
Analyte	Mammal	Bird	Shrew	Robin	BAF*	Shrew	Robin
	-		RCRA Me	tals			
Chromium	2737	1	10025	0.83	0.16	62656	5.2
Mercury	1.0	0.45	4.8	0.37	0.34	14.1	1.09
		Volatile	Organic (Compound	5		
Acetone	10	_	36.6		0.05	732	
Benzene	26.4	-	52.2	-	0.05	1044	
Ethylbenzene	_		_		0.05	8.4°	
Toluene	26	_	51.5		0.05	1030	
Xylenes, total	2.1	-	4.2	-	0.05	84	
	S	emivolati	le Organic	Compoun			
Benzo(a)pyrene	1.0	-	1.98	_]	0.05	39.6	
Benzo(b)flouranthene	_	-	_	+	0.05	3.96 ^d	
Styrene	-	_	-	-	0.05	3.964	

Table 8.6. Derivation of Toxicity Reference Values for Ecological COPCs in Soil at the Former 724th Tanker Purging Station, Fort Stewart

"NOAELs for test species used to derive NOAELs and dietary limits for shrew and robin (Sample et al. (1996).

^bDietary limit = NOAEL × BW (kg)/food ingestion rate (kg/d); see Table 8.7 for BW and ingestion rate; NOAELs are for shrew and robin (Sample et al. 1996). TRV = Touisiton for shrew and robin (Sample et al. 1996).

TRV = Toxicity reference value = dietary limit/BAF_{earthworm}

Earthworm BAFs from HAZWRAP (1994).

- = No data to derive TRV.

TRV for ethylbenzene cannot be derived, proposed TRV = 1/10 TRV for xylenes.

TRV for benzo(b) flouranthene and styrene cannot be derived, proposed TRV = 1/10 TRV for benzo(a) pyrene.

For mink and green herons, which are also exposed indirectly by ingestion of biota, the maximum detected surface water concentration is compared to the threshold water concentration (i.e., the TRV), which is calculated as the dietary concentration associated with the NOAEL dose divided by the bioconcentration factor (BCF) for the contaminant in the tissue of the ingested aquatic biota. That is,

TRV (μ g/L) = [1000 (μ g/mg) × dietary limit (mg/kg)]/BCF(L/kg).

This approach allows direct comparison of measured concentrations of COPCs in the abiotic media against the abiotic media concentration assumed to be protective of the ecological receptor. If a NOAEL is not available for a contaminant, the TRV associated with the lowest observed adverse effect level (LOAEL) divided by a conservative uncertainty factor of 10 (LOAEL/10) will be used as the NOAEL (EPA 1996a).

If toxicity data are not available for the surrogate species, data for a test species of the same taxonomic class is sometimes used, i.e., mammal test species data will be used for mammal surrogate species, and bird test species data will be used for bird surrogate species. The NOAEL for the test species is adjusted for the body weight of the surrogate species to derive the NOAEL for the surrogate species. NOAELs for test species based on daily dose (mg/kg body weight/day) are adjusted to surrogate species, according to the following equation:

surrogate species NOAEL = test species NOAEL $\times (bw_{us}/bw_{ss})^2$,

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where bw_{ss} and bw_{ss} are the body weights (kg) of the test species and surrogate species, respectively, and z = 0.25 for mammals and z = 0 for birds (Sample et al. 1996). For example, the published NOAEL for a COPC might be based on data for a 0.35 kg rat. The NOAEL for a 0.022 kg field mouse would be nearly two times larger than the rat NOAEL. NOAELs for shrews, robin, mink, and great blue heron are derived from test species data published in Sample et al. (1996). NOAELs for the raccoon are derived in Table 8.5 from the NOAEL for the red fox reported in Sample et al. (1996).

The TRVs derived for raccoons, mink, and green heron exposed to COPCs in surface water or groundwater are presented in Table 8.5. The TRVs derived for shrews and robins for COPCs detected in soil at Former 724th TPS are presented in Table 8.6. TRVs cannot be derived for ethylbenzene; a TRV is proposed for the shrew that is one tenth the TRV for xylenes, a similar BTEX compound. Similarly, TRVs cannot be derived for benzo(b)flouranthene or styrene; a TRV is proposed for the shrew that is one tenth the TRV for benzo(a)pyrene, a similar PAH compound.

The EPA Region 4 ESVs for surface water used to identify ecological COPCs for surface water and groundwater at the Former 724th TPS are considered to be protective of aquatic life. Therefore, the preliminary risk calculations for aquatic biota exposed to surface water (and groundwater) in Mill Creek at the Former 724th TPS are not required.

8.1.4 Preliminary Exposure Estimate (Step iv)

The preliminary exposure estimate (Step iv) evaluates the potential pathways of exposure appropriate to the preliminary assessment endpoints and ecological receptors at the Former 724th TPS. For receptors likely exposed by ingestion of contaminated surface soil, surface water, sediment, or biota, exposure factors are selected.

The exposures of surrogate species are estimated using conservative assumptions. It is assumed that the receptors spend their entire lives and obtain 100 percent of their diet or drinking water at the facility, i.e., the Area Use Factor (AUF) equals 1. Shrews and robins are assumed to eat only soil-dwelling invertebrates such as worms that bioaccumulate contaminants from soil, in accordance with EPA Region 4 requirements that the screen be based on exposure through two trophic transfers (EPA 1997). Raccoons are assumed to drink water only from the drainage swale at the Former 724th TPS. Contaminants are assumed to bioaccumulate in the soil-dwelling invertebrate prey of ecological receptors at levels equal to published BAFs for earthworms and other invertebrates (e.g., HAZWRAP 1994). The exposure parameters for shrews and robins exposed to COPCs in soil and for raccoons, mink, and green herons exposed to COPCs in surface water or groundwater are presented in Table 8.7.

The concentration of ecological COPCs to which endpoint receptors at the Former 724th TPS are directly or indirectly exposed are estimated by the maximum detected concentration per EPA (1996a) guidance.

8.1.5 Preliminary Risk Calculation (Step v)

The preliminary risk calculation (Step v) calculates hazard quotients (HQs) as the ratio of the measured maximum concentration and the TRV. The HQs of ecological COPCs with consistent modes of toxicity and effects endpoints are added to produce an HI. An HI greater than 1 for a category of COPCs is a useful indicator of potential risk when no individual COPC in that

Table 8.7. Exposure Parameters for Surrogate Species Exposed to Ecological COPCs in Soil, Surface Water, or Groundwater at the Former 724th Tanker Purging Station, Fort Stewart

			Surrogate Species		
Parameter	Shrew	Robin	Raccoon	Mink	Green Heron
Body weight (kg)	0.015*	0.077*	4.31°	1*	0.25*
Food ingestion rate (kg/d)	0.009*	0.093*	-	0.137*	0.048 ^b
Water ingestion rate (L/d)	-		0.345*	-	-
AUF	1	1	1	1 1	1
Bioavailability Diet	100 percent 100 percent	100 percent 100 percent	100 percent	100 percent 100 percent	100 percent 100 percent
Source medium	earthworm Surface soil	earthworm Surface soil	Surface water Groundwater	fish Surface water in Mill Creek	fish Surface water in Mill Creek

*Sample et al. (1996); Table B.1.

* EPA (1993b); value of 0.08 L/kg/d converted to L/d by multiplying by raccoon body weight.

^b U.S. Environmental Protection Agency (EPA) Region 4 Supplemental Guidance to RAGS (EPA 1996).

- = Not required for preliminary risk calculation.

AUF = Area Use Factor.

category has an HQ greater than 1. An HI assumes that the effect of the individual COPCs in the category are additive.

Because of uncertainties in quantifying exposure and effects, the exposure and effects assessments for the Former 724th TPS are designed to produce HQs that minimize the probability of falsely concluding that there is no risk when in fact there is. Therefore, ecological COPCs with HQs and HIs less than 1.0 indicate little to no likelihood of risk to the ecological receptors.

Surface Soil at the Former 724th TPS

The preliminary risk calculations for shrews and robins exposed to ecological COPCs detected in soil at the Former 724th TPS are presented in Table 8.8. This table shows the maximum detected concentrations in each soil sample and the TRVs for shrews and robins. The HQs are the simple ratio of the measured concentration and the TRV. Concentrations resulting in HQs exceeding 1.0 are shown in boldface font.

Chromium in surface soil at the Former 724th TPS is present in one surface soil sample (MW-2) at concentrations exceeding the TRV for the robin (Table 8.8). No organic COPCs in surface soil exceed TRVs for the shrew.

An HI can be calculated for the shrew using the five VOCs detected in surface soil at MW-2, assuming that they have similar mechanisms of toxicity on small mammals. The HI for acetone, benzene, ethylbenzene, toluene, and xylenes (total) is 0.00324. Because the HI is less than 1, these VOCs in surface soil at the Former 724th TPS are not ecological COPCs for populations of small mammals ingesting earthworms and other soil-dwelling invertebrates.

Thus, chromium is the only COPC with an HQ exceeding 1 for the ecological receptors exposed to surface soil at the Former 724th TPS.

	TRV		Detected Concentration					
Analyte	Shrew	Robin	*MW-1	MW-2	MW-4	MW-5		
		RCR	A Metals (mg/k	g)				
Chromium	626.56	5.2	nd	6.3	3.9	1.7		
Mercury	14.1	1.1	nd	nd	0.06	0.05		
		Volatile Org	anic Compound	s (mg/kg)				
Acetone	732	-	nd	0.0266 J	nd	nd		
Benzene	1,044	_	nd	0.0014 J	nd	nd		
Ethylbenzene	8.4ª	_	nd	0.0229	nd	nd		
Toluene	1,030	-	nd	0.0196	nd	nd		
Xylenes, total	84	-	nd	0.141 J	nd	nd		
	Se	mivolatile Or	rganic Compour	nds (mg/kg)				
Benzo(a)pyrene	39.6	-	nđ	nd	nd	0.0061 J		
Benzo(b)flouranthene	3.96 ^b	_	nd	nd	nd	0.0078		
Styrene	3.96		nd	nd	nd	0.0018 J		

Table 8.8. Preliminary Risk Evaluation of Ecological COPCs in Surface Soil at the Former 724th Tanker Purging Station, Fort Stewart

MW-1 is upgradient monitoring well location and background surface soil sample.

J = Estimated concentration.

- = No data to derive TRV.

TRV = Toxicity reference value = (NOAEL × BW/food ingestion rate)/BAF_{earthworm} (see Table 8.6).

nd = not detected

Boldface font indicates detected concentration exceeds TRV (HQ >1).

HQ = Maximum concentration/TRV, if detected concentration exceeds TRV, HQ >1.

^a TRV for ethylbenzene cannot be derived; proposed TRV = 1/10 TRV for xylenes.

^b TRV for benzo(b)flouranthene and styrene cannot be derived; proposed TRV = 1/10 TRV for benzo(a)pyrene.

Surface Water and Groundwater at the Drainage Swale

The preliminary risk calculations for raccoons exposed to ecological COPCs detected in surface water in the drainage swale and groundwater at the Former 724th TPS are presented in Tables 8.9 and 8.10, respectively. These tables show the maximum detected concentrations in each sample and the drinking water TRVs for raccoons. The HQs are the simple ratio of the measured concentration and the TRV. Concentrations resulting in HQs exceeding 1.0 are shown in boldface font.

	Raccoon		Surface Water ^a	
Analyte	Drinking water TRV ^a	SWS4	SWS5	Maximum
	7	RCRA Metals (µg/L)		
Cadmium	6,422	nd	1.7	1.7
Lead	53,247	0.46 J	10.8 J	10.8 J
Silver	-	1.3	0.29	1.3

Table 8.9. Preliminary Risk Evaluation for Ecological COPCs Detected in Surface Water in Drainage Swale at the Former 724th Tanker Purging Station, Fort Stewart

* Station SWS3 in drainage swale had no water at time of sampling.

J = estimated

^b See Table 8.4 for derivation of TRV for drinking water pathway.

Assumed to be mercuric chloride.

nd = not detected - = no TRV

Detected concentrations exceeding TRVs are in boldface font.

	Raccoon TPS Facility										
Analyte	TRV	MW-1*	MW-2	MW-3	MW-4	MW-5					
		RCRA	Metals (µg/L)								
Barium	35,330	50.7 J	33.9 J	37.4 J	99.2 J	70.2 J					
Mercury ^a	8,706	0.2	0.2	nđ	0.3	0.58					
Silver	_	4.9	0.51	3.3	4.1	nd					
		Volatile Organ	ic Compound	/s (μg/L)							
Benzene	94,633	nđ	329	nd	nd	nd					
Chloromethane		7.1	nd	nd	nd	nd					

Table 8.10. Preliminary Risk Evaluation for Ecological COPCs in Groundwater at the Former 724th Tanker Purging Station, Fort Stewart

*MW-1 is upgradient monitoring well.

J = Estimated concentrated.

TRV = Toxicity reference values (see Table 8.5).

^aAssumed to be mercuric chloride

- = no TRV

Detected concentrations exceeding the TRV are in boldface font.

No ecological COPCs are present in surface water sampled from the drainage swale at the Former 724th TPS at concentrations exceeding the TRV for the raccoon. No ecological COPCs are present in groundwater sampled from monitoring wells MW-2, MW-3, and MW-4 near the Former 724th TPS facility at concentrations exceeding the TRV for the raccoon. There is no drinking water TRV for raccoons for silver, so silver is an ecological COPC by default. An HI is not calculated for surface water and groundwater because the ecological COPCs with TRVs have dissimilar mechanisms of toxicity.

Thus, there are no HQs exceeding 1 for the ecological receptors exposed to ecological COPCs in surface water and groundwater at the drainage swale at the Former 724th TPS.

Surface Soil, Surface Water, Sediment, and Groundwater at Mill Creek

The preliminary risk calculations for shrews and robins exposed to ecological COPCs detected in surface soil at the Mill Creek sampling station (MW-5) are presented in Table 8.8 under column "MW-5". This table shows the maximum detected concentrations in each surface soil sample and the TRVs for shrews and robins. The HQ is the ratio of the measured concentration and the TRV. Concentrations resulting in HQs exceeding 1.0 are shown in boldface font.

No constituent was detected in surface soil at Mill Creek (MW-5) at concentrations exceeding the TRVs. An HI is not calculated for metals in surface soil because metals have dissimilar mechanisms of toxicity.

The preliminary risk calculations for raccoons, mink, and green herons exposed to ecological COPCs detected in groundwater (MW-5) and surface water in Mill Creek (SWS2) are presented in Tables 8.10 and 8.11. These tables show the detected concentrations in each sample, the drinking water TRVs for raccoons, and the dietary TRVs for the mink and green heron. The HQ is the ratio of the measured concentration and the TRV. Detected concentrations exceeding a TRV for any ecological receptor and thereby resulting in HQs exceeding 1.0 are shown in boldface font.

in Mill Creek at the Former 724th Tanker Purging Station, Fort Stewart TRV^a Mill Creek Raccoon Mink Green heron SWS1* SWS2

Table 8.11. Preliminary Risk Evaluation for Ecological COPCs in Surface Water

			Mill Creek		
Analyte	Raccoon (µg/L) ^b	Mink (µg/L)	Green heron (µg/L)	SWS1* (μg/L)	SWS2 (µg/L)
Lead	53,247	150	19.6	2.6	nd
Mercury	8706	0.0017	0.0005	0.09	0.4

*Upgradient background station.

J = Estimated

TRV = Toxicity reference values.

nd = not detected

" See Table 8.4 for derivation of TRVs.

^b TRV for drinking water pathway only.

Assumed to be methylmercury for mink and green heron, mercuric chloride for raccoon

Detected concentrations exceeding a TRV for any ecological receptor (HQ >1) are in boldface type.

The concentrations of ecological COPCs in groundwater from the Mill Creek sampling station (MW-5) – barium and mercury – are shown in Table 8.10. Neither barium nor mercury exceed the drinking water TRVs for raccoons. An HI is not calculated for the ecological COPCs in groundwater because metals have dissimilar mechanisms of toxicity.

An HI can be calculated for the shrew using the three SVOCs detected in surface soil at MW-5, assuming they have similar mechanisms of toxicity on small mammals. The HI for benzo(a)pyrene, benzo(b)flouranthene, and styrene is 0.0027. Because the HI is much less than 1, these SVOCs in surface soil near Mill Creek are not ecological COPCs for small mammals. Thus, there are no ecological COPCs in surface soil at Mill Creek.

The concentrations of mercury in surface water at both the upgradient background (SWS1) and downgradient (SWS2) sampling stations in Mill Creek exceed the TRVs for mink and green herons. The exceedances are based on these surrogate species being exposed to methylmercury bioaccumulated in the tissue of fish exposed to the measured concentration of mercury from Mill Creek, assuming all mercury is dissolved methylmercury. Lead in surface water at the upgradient station (SWS1) does not exceed the TRV. No COPCs exceed the drinking water TRVs for raccoons. An HI is not calculated for the ecological COPCs in surface water because metals have dissimilar mechanisms of toxicity.

Thus, only mercury in surface water at Mill Creek (SWS2) was detected at a concentration exceeding the TRVs for ecological receptors.

8.1.6. Conclusions of the Ecological Preliminary Risk Evaluation

The ERA provided a Phase 1 PRE for potential terrestrial and aquatic receptors at the site. The PRE for the Former 724th TPS identified ecological COPCs in surface water, sediment, and groundwater based on a comparison of their maximum site concentrations to their EPA Region 4 ecological screening values. Preliminary risk calculations identified ecological COPCs in Mill Creek surface water based on a comparison of detected concentrations to TRVs for surrogate species representing ecological receptors.

Chromium was detected above reference background criteria in surface soil at the Former 724th TPS and was present above the TRV for ecological receptors. The chromium concentration in one surface soil sample (MW-2) exceeded the TRV for the robin, 6.3 mg/kg in soil versus robin TRV of 5.2 mg/kg. There is uncertainty about whether robins foraging at the Former 724th TPS will obtain more than 20 percent of their diet from the site. Thus, robins are unlikely to be at risk from chromium in surface soil at the Former 724th TPS. There is uncertainty about whether ethylbenzene, benzo(b)flouranthene, and styrene are ecological COPCs in surface soil, because no TRVs can be derived for these substances. Benzo(b)flouranthene and styrene were not present at the site, but were detected only at MW-5 (adjacent to Mill Creek) at concentrations near their detection limit, and are, therefore, not site related. Ethylbenzene was detected at MW-2 and is related to former releases at the site. Ethylbenzene in surface soil is unlikely to pose a risk to ecological receptors given the low concentration (0.02 mg/kg) relative to the proposed TRV for ethylbenzene of 8.4 mg/kg, which is one tenth the TRV for total xylenes. There are, therefore, no organic ecological COPCs in surface soil.

Barium and silver were identified as ecological COPCs in swale sediment, but exposure of sediment-dwelling biota to sediment in the drainage swale was judged to be unlikely. The swale is an ephemeral surface water body, as shown by the lack of water at SWS-3 at the time of sampling, and is unlikely to support a community of aquatic sediment-dwelling organisms. Exposures of other types of receptors (e.g., terrestrial animals) to swale sediment by direct contact and ingestion are likely to be minimal. There are, therefore, no ecological COPCs in sediment in the swale.

In surface water in the drainage swale adjacent to the site, cadmium, lead, and silver were detected at concentrations that exceed reference background criteria and EPA Region 4 ecological screening values. However, there are no aquatic biota or other ecological receptors of concern in the man-made swale. No constituents are present in surface water in the swale at concentrations exceeding the TRV for terrestrial receptors (raccoon). There is uncertainty about whether silver is of concern because there is no published TRV for silver. There are, therefore, no ecological COPCs for surface water in the swale.

According to EPA Region 4 guidance (EPA 1996a), groundwater is to be screened in the ecological PRE using EPA Region 4 surface water ESVs. This was done for groundwater from a well near Mill Creek (MW-5) and from wells near the Former 724th TPS (MW-2, MW-3, and MW-4). Barium and mercury are present in Mill Creek groundwater at concentrations that exceed ESVs. Thus, barium and mercury are ecological COPCs for aquatic biota in Mill Creek. Barium, mercury, silver, benzene, and chloromethane are present in groundwater at the former 724th TPS at concentrations that exceed reference background criteria and that exceed EPA Region 4 ESVs for surface water. However, aquatic biota, including amphibians, are not ecological receptors for the man-made swale at the Former 724th TPS. Therefore, there are no ecological COPCs for aquatic biota in the swale.

Groundwater is further evaluated in the PRE as a source of surface water for the potential exposure of terrestrial mammals drinking water from both Mill Creek and the man-made swale at the Former 724th TPS. Groundwater concentrations of barium, mercury, and benzene at either location do not exceed TRVs for raccoons potentially ingesting groundwater as surface water. Therefore, these chemicals are not ecological COPCs for terrestrial mammals. There is uncertainty about whether silver or chloromethane in groundwater from the former 724th TPS are ecological COPCs because there is no TRV for them. Silver and chloromethane have a higher

concentration in the upgradient well (MW-1), and thus are not considered site related. There are, therefore, no ecological COPCs in groundwater at the swale.

In Mill Creek, mercury was identified as ecological COPC in surface water based on comparison to EPA Region 4 ecological screening values. Mercury is also an ecological COPC identified in Mill Creek surface water for terrestrial predators (mink, green heron) based on comparison to their TRVs. In Mill Creek sediment, no ecological COPCs were identified, although there is uncertainty about barium because there are no published ecological screening values for barium, making it a COPC by default. Ecological risks in Mill Creek are not related to the Former 724th TPS for the following reasons:

- As concluded in the fate and transport evaluation, off-site migration of contaminants would be very limited because of retardation and biodegradation, as well as the slow movement of groundwater. Mill Creek is the nearest surface water stream to the Former 724th TPS and is located approximately 1,200 feet west of the site. Therefore, migration of contaminants to Mill Creek via groundwater discharge is unlikely, and there is no complete pathway from groundwater to ecological receptors in Mill Creek.
- The drainage swale accepts runoff from the site and the adjacent fuel truck parking area, but is not connected to Mill Creek or its tributaries. Therefore, migration of contaminants to Mill Creek via surface water runoff is also not likely, and there is no complete pathway from the Former 724th TPS to ecological receptors in Mill Creek.

In conclusion, there are no ecological COPCs in either soil, sediment, surface water, or groundwater at the Former 724th TPS site. Therefore, no remedial levels are required to be developed for ecological receptors. No further ERA is warranted for this site.

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 SUMMARY OF FINDINGS

The RFI presented in this report was conducted to collect additional analytical data for determining the nature and extent of contamination in environmental media in the vicinity of the Former 724th TPS. The data were derived from a series of screening and primary samples collected from surface and subsurface soils, sediments, surface water, and groundwater in the study area. The samples collected were analyzed for a number of COPCs, including metals, VOCs, and SVOCs.

Results of these analyses indicated that soils at the site contain elevated levels of VOCs, predominantly BTEX, PAHs, and metals, including cadmium, chromium, and mercury. Sediments revealed elevated concentrations of VOCs like methylene chloride, toluene, and xylene, and metals including barium, chromium, lead, mercury, and silver. Surface waters indicated the presence of metals including arsenic, cadmium, lead, and silver, but no organics. Groundwater samples showed evidence of fuel-related contaminants and organic solvents such as naphthalene, BTEX, 1,1-dichloroethane, 1,2-dichloroethane, chloroform, chloromethane, methylene chloride, styrene, 2-butanone, 2-hexanone, and acetone. Metals detected in groundwater included arsenic, barium, mercury, and silver.

The following summarizes the significant findings of Phase II RFI sampling and analysis:

- Contamination is present in both soil and groundwater at the site, dominated by BTEX compounds, with secondary contaminants such as 1,1-dichloroethane.
- BTEX contamination in soil extends to the water table (approximately 6 feet deep) and is greatest immediately north and east of the area of excavated soils removed in August 1996. The soil contamination covers an area approximately 60 by 75 feet.
- BTEX contamination in groundwater extends to a depth of approximately 20 feet below the water table, although isolated areas of BTEX were found in groundwater to depths up to 40 feet. The BTEX contamination covers a plume area approximately 100 feet wide by 160 feet long, extending from the Former 724th TPS facilities to the north and west.
- The leading edge of the BTEX plume is more than 1,000 feet from Mill Creek and is, therefore, not impacting Mill Creek. Contamination in Mill Creek is not related to the Former 724th TPS.
- Biodegradation of the VOCs is likely occurring, as evidenced by the presence of methane, a breakdown product of BTEX degradation.
- Some metals are present in soil and groundwater at the facility in the swale immediately west of the site; no consistent pattern of distribution across media is apparent.

9.2 CONCLUSIONS

Several assessments were conducted to determine the significance of the contaminant concentrations found at the Former 724th TPS with respect to their impact on human health and the environment. The assessments included:

- A contaminant fate and transport analysis (Section 6.0) which provided an assessment of the potential migration pathways and transport mechanisms affecting the chemical compounds found at the site.
- A human health risk assessment (Section 7.0) which employed a Step 1 risk evaluation to determine potential human health risks associated with the COPCs.
- An ecological risk assessment (Section 8.0) which provided a Phase 1 preliminary risk evaluation for terrestrial and aquatic habitats in the study area.

The following summarizes the conclusions regarding contaminant fate and transport:

- Metals are not considered contaminant migration COPCs, mainly due to their low concentrations in the soils.
- Organics in the site soils that exceed EPA GSSLs and are, therefore, of concern for leaching from soils to groundwater, include BTEX, acetone, and naphthalene. These organics, except naphthalene, due to their high mobility, have already reached the groundwater. However, groundwater movement off site is very slow (3.6 feet/year) and may take 280 years to reach the receptor location (i.e., Mill Creek).

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• The organic compounds that are currently observed above their respective MCLs in groundwater are BTEX and acetone. Based on the site conceptual model, although these contaminants may have been leaching (and may continue to leach in the future) from the contaminated soils into the groundwater beneath the site with concentrations above their MCLs, off-site migration of these constituents will be limited due to retardation and biodegradation as well as the slow movement of groundwater flow. Benzene will degrade to a concentration less than its MCL in 22 years, having traveled less than 80 feet from the source. Similarly, ethylbenzene, toluene, xylene, and acetone with higher biodegradation rates will remain at concentrations much lower than benzene. Therefore, none of the constituents from the Former 724th TPS site are expected to be of potential concern at the nearest receptor location [i.e., Mill Creek (1,200 feet from the former facility)].

The following summarizes the conclusion of the human health risk assessment:

- Based on the results of the screening and the weight-of-evidence analysis, potential COPCs have been identified for groundwater. There are no COPCs for surface soils, subsurface soils, surface water, or sediment.
- The initial COPCs for groundwater were identified because they present a potential threat to human health as a result of using groundwater as a source of drinking water. The initial COPCs for groundwater are acetone, arsenic, 1,2-dichloroethane, chloroform, chloromethane, and BTEX.

• It should be noted that given the shallow depth of the surficial aquifer and the presence of the deeper Principal Artesian aquifer, a common source of drinking water throughout the region, the use of the surficial aquifer is not considered to be a viable exposure scenario. Drinking water screening values were used in the absence of more appropriate values.

The following summarizes the conclusions of the ecological risk assessment:

- Chromium was the only chemical detected in surface soil at the former 724th TPS at a concentration that exceeded both reference background criteria and a TRV for an ecological receptor (robin). There is uncertainty about whether earthworms from the Former 724th TPS will constitute 20 percent or more of the diet of robins foraging at the site. Thus, robins are unlikely to be at risk from chromium in surface soil.
- There is uncertainty about whether ethylbenzene, benzo(b)flouranthene, and styrene are ecological COPCs in surface soil because no TRVs can be derived for these substances. Benzo(b)flouranthene and styrene were not present in surface soil at the site, but were detected only at MW-5 (adjacent to Mill Creek) at concentrations near their detection limit, and are therefore not site related. Ethylbenzene was detected in surface soil at MW-2 and is related to former releases at the site. However, ethylbenzene in surface soil is unlikely to pose a risk to ecological receptors given the low concentration (0.02 mg/kg) relative to the proposed TRV for ethylbenzene of 8.4 mg/kg, which is one-tenth the TRV for total xylenes. There are, therefore, no ecological COPCs in surface soil.
- Barium and silver were identified as ecological COPCs in sediment in the drainage swale, but exposure of sediment-dwelling biota to sediment in the swale was judged to be unlikely. The swale is an ephemeral surface water body, as shown by the lack of water at SWS-3 at the time of sampling, and is unlikely to support a community of aquatic sediment-dwelling organisms. Exposure of other types of receptors (e.g., terrestrial animals) to swale sediment by direct contact and ingestion is likely to be minimal. There are, therefore, no ecological COPCs in sediment in the swale.
- Cadmium, lead, and silver were detected in surface water in the drainage swale at the Former 724th TPS at concentrations that exceed reference background criteria and also exceed EPA Region 4 ESVs for aquatic biota. However, there are no aquatic biota or other ecological receptors of concern in the man-made swale. Maximum surface water concentrations of cadmium and lead do not exceed a published TRV for terrestrial receptors (raccoons) and are therefore not of concern. There is uncertainty about whether silver is of concern because there is no published TRV for silver. There are, therefore, no ecological COPCs in surface water in the swale.
- Barium, mercury, silver, benzene, and chloromethane are present in groundwater at the Former 724th TPS at concentrations that exceed reference background criteria and also EPA Region 4 ESVs for surface water. However, there are no aquatic biota or other ecological receptors of concern in the man-made swale. Maximum groundwater concentrations of barium, mercury, and benzene do not exceed a published TRV for terrestrial receptors (raccoons) potentially ingesting groundwater as surface water; therefore, these metals are not of concern for raccoons. There is uncertainty about whether silver or chloromethane are ecological COPCs in groundwater because there are no published TRVs for them. However,

silver and chloromethane are higher in the upgradient well and are not considered site related. There are, therefore, no ecological COPCs in groundwater at the site.

• In Mill Creek, mercury was identified as an ecological COPC in surface water based on comparison to EPA Region 4 ESVs. Mercury is also an ecological COPC in surface water for protection of terrestrial predators (mink, green heron) in Mill Creek based on comparison to their TRVs. In Mill Creek sediment, no ecological COPCs were identified, although there is uncertainty about barium, since there are no published values for barium. Migration of contaminants to Mill Creek from the 724th TPS is unlikely either via groundwater discharge or via surface water runoff. There is no complete pathway from the Former 724th TPS to ecological receptors in Mill Creek. Therefore, ecological risks in Mill Creek are not related to the Former 724th TPS.

9.3 SUPPLEMENTAL PHASE II GROUNDWATER CHARACTERIZATION

Based upon the results of the original Phase II RFI at the Former 724th TPS, a supplemental characterization was conducted in September 1998 to verify concentrations of metals in groundwater and to provide further evidence that natural attenuation of VOCs is occurring. The scope of work included sampling of the four onsite monitoring wells (MW-1 through MW-4) and analyzing the samples for VOCs, PAHs, RCRA metals, and water quality parameters. Results of this supplemental investigation are presented in Appendix H, and summarized below.

VOCs. Seven individual VOCs were detected in groundwater samples. BTEX compounds were detected only in a single well, MW-2, which is screened at the water table and located in the center of the former facility (i.e., the identified source). During sampling, approximately 1.9 feet of free petroleum product were encountered in MW-2; no free product had been encountered in any of the direct-push groundwater samples or any of the wells during the Phase II RFI in August 1997. Once free product was discovered, a ferret system was installed in MW-2 for recovery of the free product; operation of the ferret system is ongoing.

Benzene (1,350 μ g/L), ethylbenzene (477 μ g/L), toluene (1,540 μ g/L), and total xylenes (2,350 μ g/L) were reported in MW-2. The concentrations of benzene and toluene exceeded their respective MCLs of 5 μ g/L and 1,000 μ g/L. No BTEX constituent was found in any of the other wells, confirming the Phase II RFI conclusions that contaminants have not migrated vertically or laterally from the source at the former facility.

The other VOCs that were detected included chloroform (18.7 μ g/L at MW-2), 1,1-dichloroethane (1.4 μ g/L at MW-3), and 2-hexanone (6.7 μ g/L at MW-3). Chloroform and 2-hexanone are common laboratory contaminants and were not detected in these wells during the Phase II RFI, and are therefore not likely a result of contaminant releases from the former facility. 1,1-Dichloroethane was detected in MW-3 during the Phase II RFI at a concentration of 2.2 μ g/L, and is considered a secondary contaminant within the primary BTEX plume.

PAHs. Naphthalene was the only PAH compound detected in groundwater. Naphthalene was reported at 242 μ g/L at MW-2, which exceeds its EPA Region III risk-based criterion of 150 μ g/L. Naphthalene was also detected in MW-2 during the Phase II RFI. The increase in the concentration of naphthalene is likely due to the presence of the free product found during the supplemental sampling.

RCRA metals. Four metals were detected in the groundwater samples, including arsenic, barium, chromium, and mercury. These metals were detected above the reference background criteria and in the same wells as detected during the Phase II RFI sampling in August 1997. None of the metals exceeded their respective MCLs. Silver, which was detected above background in the original Phase II RFI sampling, was not detected above background in the supplemental sampling.

- Arsenic (maximum 16.4 µg/L) was found at its highest concentration in the upgradient well MW-1, and is therefore not considered site related.
- Barium (maximum 87.9 μ g/L) and mercury (maximum 0.59 μ g/L) were found at concentrations above background in well MW-4, screened at a depth of 35 to 45 feet. In other wells, barium and mercury were found at or below background. Because these metals do not migrate readily and are only present at depth, they are not likely related to any contaminant plume emanating from the facility
- Chromium (maximum 6.1 μg/L) was found in MW-2 at a concentration only slightly above background and marginally higher than that found during the Phase II RFI (2.4 μg/L). Chromium was not detected in any of the other wells in the vicinity of the Former 724th TPS, and was detected at a concentration well below its MCL (100 μg/L) and its EPA Region II risk-based level (180 μg/L). Therefore, no further action is warranted for chromium in groundwater at the facility.

Other analytes. Alkalinity varied between 102 and 321 mg/L (lowest at the upgradient well MW-1 and highest in the deeper well MW-4). Sulfate varied between 0.18 and 11.4 mg/L (lowest at well MW-2 and highest at MW-4). These results are consistent with the results of the Phase II RFI and suggest that biodegradation is occurring, resulting in higher alkalinity and sulfate content in the downgradient wells.

9.4 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations have been made based on the results of the Phase II RFI and the supplemental groundwater investigation:

- 1. Because there are no ecological COPCs at the Former 724th TPS, an ERA is not warranted.
- 2. Concentrations of metals found during the Phase II RFI are similar to those found during the supplemental sampling. None of the metal concentrations exceed MCLs or EPA Region III risk-based levels. No further corrective action for metals in groundwater is warranted.
- 3. Free petroleum product was encountered at well MW-2 in the center of the former facility during the supplemental investigation. Free product recovery, which has been undertaken at the site, should be continued.
- 4. BTEX compounds exceed MCLs in the shallow water table aquifer near the source. There is no evidence that contamination has migrated further beyond the source, despite the presence of free product being discovered. Natural attenuation of organics through biodegradation is

occurring, as suggested by the presence of higher methane, alkalinity, and sulfate in downgradient wells.

5. Due to the presence of free product and BTEX compounds at concentrations in groundwater exceeding MCLs, a CAP will be required to evaluate measures to mitigate the effects of these contaminants. The CAP should evaluate the effectiveness of natural attenuation in remediating VOCs in soil and groundwater by using fate and transport modeling of leaching and biodegradation. The CAP should also address mitigation of naphthalene, which was detected during the supplemental investigation at a concentration exceeding its EPA Region III risk-based level and is likely associated with the free petroleum product.

9.5 IDENTIFICATION OF REMEDIAL LEVELS

Remedial levels are presented in Table 9.1 for soil and groundwater. Soil remedial levels are based on leaching from to groundwater at levels exceeding MCLs or EPA Region III risk-based values. Groundwater remedial levels are based on MCLs, which take into consideration both human health and technological limitations. In the absence of an MCL, the EPA Region III risk-based values for groundwater were used for deriving remedial levels.

Analyte	Soil Remedial Level (µg/kg)	Groundwater Remedial Level (µg/L)
Arsenic	-	_a
1,1-Dichloroethane	•	b
1,2-Dichloroethane		_b
Acetone	370	370
Benzene	20	5
Chloroform		0.1
Chloromethane	-	
Ethylbenzene	3,100	700
Naphthalene	600	150 ^c
Toluene	4,200	1,000
Xylenes, total	3,200	10,000

 Table 9.1. Remedial Levels for Soil and Groundwater

 Former 724th Tanker Purging Station, Fort Stewart

- Indicates no remedial action needed for that analyte.

-^a No remedial action is needed for arsenic in groundwater since the maximum concentration for arsenic is below its maximum contaminant level (MCL).

-^b No remedial action is needed for 1,1-dichloroethane, 1,2-dichloroethane, or chloromethane since the maximum concentration for these analytes during the supplemental groundwater sampling did not exceed their respective MCLs or U.S. Environmental Protection Agency (EPA) Region III risk-based levels.

- No MCL exists for naphalene; the remedial level for naphthalene is based on its EPA Region III risk-based level.

These soil and groundwater remedial levels are protective of direct exposure to residents by hazardous constituents in groundwater or that may leach from the soil to groundwater. However, it is recognized that groundwater is not used at this site as a source of drinking water. It will take approximately 280 years for groundwater to reach the nearest receptor at Mill Creek, which is 1,200 feet from the former facility. Constituents will naturally attenuate in groundwater through retardation and biodegradation before reaching Mill Creek.

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PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANKER PURGING STATION FORT STEWART, GEORGIA

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APPENDIX A

BORING LOGS

	G	DISTRICT	Sava	nnah	•	HOLE NUMBER MW-1 (Pur
1. COMPANY NAME S.A.I.C.		2. DREL SUBCON	TRACTOR	Miller Drilling	Co.	SHEET SHI] _{OF}
J. PROJECT Ft. Stewart Purge (Tanke	er) Facility		4. LOCATION	Tanker Purge Fa	cility, MW-1, 724	4 th
S. NAME OF DRELER Doug Bishop			6. MANUFACTURERS DESIGNATION OF DRIL CME-550 X			
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT			8. HOLE LOCATION	N See Ske	tch Below	
4 1/4" ID HSA 5' CM	AE Continuous Sampler		9. SURFACE ELEVA	ATION	- · · ·	
			10. DATE STARTED	07/23/97	11. DATE COMPLETED	
2. OVERBURDEN THICKNESS N/A			13. DEPTH GROUN	DWATER ENCOUNTERED ~4.5 I	L Ft. BGS	
3. DEPTH DRILLED INTO ROCK N/A			16. DEPTH TO WAT Sur	TOUNDELAPSED TIME AFTER	ORILING COMPLETED	ft BGS
I. TOTAL DEPTH OF HOLE 14.5	Ft BGS		L	LEVEL MEASUREMENTS (SPEC		
B. GEOTECHNICAL SAMPLES	DISTURBED)	UNDISTURB	BED 19. TO	TAL NUMBER OF CORE BOXES	3	
1 . SAMPLES FOR CHEMICAL ANALYSIS 3 sets	voc M	I ETALS 3	OTHER (SPECIFY) 3 PAH	OTHER (SPECTFY) 3 TOC	N/A OTHER (SPECIFY)	21. TOTAL COR
DISPOSITION OF HOLE Set Well	BACKFILLED MONT		3 PAH OTHER (SPECIFY) N/A	3 TOC 33. SIGNATURE OF INSPEC	N/A	RECOVERY N/
OCATION SKETCH/COMMENTS	A00	V OIAUG	IN/A -		NOT TO GO LT	
				SCALE:	NOT TO SCAL	<u>.</u>
•						
) 4 * • • • • • • • • • • • • • • • • • •		
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VECT	Ft. Ste	HTRW DRILI	LING LOG	Matthew B. Ve	st	SHEET 2 of 3	
1.EV, (A)	рертн (в)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	HEADSPACE	ANALYTICAL BANGLE NO. (F)	REMARKS (G)	
		SAND; fine grained, loose, moist to	0.0 ppm	0.0 ppm	261111	Ran 4.5	
		damp, non-plastic, 10YR5/1 gray	ono ppin	•••• FF	&	Rec 3.3	
		0.9			261131		
		0.9	_				
	_	same as above, but 10YR6/8 br.					
	_	yellow 1.4					
		same as above, but 10YR8/3 v. pale					
	-	brown			• •		
					2.0		
			0.0 ppm	0.0 ppm	261112		
	_	2.6					
		same, but 10YR6/1 gray 3.0					
			• • •				
		same, but 10YR4/1 dark gray 3.3			3.3		
		No Recovery	N/A	N/A	N/A		
	1						
	-	4.5			4.5		
	11	CLAYEY SAND; fine grained,	0.0 ppm	0.0 ppm	N/A	Ran 5.0	
	-	loose, wet, low plasticity, 10YR5/1				Rec 4.2	
	-	gray				Wet below 4.5 ft BGS	
	-						
	Ξ						
		(gradual contact) 6.5					
			-				
	=	SAND with clay; fine grained, loose, wet to moist, non-plastic,			-		
		10YR5/1 gray			7.0		
			0.0 ppm	0.0 ppm	N/A		
	Ξ						
	· _						
	ᅴ						
	Ξ	8.7					
	ᅴ	No Recovery					
					9.5		9.5
	ᅻ						
	=						
		PROJECT Ft. Stewart Tanker Purge F	I Facility	AD	J	HOLE NO. MW-1 (Purge)	

Iteward Purge (Tanker) Facility IN DESCRIPTION OF MATERIALS (C) CLAYEY SAND; fine grained, medium density, wet to moist, low plasticity, 5/10GY greenish gray (gradual contact) CLAY; moist, high plasticity, soft, 5/10GY greenish gray (gradual contact) CLAYEY SAND; fine grained, wet, low plasticity, loose, 8/1 light greenish gray 14.0	0.0 ppm	неловилсе 0.0 ppm 0.0 ppm	Geotech Shelby Tube 261113 9.5' to 11.5' BGS 12.0 N/A	NEET 3 of 3 REMARKS (0) Push Shelby Tube 9.5' - 11.5 BGS. Full Recovery. Geotech Shelby Tube 261111 Ran 5.0' Rec 4.5'
medium density, wet to moist, low plasticity, 5/10GY greenish gray (gradual contact) CLAY; moist, high plasticity, soft, 5/10GY greenish gray (gradual contact) CLAYEY SAND; fine grained, wet, low plasticity, loose, 8/1 light greenish gray 14.0 No Recovery	0.0 ppm		Geotech Shelby Tube 261113 9.5' to 11.5' BGS 12.0	BGS. Full Recovery. Geotech Shelby Tube 261112 Ran 5.0 ¹
CLAY; moist, high plasticity, soft, 5/10GY greenish gray (gradual contact) CLAYEY SAND; fine grained, wet, low plasticity, loose, 8/1 light greenish gray 14.0 No Recovery	0.0 ppm	0.0 ppm	l	
CLAY; moist, high plasticity, soft, 5/10GY greenish gray (gradual contact) CLAYEY SAND; fine grained, wet, low plasticity, loose, 8/1 light greenish gray 14.0 No Recovery	0.0 ppm	0.0 ppm	l	
CLAYEY SAND; fine grained, wet, low plasticity, loose, 8/1 light greenish gray 14.0 No Recovery				
wet, low plasticity, loose, 8/1 light greenish gray 14.0 No Recovery				
·			14.5	14.5
				BoH & end drilling @ 14.5' BGS
	Ft. Stewart Tanker Purge Fac	Ft. Stewart Tanker Purge Facility A-5		

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HTRW DRILLING L	DG	DISTRICT	Savan	nah		HOLE NUMBER MW-2 (Purge
1. COMPANY NAME S.A.I.C.		2. DRAL SUBCO)	NTRACTOR	Miller Drilling	Co.	SHEET SHEE I _{OF}
3. PROJECT Ft. Stewart Purge (Tan	ker) Facility		4. LOCATION	Tanker Purge	e Facility, 724 th	
S. NAME OF DRILLER Allen Gonsu	ron		6. MANUFACTURES	us designation of drill. Ingersol R	and A-300	
7. SIZES AND TYPES OF DRILLINO AND SAMPLING EQUIPMENT		i i i i i i i i i i i i i i i i i i i	8. HOLE LOCATION	See Sket	tch Below	. <u> </u>
7 7/8" OD HSA 3 1/2	CME Continuous Sam	pler	9. SURFACE ELEVA		· · · · · · · · · · · · · · · · · · ·	
12. OVERBURDEN THICKNESS N/	/A			7/24/97	11. DATE COMPLETED	<u></u>
				~5.0 f	A, BGS	
S. DEP IN DRILLED IN TO KOCK				N	I/A	
	.0 ft BGS				/A	
8. GEOTECHNICAL SAMPLES N/A	DISTURBED N/A	UNDISTUR N/A		TAL NUMBER OF CORE BOXES	N/A	
0. SAMPLES FOR CHEMICAL ANALYSIS 2 2. DISPOSITION OF HOLE	VOC N/A backfelled m	METALS N/A ONITORING WELL	OTHER (SPECIFY) N/A	OTHER (SPECIFY) N/A 23, SKONATURE OF DISPEC	OTHER (SPECIFY) N/A	21. TOTAL CORE RECOVERY N/A
Set Weil	N/A	Yes	other (specify) N/A	23. SIONATURE OF INSPEC	лок 	
OCATION SKETCH/COMMENT:	3	······		SCALE:	NOT TO SCAL	E
	•••••••••••••••••••••••••••••••••••••••					
	·····					
	······				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
			·		HOLE NO.	
ROJECT Ft	Stewart Tanker	Purge Facilit	у	1	MW-2 (Purg	e Facility)
NG FORM 5056-R, AUG 94		·····		<u>l</u>	Proponer	nt: CECW-EG

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		HTRW DRIL				HOLE MUNBER MW-2 (Purge)
OPECT		wart Purge (Tanker) Facility I DESCRIPTION OF MATERIALS	NSPECTOR	Wayne Parker	HEADSPACE	SHEET 2 of 2
elev. (A)	Дер тн (в)	DEECREPTION OF MATERIALS (C)	FELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO. (E)	HEADSPACE (F)	(0)
	-	CLAYEY SAND, subangular, soft	0.0 - 2.0		261211	
		to firm, moist, varigated colors,	>2000 ppm			
		yellow 10YR7/8 red 25YR5/6	1350			
Ì	-			-		
	_		_			-
	11	SAND, poorly graded, subangular,	2.0 -5.0		261212	
	11	soft, moist, white 8/N	>2000 ppm			
			1350			
	-					
	_					
	=	SAND, with silt, subangular, firm	5.0 -7.5	261213		Water Table ~5.0 - 6.0 ft BGS
		to soft, moist to wet, medium to fine, light gray 7/N, varigated	0.0 ppm 1400	gutech		- 20 - 20 - 20 - 20 - 20 - 20 - 20 - 20
		yellow 5Y7/8		•		
		·				
			26 100			
			7.5 - 10.0 0.0 ppm			
			1400			
			1400			
	_					
		<u></u>				4
	1	SAND, with silt, subangular, firm	10.0 - 12.5			
		to soft, wet, light gray 8/N	0.0 ppm			
			1415			
	ㅋ					
	-					
	コ					
	ㅋ		12.5 - 15.0			
			0.0 ppm			
	コ		1415			
	ー					
	ヨ					
	_=					
	-					TD = 15.0 ft BGS
	=					
	ㅋ					
	ヨ					
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			1		-	
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	H					
			1 1			

HTRW DRILLING L	DG	DISTRICT	Savan	nah		HOLE NUMBER GP-2 (Purge)
1. COMPANY NAME S.A.I.C.		2. DRILL SUBCO	NTRACTOR	Miller Drilling	Co.	sheet sheets 1 _{of} 4
ROJECT Ft. Stewart Purge (Tank	er) Facility		4. LOCATION	Tanker Purge	e Facility, 724 th	
S. NAME OF DRILLER DOUG Bishop			6. MANUFACTURE	S DESKINATION OF DRUIT	-550 X	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT			8. HOLE LOCATION	See Sket	tch Below	
4 1/4" ID HS	A & Power Punch		9. SURFACE ELEVA	אאא		
			10. DATE STARTED O	7/24/97	11. DATE COMPLETED	<u></u>
12. OVERBURDEN THICKNESS N/	A		15. DEPTH GROUND	water encountered ~5.0 f	ì. BGS	,
13. DEPTH DRILLED INTO ROCK N/.	A		16. DEPTH TO WAT	ER AND ELAPSED TIME AFTER N	DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE 51.	0 ft BOS		17. OTHER WATER I	evel measurements (spec N	ify) /A	// // // // // // // // // // // // //
18. GEOTECHNICAL SAMPLES N/A	DISTURBED N/A	UNDISTUR N/A	RED 19. TO	AL NUMBER OF CORE BOXES	N/A	
20. SAMPLES FOR CHEMICAL ANALYSIS S	voc S	METALS N/A	OTHER (SPECIFY) N/A	other (specify) N/A	OTHER (SPECIFY) N/A	21. TOTAL CORE RECOVERY N/A
22. DISPOSITION OF HOLE Set above grade Well		onitoring well Above Grade	OTHER (SPECIFY) N/A	23. SIONATURE OF INSPEC	TOR	· .
LOCATION SKETCH/COMMENTS				SCALE:	NOT TO SCAL	E
		••••				
		••••	•			
PROJECT Ft.	Stewart Tanker I	Purge Facility	y	Ĥ	IOLE NO. GP-2/M	W-3
ENG FORM 5056-R, AUG 94					Proponen	t: CECW-EG)

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		HTRW DRIL	LING LOG			HOLE NUMBER GP-2 (Purge)
OJECT		ewart Purge (Tanker) Facility	DISPECTOR	Matthew B. V	est	SHEET 2 of 4
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	READSPACE (E)	HEADSPACE (F)	REMARKS (G)
		SILTY SAND, fine grained, loose, damp, non-plastic, 2-SY 5/2 grayish brown.	0.0 ppm cuttings	N/A	N/A	Drilling without sampling soil. Logging description from cuttings. Taking water samples with Power Punch @ 10 ft intervals.
		(Approximate contact) 5.0				
		SILTY CLAYEY SAND, fine grained, low to non-plastic, wet, 2-5Y5/2 grayish brown.				
		(Approximate contact) 8.0)			
		SILTY SAND, with clay, fine grained, low to non-plastic, wet, loose, 7/N light gray.				
					10.0	
			0.0 ppm cuttings	41.2 ppm	266U11	Push Power Punch 10.0 to 13.7 ft BGS and take groundwater sample 266U11.
						200011.
					13.7	
		(Approximate contact) 15.0	N/A	N/A	N/A	
		SILTY SAND, fine grained, non-plastic, saturated, very soft, 7/N light gray	-			
		(Consistency of mud, almost a liquid)				
	П					
			t Tanker Purge Fa			20.0 HOLE NO. GP-2/MW-3

		HTRW DRILLI	NG LOG			HOLE NUMBER GP-2
PROJECT	Ft. Ste	wart Purge (Tanker) Facility	SPECTOR	Matthew B. Ves	l	SHEET 3 of 4
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	HEADSPACE (E)	HEADSPACE (F)	REMARKS (G)
		Same as above	0.0 ppm	72,000 ppm	266U12	Push Power Punch 20.0 to 23.7 ft BGS and take groundwater sample 266U12.
			N/A	N/A	23.7 N/A	
		(Approximate contact) 30.0 SILTY SAND with Clay, fine grained, non-	0.0 ppm	0.0 ppm	30.0 266U13	Push Power Punch 30.0 to 33.7 ft
		plastic, saturated, very soft, 7/5GY light greenish gray. (Nearly same as above, slight color change and minor amounts of clay)				Push Power Punch 30.0 to 33.7 ft BGS and take groundwater sample 266U13.
					33.7	
	111111				33.7	
	111111					
					40.0	40.0
l		PROJECT Ft. Stewart	Tanker Purge Fac	ility .	40.0	HOLE NO. GP-2/MW-3

		HTRW DRILLI	NG LOG			HOLE NUMBER GP-2/MW-3		
PROJECT	FL SU	swart Purge (Tanker) Facility	SPECTOR	Matthew B. Ve	st		SHEET 4 of 4	٦
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING NESULTS (D)	HEADSPACE (E)	HEADSPACE (F)		REMARKS (G)	
		Cuttings are same as above, but cuttings return amount is much less. Very little coming to surface. Power Punch was dry and also was very hard to push @ 40.0 to 43.0 ft BGS depth.	N/A	N/A	No sample Dry depth	BGS an sample to No wate sample to Possibly allowing on Power from cut	wer Punch 40.0 to 43.0 fl d try to take groundwater 266U14. er at this depth however so no taken. mud so thick that it is not g trapped water to enter slots er Punch screen. Judging ttings there is no dry soil from 40.0 to 50.0 ft BGS.	
		46.0 @ ~45 ft BGS cuttings return increased and cuttings still same as above 30.0 ft BGS and below.						
1 		Hard below ~48 ft BGS.			50.0			
		End of description and end augering @ 50.0 ft BGS.	0.0 ppm	0.0 ppm 26 26 26 26 26 26 26 26 26 26 26 26 26	266U15 (soil) 51.0 6 U 11 - 6 U 12 U 13 - U 13 - 14 - 51)	BGS. No soil samp Difficulty Had to do hammer. Bottom of 51.0 ft B		
		PROJECT Ft. Stewart	I Tanker Purge Fac A_12	ility	1	HOLE NO.	GP-2/MW-3	

HTRW DRILLING LO	G	DISTRICT	Savan	nah		HOLE NUMBER MW-4 (Purge)		
1. COMPANY NAME S.A.I.C.		2. DRILL SUBCX	ONTRACTOR	Miller Drilling	Co.	sheet sheets 1 _{of} 6		
ROJECT Ft. Stewart Purge (Tanke	r) Facility		4. LOCATION	Tanker Purge	Facility, 724 th			
S. NAME OF DRILLER DOUG Bishop			6. MANUFACTURERS DESIGNATION OF DRILL CME-550 X					
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT			8. HOLE LOCATION See Sketch Below					
4 1/4" ID HSA 5' CN	IE Continuous Samp	ler	9. SURFACE ELEVA					
				7/26/97 DWATER ENCOUNTERED	11. DATE COMPLETED	M-MM-M		
				~6.6 f	t. BGS			
				10.25 ft BGS	Safter 24 hrs			
	ft BGS				/A			
18. GEOTECHNICAL SAMPLES	disturbed 1	N/A	A	TAL NUMBER OF CORE BOXES	N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS 3 sets 22. DISPOSITION OF HOLE	VOC 3 BACKFILLED	METALS 3 MONITORING WELL	OTHER (SPECIFY) 3 PAH OTHER (SPECIFY)	OTHER (SPECIFY) 2 TOC 23. SIGNATURE OF INSPEC	OTHER (SPECIFY) N/A	21. TOTAL CORE RECOVERY N/A		
Set Well	N/A	Above Grade	N/A					
LOCATION SKETCH/COMMENTS				SCALE:	NOT TO SCAL	E		
PROJECT Ft.	Stewart Tanker	Purge Facili	ty		HOLE NO. MW-4 (Purg	e Facility)		
ENG FORM 5056-R, AUG 94		-	-			nt: CECW-EG)		

A-13

NECT	FL St	ewart Purge (Tanker) Facility	ING LOG	Matthew B. Ve			4 (Purge)
2LEV. (A)	рертн (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	HEADSPACE (E)	HEADSPACE (F)	SHEET 2 of 6 NEMARKS (G)	
	(8)		(D)	(E)	(F)	(0)	
		SILTY SAND, fine grained, loose, damp to	0.0 ppm	0.0 ppm	261411	Ran 4.5	
ľ		moist, non-plastic, 2-5YR3/1 very dark gray				Rec 4.0	
		Same as above, but color changed to 7-	-				
	П	5YR4/4 brown					
	11				2.0		
	_					-	
	_		0.0 ppm	148.0 ppm	N/A		
							Í
	コ						
				1	1	,	
1	111						
		3.6					
	ᅴ	color changed to 2-5Y5/3 H. olive brown					
							-
	ㅋ	No Recovery					ŀ
	ㅋ	4.5			4.5		4.5
		Same as Above, 2-5Y5/2 grayish brown					
	=	Same as Above, 2-5 1 5/2 grayish brown	0.0 ppm	172.8 ppm	N/A	Ran 5.0 Rec 3.2	F
						1110.2	E
	コ						F
	ヨ						E
							F
	1						E
							E
	1						E
							E
		6.6	-				E
	コ	SILTY SAND, fine grained, non-plastic,				Wet below ~6.6 ft BGS	F
		loose, wet, 2-5Y5/2 grayish brown			7.0		F
	4		0.0 ppm	180.0 ppm	N/A		E
	4-	7.4					E
		SILTY SANDY CLAY, fine grained, low					E
		plasticity, moist, 2-5Y5/1 gray 7.7					E
	-1'	No Recovery					E
	Ξ						E
							E
							F
	-						F
	1		1				F
	7						E
	コ				9.5		9.5
					_	- <u> </u>	—— <u>-</u>
	ゴ						E
1							

			LLING LOG			HOLE NUMBER MW-4 (Purge)
олест		ewart Purge (Tanker) Facility	DESPECTOR	Matthew B. V		SHEET 3 of 6
ELEV. (A)	DEFTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING DESULTS (D)	HEADSPACE (E)	HEADAPACE (F)	REMARKS (G)
		SILTY SANDY CLAY, fine grained, low	0.0 ppm	145.0 ppm	N/A	Ran 5.0
		plasticity, moist, soft, 7/10GY light greenis	h i			Rec 4.0
		gray.				
	_					
		CLAYEY SAND, fine grained, non-plastic				
		moist, loose, 7-10GY6/6 light greenish gra	y j			
		with 2-5Y6/6 olive yellow.			12.0	
	—					-
			0.0 ppm	200.0	261412	
			0.0 ppm	300.0 ppm	201412	
	_					
	-					
	_					
						-
		13	.5			
		No Recovery				
		14	.5		14.5	14.5
	_	CLAY, stiff, medium plastic, damp to moist	, 0.0 ppm	2.5 ppm	N/A	Ran 5.0
	_	minor fine grained sand, 6/10GY greenish	·			Rec 5.0
		gray.				
	-					
		15	.7			
	ゴ					
		CLAYEY SAND, fine grained, non-plastic, medium density, moist to damp, 6/10GY				
		greenish gray.				
	_	Breenmin Bray.				
	_					
					17.0	
						· · · · · · · · · · · · · · · · · · ·
	ㅋ		0.0 ppm	0.0 ppm	N/A	
				1		
	コ					
	_			1		
	ヨ					
	1					
	コ					
	1					
	-1				1 I	
	コ	18.	9		1 I	
	ł					
		SANDY CLAY, fine grained, loose, non-			1	
		plastic, saturated, 6/10GY greenish gray.	1			
	Ξ	plastic, saturated, or foch r greenish gray.				
		plastic, saturated, 0/100/1 grounsi gray. 19.	5		19.5	19 4
		19.	5		19.5	19.5
		19.	5		19.5	19.5
		19.	5		19.5	19.5

		HTRW DRIL	LING LOG		HOLE NUMBER MW-4 (Purge)		
PROJECT	Ft. St	ewart Purge (Tanker) Facility	INSPECTOR	Matthew B. V	'est	steet 4 of 6	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	HEADSPACE (E)	HEADSPACE (F)	REMARKS (0)	
	- 1	CLAY, stiff, low plasticity, damp, 6/10GY	0.0 ppm	0.0 ppm	N/A	Ran 5.0	
	=	greenish gray	0.0 ppm	0.0 ppm	19/24	Rec 4.5	
	_						
	=						
						<u>E</u>	
	_						
	=				22.0	F	
				-			
		22.3	0.0 ppm	0.0 ppm	N/A		
	=	Same as above, but wet					
	-						
	=	22.8					
	_	SAND, coarse grained, non-plastic, wet,	1				
	=	loose, 6/10GY greenish gray with some clay.		1			
	=				1		
						E	
		24.0				F F	
	-	No Recovery					
		24.5		ļ	24.5	24.5 —	
		SAND, coarse grained, non-plastic, wet,	0.0 ppm	0.0 ppm	N/A	Ran 5.0	
	1	loose, 6/10OY greenish gray with some clay.				Rec 4.3	
						Sand heaving up into augers @ 24.5	
						ft BGS.	
	_					E.	
						F	
						—	
						F-	
	7					F	
	=					—	
	ㅋ	(gradual contact) 26.9					
		CLAYEY SAND, dense, fine to coarse			27.0	<u> </u>	
	1	grained, wet, non-plastic, 6/10GY greenish	0.0 ppm	0.0 ppm	N/A	E	
		gray, with shell fragments throughout.				E	
						E	
						E	
			1			F	
	_					-	
1	-					F	
	_					F	
	ヨ	28.8				F	
	ゴ	No Recovery]				
	_						
		29.5				E (
		29.5			29.5	29.5	
	-					E	
						E	
1]	Ft. Stewar	I t Tanker Purge Fa	cility		HOLE NO. MW-4 (Purge Facility)	
		PROJECT FL. SIGWAR	A-16			HOLE NO. MATT T (1 MIGO I AOMINY)	

	E1 04-	HTRW DRILLI) ()		HOLE NUMBER MW-4 (Purge)
OTECT			SPECTOR	Matthew B. V		SHEET 5 ard
elev. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	HEADSPACE (E)	HEADSPACE (F)	REMARKS (G)
		Same as above with shells ~25% to 50% of	0.0 ppm	0.0 ppm	N/A	Ran 5.0
		soil & varies from very dense to medium	ore bbin	0.0 ppm	100	Rec 5.0
		dense sands throughout.				
	-					
	_					
	_					
	·					
			1			
					32.0	
			0.0 ppm	0.0 ppm	N/A	
	_					
.]						
1	1					· · · ·
	コ					
1						
					34.5	34.5
				·		
	_		0.0 ppm	0.0 ppm	NHA	Ran 5.0
	_				261413	Rec 5.0
						Geotech sample 34.5 - 39.5 ft BGS
	1					Sample ID# 261413
	ー					
[
	7					
	_					
	コ					
	_					
i i						
					37.0	
		1	0.0			
			0.0 ppm	0.0 ppm	N/A	
					1 1	
	コ					
	_					
			· · ·			
	コ				ļ İ	
		39.3				
	ㅋ	CLAYEY SAND, fine grained, non-plastic,			39.5	39.5
		dry, very dense, 4/10GY dark greenish gray.			<u>↓ </u>	37.5
	コ	- y, tery derive, a root a durk groundin gruy,			1	
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DECT	Ft. Ste	HTRW DRILLI	SPECTOR	Matthew B. Ve	st	HOLE NUMBER MW-4 (Purge) Sheet 6 of 6
LEY, (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING NESULTS (D)	HEADSPACE (E)	HEADSPACE (F)	REMARKS (G)
	_	CLAYEY SAND, fine grained, non-plastic, dry, very dense, 4/10GY dark greenish gray.	0.0 ppm	87.5 ppm	N/A	Ran 5.0 Rec 5.0
						100 5.0
	_					
	_					
	11					
	11				42.0	
			0.0 ppm	20.4 ppm	N/A	
	П					
	_					
	Ξ	Claycy sand is very dense, very hard, most likely impermeable.				
					44.5	
	ヨ		0.0 ppm	120.0 ppm	261414	Ran 1.0
	1					Rec 1.0
		45.5			45.5	45.5
	_	Bottom of Hole @ 45.5 ft BGS		•		End augering & sampling @ 45.5 ft
	コ	Auger and sampler refusal @ 45.5 ft BOS				BGS
						Set well in 45.5 ft BGS borehole on
	コ					agreement with P. Stoll.
	1					
	ヨ					
	1					
	コ					
	1					
	hululuuluuluu					
	ヨ	E Contractor de la contractor de				
	1			·		
	I	PROJECT Ft. Stewart 7	Fanker Purge Fac	ility	L	HOLE NO. MW-4 (Purge Facility)

B. FROJECT Ft. Stewart Purge (Tanker) Facility S. NAME OF DRILLER Allen Gonsuron	2. DRILL SUBC	ONTRACTOR	TION	Miller	Drilling	Co.		SHEET	SHEET
Allen Comuser		4. LOCA	ΠΩN	2. DRUL SUBCONTRACTOR Miller Drillin				1	OF
NAME OF DRILLER Allen Gonsuron				24 th Tan	ker Purge	e Facility,	Mill Cr	eek	
		6. MANU	6. MANUFACTURERS DESIGNATION OF DRILL Ingersol Rand A-300						
, SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		8. HOLE I	LOCATION		See Ske	tch Below			
7 7/8" OD HSA 3 1/2' CME Continuous Sam	pler	9. SURFA	CE ELEVAT	юн					
				/25/97		11. DATE C	OMPLETED		
2. OVERBURDEN THICKNESS N/A		IS. DEPT	H GROUND \	WATER ENCO	UNTERED	I/A			
3. DEPTH DRILLED INTO ROCK N/A		16. DEPT	H TO WATE	R AND ELAPS	ed time afte N	R DRILLING CO	MPLETED		
4. TOTAL DEPTH OF HOLE 15.0 ft BGS		17. OTHE	R WATER LI	EVEL MEASUR	ements (spec N	元FY) I/A			
8. GEOTECHNICAL SAMPLES DISTURBED 11.0' - 12.0'	UNDIST. Ye	JRBED S	19. TOT.	AL NUMBER (OF CORE BOXE	s N/A			
0. SAMPLES FOR CHEMICAL ANALYSIS VOC 2 N/A	METALS N/A	OTHER (SE N//	ECEFY)	OTHER N	(SPECIFY) /A	other (5 N/	pectfy) A	21. TOTA RECOVE	IL CORE RY N/A
2. DISPOSITION OF HOLE BACKFILLED N/A	ONITORING WELL Yes	other (sp N//	ecify) 1	23. SIGNAT	URE OF INSPE	CTOR			
OCATION SKETCH/COMMENTS					SCALE:	NOT T	O SCAL	E	
					·····				
					•				
		••••					·····		
ROJECT Ft. Stewart Tanker	Purge Facili	ty				HOLE NO MW-:). 5 (Purg	e Faci	lity)

		HTRW DRILL	ING LOG		HOLE NUMBER MW-5 (Purge)	
PROJECT			NSPECTOR	Wayne Parker		SHEET 2 of 2
ELEV. (A)	DЕРТН (В)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH BAMPLE OR CORE BOX NO. (E)	HEADSPACE (F)	REMARKS (G)
		SAND, well graded, subangular, soft to firm, moist, medium to fine grained, grayish brown 10YR5/2 to light gray 10YR7/2.			261511	
			2.5 - 5.0 ft 0.0 ppm 0935			
	1111	No Recovery				5.0
		SAND, well graded, medium to fine grained, subangular, soft to firm, light gray 10YR7/1	5.0 - 7.5 ft 0.0 ppm 0955		261512	
	u lu		7.5 - 10.0 ft 0.0 ppm 0955			
	1 1 1 1 1 1	No Recovery				10.0 E
		SAND, well graded, medium to coarse grained, subangular to subrounded, dark greenish gray 10GY3/1	10.0 - 12.5 ft 0.0 ppm 1015	Collected Geotech 11.0 - 12.0 ft		
	TITL.	:		261513		
		Numerous shell fragments 13.0 - 14.0 ft	12.5 15.0 ft 0.0 ppm 1015			
		No Recovery				15.0
		TD=15 ft BGS				
l"		PROJECT Ft. Stewart	Tanker Purge Fa A-20	l cility		HOLE NO. MW-5 (Purge Facility)

HTRW DRILLING LOG		DISTRICT	Savanı	nah		HOLE NUMBER LN-2 (Purge)		
1. COMPANY NAME S.A.I.C.		2. DRILL SUBCON	TRACTOR	Miller Drilling C	o.	sheet sheets I _{of} 4		
ROJECT Ft. Stewart Purge (Tanker) F	racility		4. LOCATION	Tanker Purge	Facility, 724 th			
5. NAME OF DRILLER Doug Bishop			6. MANUFACTURERS DESIGNATION OF DRILL CME-550 X					
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT			8. HOLE LOCATION	See Sketc	h Below			
4 1/4" ID HSA &	Power Punch		9. SURFACE ELEVAT	ΤΟΝ				
				/27/97	11. DATE COMPLETED 07/2	7/97		
12. OVERBURDEN THICKNESS N/A	Survey and the second		15. DEPTH GROUND	WATER ENCOUNTERED N/2	4			
			r and elapsed time after i N//					
14. TOTAL DEPTH OF HOLE 50.0 ft 1	BGS		17. OTHER WATER L	EVEL MEASUREMENTS (SPECIF N//				
18. GEOTECHNICAL SAMPLES N/A	disturbed N/A	UNDISTURI N/A	3ED 19. TOT	AL NUMBER OF CORE BOXES	N/A	<u>, , , , , , , , , , , , , , , , , , , </u>		
20. SAMPLES FOR CHEMICAL ANALYSIS 5	5	retals N/A	OTHER (SPECIFY) N/A	OTHER (SPECIFY) N/A	OTHER (SPECIFY) N/A	21. TOTAL CORE RECOVERY N/A		
22. DISPOSITION OF HOLE Abandoned	BACKFILLED MONIT N/A	ORING WELL N/A	orner (specify) Grouted	23. SIGNATURE OF INSPECT	OR			
LOCATION SKETCH/COMMENTS				SCALE:]	NOT TO SCAL	E		
			••••••					
DDOIECT								
PROJECT Ft. Ste	ewart Tanker Pu	rge Facility	1	H	OLE NO. LN-	2		
ENG FORM 5056-R, AUG 94				I	Proponer	nt: CECW-EG)		
		HTRW DRILI	JING LOG			HOLE NUMBER LN-2 (Purge)	٦	
--------------	--------------	--	-----------------------------------	------------------	------------------	---	----	
PROJECT	FL St	ewart Purge (Tanker) Facility	DESPECTOR	Matthew B. V	'est	SKEET 2 of 3		
ELEV. (A)	DЕРТН (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	HEADSPACE (E)	HEADSPACE (F)	REMARKS (G)		
		SAND, with silt, fine grained, non-plastic, moist, loose, 5/N gray	N/A	N/A	N/A	Not running a soil sampling device. Logging soil from cuttings only. All contacts approximated.	Ē	
		Wet below ~ 5 ft BGS						
							E	
							Ē	
							E	
		Wet below ~ 5 ft BGS					E	
							E	
							E	
							E	
		- 					E	
		(Approximate contact) 10.0			10.0		E(
		SILTY, CLAYEY SAND, fine grained, non- plastic, loose, wet, 5Y6/2 light olive gray.	0.0 ppm	0.0 ppm	266211	Pushed Power Punch 10.0 to 14.0 ft BGS. Took groundwater sample 266211.		
						200211.	Ē	
-							E	
					14.0	- -	E	
			N/A	N/A	N/A		Ē	
3		(Approximate contact) 16.0 SILTY, SANDY CLAY, fine grained, non to	-					
		low plasticity, soft, wet, 5Y6/3 pale olive.						
							E(
							È	
		Ft Sterret	Tanker Purge Fac	sility	20.0	LNI 2 (Durge Destilies)	E	
		PROJECT Ft. Stewart	A-22	aiit y		HOLE NO. LN-2 (Purge Facility)		

		HTRW DRILL	ING LOG			HOLE NUMBER LN-2 (Purge)
ROJECT	Ft. Ste	wart Purge (Tanker) Facility	SPECTOR	Matthew B. Ve	st	skeet 3 of 4
ELEY. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FELD SCREENDIG RESULTS (D)	KEADSPACE (E)	HEADSPACE (F)	REMARKS (G)
	_	Same as above.	0.0 ppm	0.0 ppm	266212	Push Power Punch 20.0 to 24.0 ft
	=		one ppin	olo ppin	and	BGS.
					266222	Take groundwater sample 266212
	=					and 266222.
	_					
					24.0	
					24.0	
			N/A	N/A	N/A	
	111					
	-					
	_					
	コ					
1						
	コ					
1						
			-			
					30.0	
			0.0 ppm	0.0 ppm	266213	Push Power Punch 30.0 to 34.0 ft
	=					BGS.
	_					Take groundwater sample 266213.
	ヨ					
	=					
	-					
	_				34.0	
			N/A	N/A	N/A	
		35.0				
	1	SILTY SANDY CLAY, fine grained, non-				
	_	plastic, saturated, very soft, 6/5GY greenish gray.				
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	4					
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	-					
	一					
	=				40.0	
I		PROJECT Ft. Stewart	Tanker Purge Fac	ility		HOLE NO. LN-2 (Purge Facility)

VECT	Ft. Ste	wart Purge (Tanker) Facility	SPECTOR	Matthew B. V	est	SHEET 4 of 4
LEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	HEADSPACE (E)	HEADSPACE (F)	REMARKS (G)
		Same as above.	N/A	N/A	N/A	Can't push or drive Power Punch @ 40.0 ft BGS depth. Refusal with
	_	Cuttings still showing wet grout-like				Power Punch. Can't even drive it to
		consistency clay-mud with sand, but soil too				sufficient depth with 180 lb automati
		hard to push Power Punch @ 40.0 ft BGS.				hammer.
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	_					
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	_					
	_			i i i i i i i i i i i i i i i i i i i		
					45.0	
		,			226215	1
	=				Soil grab	
					from auger	
	_				flights and	
	コ				bit.	
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	<u> </u>					
	コ					
l	二					
		-		- -		
		50.0				
1		0.00			50.0	
	_	BOH and refusal @ 50.0 ft BGS			1	Could not push or drive Power
		Ŭ				Punch.
	_					Power Punch refusal.
						Take soil grab sample 45.0 - 50.0 ft
						BGS, ID# 266215
	-					
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LUMPANY SAM	541C Ef. Stevart			50 0478ACTIVE MU	ivor=	4					- ZZ		5/ HELPT \
IRUAL I	ANI TYPES OF HALLANS: 211 OUTER OU				ГКИК							/ «	2
Et. Sterr					Tan	ter P.	und						
CANE OF TREELER H. H.	untoon			Tanker Purge • MAMPACTURER DESIGNATION OF DRAL Modile B-47 W Dictrich Soil Probe • HOLE LOCATION See Sketch Gelow									
STEL AND TYPES OF DRALING	ril ouki			\$ HOLE	WCATION			Vicition Poil Pabe					
	<u>4 1''</u> í	yner i	Collo.R	v star	CE ELEVAT	J/Cere		pe/os					
	MALINETH OF HOLE (FF B LS INFECTINGCAL SAMPLES DISTURBED) INFLES FOR CHEMICAL ANALYSIS VOC INFLES FOR CHEMICAL ANALYSIS VOC INFLES FOR CHEMICAL ANALYSIS VOC INFLES FOR CHEMICAL ANALYSIS VOC INFLES FOR CHEMICAL ANALYSIS VOC				STARTED								
				7 11	2/64	3/97	-		DATE CO	88/	97	-	
				13 1601	HOROUNDY		MITELED	s f f	Bb	Ś			
P COTTI (MALE) BITO ROCK						AND ELANSE				PLETE	J		
THALINETTH OF HOLE	RIS			17.0110	R WATER LE	VIL NEASUR	EVENUS (RECEM	cill for in some second				
S LE +1			UNDIST			U MAGERO			•			-	
		·	TALS 7]	<u></u>	-						
				O TADATO		OTHER C	SPECIFY	+	11122.01	ECIFY	- "	TOTAL	<u>, 700</u>
	(AGTILE)	MONITO	ALENO WELL	OTHER OF		3) SIONAT				C.	ù		
TION SKETCH/COMMENTS				SCA				Ways H F-1 ALE: 1"=50'					
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the S	tert								TP	5-	5/		
M H H H H H H H H H H												CFCV	λ I G

(A) (14) CLUTTON OF MATERIALS ar kı FELD ACREEMING REFATS (0) 100131 CENTECH LANDLE OR CORE BOX NO (E) ANALYTICAL BANGLE NO Sand (SW) Well-graded NDUUK 20 14 0.0-2.0 Light gray MYR 7/1 Soft moist 33.3ppm Sand (Sw) wall-graded 9194.N5 50H 0 Moist 2.0-4.0 M 3 1506 ppm 54mp 95 4bove Sand (SW) Well-graded N7 Soft Moist 4.0-60 265111 Varigated Water table = 4.5 BLS 165.3pp TD = 6BLSBoth Hole 5 duplicate and regular pushed TO 6 BLS PROR/ 7 #4. Stewart HOLE NO TP 5-51 A-26

I UMPANY KANE SAIC		2 100 M	Savenah			TPS -
I PRIVET			MDC			SHOTE N
F4. 5th	twort.		4 WCATION	te funde 16 B-47 W See Skefeh		1 / 14
· NAME OF IMPLEX	. /		lan	te Parge		
SZENANU TYPES OF DUBLING		· · · · · · · · · · · · · · · · · · ·	Mob	The R-117 W	Dulil	C 1 D
AND SANPLING EOLONENT	211 00. 0. 14 pp. T	ter Rods	# HOLE LINCAT	ON J T T	aretrich.	oil Prot
		aner Roals	1 SUNVACE ELET	See Sketch	Below.	
TO OVERBURNEN THROWNESS			10 DATE STAAT	Tolos	II DATE CONFLETE	
			IS HEPTHOROUN	WATER ENCOUNTERED	67/0	8/17-
IL DEPTH DRALLED INTO ROCK						/
IN TOTAL DEPTH OF HOLE			16. DEPTH TO WA	TER AND ELAPSED TIME ATT	ER DRALING COMPLETED	
	ft BLS			LEVEL MEASUREMENTS (SPI		
RENTECHNICAL SANDLES	DISTURBEN	UNDISTUR		-		
SAMPLES FOR CHEMOCAL ANALYSIS			- "	TAL MUNRER OF CORE BOX	8	
THE OWITION OF HOLE	1	METALS	OTHER OFFICE YI	OTHER GRECET	OTHER CRECETY	N TOTAL CO
abandoned	BACKTELE) MO	TORING WELL	OTHER GRECETY	11 000		AECOVERY
ATION SKETCH/COMMENTS			benforites	2) SIGNATURE OF DEST	Then	
A A A A A A A A A A A A A A A A A A A				SCALE		
					1"-50	
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(A) DEFECTOR 723 00-Th (10) 5 Z DESCRIPTION OF MATERIALS ar ker ALERALITI ALERALITI (0) CEOTECH EAUDLE OR COLE BOX NO (E) ANALYTICAL BANGLE HO (T) REMARKS Sand Well-graded (5W) 24 24 Hight Gray N7 Moist Soff 0-2 0.0ppm Varigated dark Z red 10 R 3/6 24 2-4 265211 3 625.8pp Same 49 gbour Except boloming Park Gray NH 4+ 3.8 BLS 4 4-6 314.0 pm Samp q & qburp 6 7 8 Sime 454bour Sieve Simple 9 collected from 10 10 813 6.0- 10.0 PROBAT # . Stewart HOLE NO TPS- 52 A-28

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arc: HOU N -53 нтен (П) DESCRIPTION OF MATERIALS 6101.1 NEUD KOUEDON NEUVUTI (D) CEOTECH LANDLE OR COLE BOX NO (E) ANALYTICAL BUNGLE HO NENCON Sand Well-graded (SW) 4 0-2 2.8ррт Light Gray N7 Moist Soft 64 Sind well-gradedism 2-4 Light gray N7 7790 Verigsted Yelowish -feot SYR 4/6 Sind well graded (SW) Light gray N7-N4 To dark gray Moist Soft 8.5 77pcm 3 14 245311 Lind R H 5 6 ٠. (***) . Ft. Stavart HOLE HO TPS-53 A-30

THIRW DRILLING LOG TPS-54 Suvana 1 ANY NASE > DRAL SURA SAIC UD C sari Tanto Purge Ampartues Descuation of Data Jobile B-47 W/Dictrich Soil Probe WILL LOBATION (Hetch Below I PROJECT Ft. Stewart 4 LUCATION NOTE TYPE OF MONITORING (I.e., DUIRING COMPRESSED air, NAME OF DRALLER stor SIZEN AND TYPEN OF DRALLING IND SAMPLING EOUPMENT 00 tre o P nar h , SURFACE ELEVATION 47/05/5+ IN DATE STARTED Q7/49 97 COVERBURISEN THICKNESS 13. DEPTH OROUNDWATER ENCOUNTERED 5.81 BLS INTO BOCK 14. DEPTH TO WATER AND ELAPSED TIME AFTER DRALING COMPLETED TOTAL INPTH OF HOLE 17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) 121865 I MENTECHINACAL SAMPLES DISTURBO UNDISTURBED 19 TOTAL HUMBER OF CORE BOXES 6 ram <u>____</u> K CHEMICAL ANALYSE W METALS OTHER GREAT I'S OTHER GREETY OTHER OPECIFY II TOTAL CORE OSTICH OF HOLE 3) SIGNATURE OF DISPECTOR LOTUE MONTORING WELL OTHER OPECETY han don 1 enten its U CATION SKETCH/COMMENTS SCALE: ,4 = 50 etmosph 3 ŗ Truck Ø. 0 36 122 : ••• HOLF NO (Proponent CFCW EG) A-31

HTRW DRILLING LOG Tes -54 MERECTUR W. Parker E.N (A) DE2*314 (10) DESCRIPTION OF MATERIALS -PELO SCRIZDANG AZRULTI (D) CEDITECH ANDLE OR CORE BOX HO (T) ANALYTICAL BANDLE HO (7) REMAKE (0) 0.0 - 1.3 Black TOP 0-Z 0.0ppm SAND willgridged ¥. supengula soft Z 2-4 9 moist to dry 0.0ppm 24 Same as above 5moll Oky Layor of 3.5 - 3.7 245411 4-6 0.0ppm 20 5 24 water table 5.8 6 wHY \$4 6BL IP= 7 SAND Poorly graded Light gray top 71 subsergular sof 8 Net 9 collected Sieve Sample 6.0-12.0 10 TD = 12 825 11. 12 ROBLI Ft. Stennet A-32 HOLE NO

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067710 (11) มสมา ELEV (A) DESCRIPTION OF MATERIALS (C) ADRULTS (D) میلے NDLUK OR COLE BOX HO (7) ANULYTICAL BANDLE NO 20/24/ well graded Sand 0-2 152.38pm doish graf botts moist 4-5-4 07/09/97 > 2000 ppm landiçr 18 Same as about 24 becoming moister 265511 54nd Poorty Grade d (SN) gray N 5 Soft, wet subangula Wide Table 9t 5.5 BLS TP=6BLS 194 24 1.1717 X7197 4 7 Ť 8 HOLE NO 55 A-34

28 UNTRO 1 INU STREET **, , RW DRILLING LOG** Savanah PS-56 LIMPANT SALE WEET 3 DRAL SUBCONTRACTOR SAIC SHI I NOC Ċ. PROZIT 4 LUCATIN =7 Tanker Gurge +-Stena ALL OF IMPLIES Detrict Soil Probe breathing zone, venting compressed MEN AND TYPES OF DRELING Ron Outer Ð 01 Inner SUBFACE ELEVATIN 1 INTE STAATEN 11 UATE CONDUCTED 4 7-199/57 \$9 57 C WERBURNEN THICKNESS 15 DEPTH GROUNDWATER ENCOUNTERED 5.8 1 BUS A DETTHE MELLER I INTO ROCK 14. DEPTH TO WATEL AND ELAPSED TIME AFTER DRALING CONDUCTED NITAL DEPTH OF HOLE BLS 17. OTHER WATER LEVEL NEASUREMENTS (SPECIFY) F7 ll DISTURBED UNDISTUILLEI) MITECHNACAL SANDLES 19 TOTAL MINBER OF CORE BOXES METALS OTHER OFFICE Y OTHER ISPECTEN THES FOR CHEMICAL ANALYSIS WX H TOTAL CORE OTHER OF ECTIV MOTION MONITORING WEL OTHER CONSCIENT 23 SIGNATURE OF D NIL tonite 1"= 50" CATION SKETCH/COMMENTS SCALE NOTE TYPE UP Tenter Tultes ſ ĠØ Ĵ, Ì ų, Ŵ HOLF NO 4. Ster art 11Ki 94 1Proponent CFCW FG A-35

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HTRW DRILLING LOG MOECT tena р<mark>от</mark>н (II) DESCRIPTION OF MATERIALS E, -AZULTI (D) CEOTECH BANDLE OR COLE BOX NO (E) ANALYTICAL BANGUE HO (T) NDIUL 0.0 - 0.8 Black Top sand woll-graded for 13 13 0-2 0.090m Light groy V7 Subangular moist Soft medium quined ଟ Borly - SWS WHP 3P \$7/9/97 2-4 3 sind 24 265611 graded 79.3pm Light gray N8. Sutsing 14 Moist TO dry 4-6 Medium grained 0.0ppm Same as about TD= 6BLS Water table £ 5.8 PROJECT Ft. Stewart A-36

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Ster PS-57 DCPTH (9) vec DESCRIPTION OF MATERIALS ke/ RHELT PELD SCLEDONG ADSULTS (D) CEOTECH EANOLE OR CORE BOX NO (E) ANALYTICAL EAMPLE NO (F) ADMARKS (0) 0.0-0.8 Black to, 2. 0-2 SAND NOT gradic (SN) 14 0.0ppm Gray SYR 6/1 [H Moist Subanqular Soft 2 2-4 7 SAND Poorly-graded 3 4.17pm 24 (3P) Light Gray N8 Supangular Dr 4. Soft 4-6 265711 1 SAND Well-graded Medium grained (3N) Medium grained Moist Subangular Soft 19.0ppm И 6-8 0.0ppm Water tests at 6.5 BLS TD = 881 3 Ft. Stewart HOLE NO TPS-57 A-38

DOM: N INU STREET HTRW DRILLING LOG Savanah <u>TP5-58</u> I THELE NUBCONTRACTOR MILLEN LINGAND NAVE (moc 54 (C 4 LOCATE RIVET FT. STEWART Tanker Purge Harry / B-47 (Mobile) Hautoon Dictrich Probe 192 venting compresse STEN AND TYPES OF IRELING owkr LOCATIO TPS n 00 -58 SUNFACE ELEVATION UNTECONOLETEN /97 IN DATE STARTED 07 Ø WERBLIEN THICKNESS 13 DEPTH GRO 5.8 Ma zone, PETHIBALED INTO ROCK 14. DETTH TO WATER AND ELAYSED THE AFTER DRALING COMPLETED I/A 17. OTHER WATER LEVEL NEASUREIGHTS (SPECIFY) NOTAL DEPTH OF HOLE breathing DISTURBED ,6.0-12.1 IT TOTAL MANDER OF CORE BOXES CAL SAMPLES NIA Sieve Gnalysis Jľa ٨ 11 TOTAL CORE METAL OTHER OFECT CHEMICAL ANALYSIS With OTHER GRECTY OTHER OFFICEY NA Ż **81/CK711E** MONITORING WELL H OF HOLE OTHER ODECTY \sim A JA entonited Handon CATION SKETCH/COMMENTS SCALE NOTE TYPE OF 1" = 50 ġ **Haggan** ** 15 4 いべつ TANKer Πę n^{ian} Truck S ¥. 800 58 HOLENO FT, STEWART TPS -5 (Proponent CFCW+G) A-39

MONITORING (i.e., borehole cuttings, monitoring

WITH W. Parker 4027 20 (A) TION OF MATERIALS PELD SCREDHING MENUTS (D) CEOTECH LANDLE OR COLL BOX HO (T) AHALYTICAL BANFLE HO (T) NEW (0) WPII - Gryded Synd (SW) Light brownish gray 0.0-1.0 24/24 2:5/6/2 Moist 0.0ppm Well - graded sand (Sw) Blive yellow 6/6 Very Soft Moist 9.14 7.0-4.0 o oppm Poorly-Graded 54 40(5) Light Olive brown 4/3 Very Soft moist 4.0-6.0 265811 24 24 1.8pp fines increase 4 t 5.4 sediment submitted 4 5.8 07/08/57 6.0 water table at 5.8 BL5 8 syme as above 24 sample to wet. falling out spool TD= 12 BLS Ft. Stant 101E HO 7P5-58 A-40

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Note TYPE OF MONITORING (i.e., borehole cuttings, monitoring

MELD SCREEDENO CO MERATE CO ал И) ротн (П) DEKTOPTION OF MATERIALS -CEOTECH BANFLE OR CORE BOX NO (E) AKALYTICAL BANPLE NO (F) RDLLLL Sand well graded sm 20 0.0-20 Olit P yollow 616 Moist Soft 24 0. oppm Z 17.5 124 2.0-4.0 sind well grided sw Light gray"2 Moist Soft 3.2ppm 7/Z 27 Sand wall to Poorty 9-9040 Sw/31 4.0-6.0 245911 Light to Light 6.3 ppm Olive brown 25/ water table at 101: See 5.2 BLS Samo 45 GLOVE 8 Pushod Three 9 speans to collect * Sumple 6-10 Sin ľĎ TD= 10 BLS H. Skwart TP 5-59 A-42

INTE HIKW DRILLING LOG TPS-SIØ Savanah I . IMPANT NAME S INAL SUBCONTRACTOR SAIC 5101 MEET M, //pi (MOC L PROJECT ί.Υ 1 LICATION FT. STEWART ing core, breathing zone, venting compressed air. <u> 195 - 510</u> COALE OF DRALLER Mob, UB.47 2 Dietrich Soil Probe 11 tarry tuntoon MEN AND TYPES OF DRALING Lo prop f ω, NOTE TYPE OF MONITORING (i.e., borehole cuttings, mt interpretation of compression of compression of the compressi Out Rod on. " Inul Sketch Relay D. O.D. SUBJACE ELEVATION IN DATE STARTED IT DATE CONFLETEN 87 9 I WERBURNEN THICKNESS 0 108 9 7 N/A IS DENDLORA ENCOUNTERED IT NOTH DRALLED BOTO ROCK BLS 16. DEPTH TO WATER AND ELAPSED TIME AFTER DUALING COMPLETED NA H ROTAL DEPTH OF HOLE **A** \sim ft б 17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) BLS 6. N/A SATECHNICAL SANDLES DISTURBLE UNDISTURBEL 12 TOTAL HUNGER OF CORE BOXES NIA NA ~/A S MUPLES FOR CHENOCAL ARALYSIS in METALS OTHER OFFECTIV OTHER ISPECTEY OTHER OPECATI II TOTAL CORE マグス NA FORTICH OF HOLE MOJUSI A HONITORIAN WELL on er ar ίCΤ abandone 1) SIGNU NA SIA May toni Ť TION SKETCH/COMMENTS SCALE: = 50 Se 33 541.12 U 99 100 9 Tunkar Trucks Ś C ų V 1 ١V; 310 HOLF NO Ft. Stewart TPS-5/0 Proponent CFCW FGG A-43

(A) юстти (П) DERCEPTION OF MATERIALS 77 ABELD SCREENING ABELL TO (D) CEOTECH AMPLE OR COLE BOX NO (E) ANALYTICAL AMPLE HO ADIUS Sand well graded (SW) 18 dark red To dark yellowish 0-2 oringe IOR 3/6 -104R 6/6 moist GPD wHP Very Sort moist GPD wHP Very Sort 2 24 54nd Poorly graded 2.0-4.0 Gray 54R 6/1(3P) 9.6pp, Moist vory 50ft 3 265A11 9.6 ppm 4 Same as above 5 4.0-6.0 Water table 7 4B25 0.0ppm TD = 6.0 BLS HOLE HO TPS-510 A-44

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*GPLCTOP W. Parko . 61.FV (A) осли (П) DESCRIPTION OF MATERIALS MELD SCREENING ADJULTS (0) CEOTECH BANDLE OR CORE BOX HO (E) NDUULS (0) ANALYTICAL BANFLE NO 19 SAND Well-graded (SN) Gray 7.5YF 6/1 70 14 0-2 265B11 770.4ppm Black 2.5N Subanquan Soft moist 2 24 Samp as above 2-4 172.0 APM Sand with silf (SW-SM 19 Light gray 7N Subanguar Soft Mist 4-6 25.0 ppm TD=6BLS Water taple 2 5.4 BLS fewat HOLE HO 785 - 511 A-46

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an cr шгч (Л) (PEPT)) (PE) DESCRIPTION OF MATERIALS 2 MELD ACTUED ONG ACTUUTS (D) CEOTECH SAUDLE OR CORE BOX HO (E) ANALYTICAL BANDLE NO (F) REMARK Sand well-grade d (w) medium grained Light gray 54R7/1 Moist Soft 0-2 Holp Augpud with 24 mich hand Auger 101.0ppm Samp 45 Gbout 3 2-4 Simples Collected 265011 136.8ppm Gt z' intervals Water table 47 2 35 BLS 0-2, 2-4 TD=4BLS HOLE NO SIZ 75 A-48

DATE DATE DATE LOG ----2GVG1hg -----54 513 2 DRAL AUBCONTRACTO PROACT SHELLI MELTY Z N. pring. PAUGU 4 LUCATE J air, NAME OF DRALES JAG 6 . MANUFACTURERS DE 41 900 STEN AND TYPES OF INALING probe È venting compre. # HOLE LOCATION borehole cuttings, dow * SURFACE ELEVATION IN DATE STARTED IL DATE CONDLETE C WERBLAUEN THICKNESS 4 IS DEPTH GROUND THETRO zone, H PETH (RALE) NTO ROCK 8 3 16. DEPTH TO WATER AND DLAPSED THE AFTER DALLING COMPLETED OF MONITORING (i.e., IN WALLIETTH OF HOLE thing 313 5.0 17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) CALECHARCAL SAMPLES DISTURBED UNDISTURBED) IF TOTAL MANDER OF CORE BOXES THERE'S FOR CHENOCAL AMALYSIS Vin METALS OTHER (SPECT Y OTHER GRECTEN OTHER OFFICET 21 TOTAL CORE MON OF HOLE BACKFELEI) MONTORING WELL OTHER GRECKY 23 SIGNATURE OF DOD e, TION SKETCH/COMMENTS SCALE NOTE TYPE "= 50 4 ŝ Q 3 1 5 C G Ŵ \$ Ň. - - -HOLL NO 513 (Proponent: CFCW-Eco إلا A-49

44921.1 n ADRILL SCREENING ADRILLTS (D) GEOTECH EUNPLE OR CORE BOX HO (E) ANALYTICAL ANAPLE NO NDIAUK (0) Sand Well-graded 2 10% Silt & Clay Light gray Syr 7/1 0-Z 65.8ppn Moist Subançuku medium graine d 5044 3 w# 07/09/97 Sand well-graded with Olay (SN-SC Light gray N7 Wet, Subangua Soft madium grained 265D11 2-4 1176.0ppm TD = 5.0water table z Sieve analysis Collected from 3.8 BLS 4.0-5.0 HOLE NO 12 A-50

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HTRW DRILLING LOG HOLE MUNOU <u>5 | 5</u> Stewart Fł. Tanker Purge MAPLOTOR HOLET 292 DESCRIPTION OF MATERIALS ытаю (#) ELD SCREDANG AZKATS (D) OR CORE BOX HO ANALYTICAL RANATE HO. (7) NENLINES (O) SENC Will greated (SW) Modium gray NS TO Black NI Soft Moist 0-2. 6.600m 4 Soft moist Sand Wall graded SW 07/14/97 with Silt SM - SW Soft Wat Light gray NT D = 4.08LS 1670 3 Ŷ, 4 wą ata 46/p gt 2 4.0825 A-54

3 URALL SUBCONTRACTOR 516 ET IMPANY NAME N 2 WETI MPC I PROJET Stewar 4 LUCATION 14n/41 ters NAME OF DRILLER . MANUFACTURERS DESIGNATION OF DEAL Mobi SZEN AND TYPES OF DREENED AND SASPLING EOUPMENT -71 α I HOLE LOCATION 617 me Work T SLEFACE ELEVATION 10 DATE STARTEN IL UATE COMPLETED Ø 2 1: OVERBURDEN THICKNESS IS DEPTH GROWNING TER ENCOUNTERED NA 55 1 B65 IN DEPTH DRALED INTO ROCK 14. DEPTH TO WATER AND ELAPSED THE AFTER DRALING CONFLETED NA H TOTAL INEPTH OF HOLE 17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) [1 I DEOTECHNICAL SAMPLES DISTURBED UNDISTURBED 19 TOTAL MANSER OF CORE BOXES TA SAMPLES FOR CHENICAL ANALYSIS VOC METALS OTHER (SPECT ') OTHER OFFICERY H TOTAL CORE RECOVERY OTHER GRECTY) / 50// B LESPOSITION OF HOLE MONITORING WELL OTHER OFFCERY 3) SIGNATURE OF Cla 1 -IDCATION SKETCH/COMMENTS SCALE: ÿ 763 Ŵ GW: HOLENO 5Hewart 51 Alk: VA (Proponent CFCW FG) 2/ A-55

 NOTE TYPE OF MONITORING (i.e., borehole cuttings, moments well atmosphere, soil core, breathing zone, venting compressed air,

CEOTECH EALPLE DE CORE BOX HO (E) ANALYTICAL BANFLE NO ADLAUK 59nd wellgraded bu 0-Z reddish yellow 7.57.96 0.0 ppm modium to fine 1515 20/24 Sand poorly graded (SP) pinking white 1 y 3. 2-4 (SP) 0.0 ppm 1515 7.5YR 8/2 4-Sand well graded with silt (SW-SM) Light Gray N7 4-6200. ppro 2000/00/14/57 155 WH 07/14/57 V, 265611 3 24 water table 6 TD=6BLS 2 5.5 BLS ROALT HOLE NO 22 A-56

HIKW DRILLING LOG <u>5quangh</u> I I I MEANY NAME SA. LIKEL SUBCONTIL SHOT 1 HUT I PRODO F.f. Stewar 4 LOCATION Tarter ing. soll core, breathing zone, venting compressed air. · NAVE OF DRALER MANUFACTULERS DEPONATION OF DRA TUNY 41 tour MObil SIZEN AND TYPEN OF DRALING (MUSAAPUNG EQUIPMENT HOLE LOCATION MONITORING (i.e., borehole cuttings, mc 0141 0 200 Del th fo Y SURFACE ELEVATION 10 DATE STAATED H UATE CONFLETE 47 IT OVERDURUSEN THROWNESS IS DEPTH GROUNDWATER ENCOUNTERED NA 5. IL DEPTHEDRALED INTO ROCK 14. DEPTH TO WATER AND ELAPSED THAT AFTER DALLING COMPLETED いがならは高ないな H TOTAL DEPTH OF HOLE 17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) BLS PROTECHINCAL SAMPLES DISTURBUT UNDISTURBED 19 TOTAL HAINGER OF CORE BOXES SAMPLES FOR CHEMICAL ANALYSIS VXX METALS OTHER (SPECTON) OTHER GRECEY OTHER OFFICERY H TOTAL CORE SANSTINN OF HOLE MOSTILLEI MONITORING WELL OTHER OFFICE YI <u>))</u> 🛛 Glandone DCATION SKETCH/COMMENTS NOTE TYPE OF atmosphere, SCALE 64m HOLENO Hwat 7 5 (Proponent CFCWEG 3 A-57
un per y wige MILCTO ELEV (A) DEPTH (U) DESCL -TICH OF MATERIALS PELO SCILEDINO MENULTI (D) CEOTECH BAUMPLE OR CORE BOX NO (E) ANALYTICAL ANAPLE HO (7) КЭЦЦКІ (0) 0.0- 0.7' Black Top 0-2 72.1 ppr 14/5 14 14 265H11 Synd well graded SW) Light gray ISW, 14/24 NI SUBLINGULA Soft duy z-4 6.0 ррм 1415 Same 44 Gboue Same as about Except for Moist To wet 19 14 4-6 Wata table GF 5.7 BL \$ 0.0pp 6. TD = 6BLS..................... PROFLE -36 HOLE NO A-58

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Etistantes Tanker Purge SHEET <u>ви</u> м) PIELD SCREED-INO NERULYS (D) OR COLE BOX NO ANALYTICAL BANDLE HO NDAN (0) Sand poorly graded 60 0-2 Subanque Soft muist Lightgray NZ 6.0000 18/24 2. 265511 20 24 3 3-WHI SAMO as GOOUP WHI B 5 SEND with silt. 6 Well greaded morst SOFF to Firm MOIST TD = 6 BLS 4.0 BL 2-4 0.0ppm Water Holpo at 50 bl.3 4.0 ROALT 29 HOLE NO A-60

I HALL SUBCONTRACTOR PRIVATI WEIT Miller Drilling stewart + LUCATION ssed air, I NAVE IN TRALER WVG 6 Hutron 2" 00 . MANUFACTURES MUDI STEN AND TYPES OF DUALS GPO 04 # HOLE LOCATION MAP coll core, breathing zone, venting con. * SURFACE ELEVATION IN DATE STARTED II UNTECO IT OVERALIRUSEN THICK NESS NA EL ENCOUNTEUED IT DEPTHERALET I DATO ROCK 5. NA 14. DEPTH TO WATER AND ELAPSED TIKE AFTER DRALING COMPLETED H TOTAL DEPTH OF HOLE 6.0 BLS 17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) S GEOTECHARCAL SANDLES DISTURBED UNDETURIE) IT TOTAL MUNDER OF CORE BOXES THATLES FOR CHENOCAL ANALYSE Voc METALS OTHER OFFICE Y OTHER GREET OTHER GRECTEY 1 HECOVERY POSITION OF HOLE 11 ACITELEI) MONITOWING WELL OTHER GRECTY abunlored 3) SIGNATURE O PATION SKETCH/COMMENTS SCALE: **Month** 1 ----· ···· .. :. Stewar HOLENO 5 K. AIK: 94 Proponent CFCW EGO 28 A-61

onitoring

• NOTE TYPE OF MONITORING (i.e., borehole cutting

11 HTRW DRILLING LOG LIOH 519 Ft. Stewart Tunker Purge Maria 8403.7 02 647 (A) DE)77H (B) DESCRIPTION OF MATERIALS ALERAL TS (D) CEOTECH BANDLE DR CORE BOX NO (E) ANALYTICAL EANDLE NO (F) ND-11111 0-1.2 Black TOP Sand well graded 1.0-3.0 1335 Pale yellow 2.548/2 0.0 pp dry predium Grained Supangular fort. 20-5.0 12 24 2-3. 3.0-5.0 1335 215.0ppm Z Boloming dart Grayish Drown 2.575/2 24 2 at 5.5 BLS Weta Tuble 2 b 5.0-6.0 700.000m 265KII TD=6.0BLS PROBAT 29 A-62 HOLE NO

1641 NT 1811 F INSTRUCT HTRW DRILLING LOG 52 ð Surgnigh SHEETI 2 INEL SUBCONTRACTOR MDC MILTY I COMPANY NAME 54 2 Ø. 4 LOCATION 1.7608.03 Steward 149/1 breathing zone, venting compressed a MANUFACTURENS DESIG NAME OF DRALES yyp. SIZEN AND TYPES OF DRULLIN AND SANPLING EOUPMENT 1 HOLE LOCATIO 2 o0 at * SURFACE ELEVATION Inne Ø h UATE COMPLETED IN DATE STARTED 18 1 IT OVERBURDEN THICKNESS WATER ENCOUNTERED IS DEPTH GROUN VA ģ 14. DEPTH TO WATER AND ELAPSED TIME AFTER DRALING COMPLETED B DETILORALED BITO ROCK 17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) S TOTAL DEPTH OF HOLE RL S IT TOTAL MANAGER OF CORE BOXES DISTURGED UNDETURAL FOTECHNICAL SANDLES TYPE OF MONITORING 21 TOTAL CORE OTHER OPECATY) METALS OTHER OFFICE T vov OTHER GRECTY EALIPLES FOR CHERICAL ANALYSIS • 501 Ś HACHET COLDAG WELL OTHER GRECTY 23 SIGNATURE OF BE BACK/TLLED INSPOSITION OF HOLE Charbert SCAL ICATION SKETCH/COMMENTS Saphere. 7 *5*70 μ Ň wate Ş. Ľ. Willie W Q 3 Ĩ, 20 5 HOLF NO Ft. stewert. 529 (Proponent CFCW EG) MISG-R, AUG 94 c A-63

(i.e., borehole cuttings, monitoring

ш. (А) осутн (Ф) PAPECTOR HOU MANY DESCRIPTION OF MATERIALS PIELD SCREDMIN RESULTS (D) HELT CREDTECH BANDLE OR CORE BOX HO (E) ANALYTICAL BANGIE NO 22 REMARKS 54nd well graded (SW) Light Grades To modiun grades 24 Z O SUDGIST & 8 3 24 <u> 24 m</u> Z Very lo orgnge O. Open 150FF MO 15 24 sind with clay 24 Well graded Soft wat Light gray (N7) 265M11 6 mhultuhut 111111111 untru lini PROMUT A-64 HOLE NO 36

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12 OVERBUILDEN THICKNESS		2			15. DEPTH	CROUNDY	VATER EXCO		2		/
IT DEPTH DRALLET INTO ROCK	<u> </u>	Λ.			16. DEPTI	TOWATE	ANDELAN		EX DILLUNG C	ONGLETED	
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H TOTAL DEPTH OF HOLE	NA	2			17.07142	R WATER LE	EVEL NÆASU	1940/15 (31	5 017 71		
IS GEOTECHOICAL SAMPLES		ne	NA	UND	STURBEL	19 101.	AL HAINGER	OF CORE BOX	<u>p</u>		
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/			<u>_</u> _+		-						RECOVERY
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RM 5056-	R, AUG 94						_		•	(Propos	ient CFCV
					A-65						

10 KCRUDD ABBULTS (0) GEOTECH LAND LL BR COLE BOX NO 1011113 101 ANALYTICAL EANIFLETIO 0.0-0.5' Black Tup Sand with silt Well graded 0-Z 0.0pp 1430 14 18 2 reddigg yellow 7.5YR 6/8 . 3-R 24 2-4 0.000m 1430 same as good Except 2.5/N TD = 6.BLS 4-R ZUSNII 4-6 0.0ppm 1430 24 Groond Water table 4+5.7BLS -18-4--HOLE NO A-66

PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANKER PURGING STATION FORT STEWART, GEORGIA

APPENDIX B

MONITORING WELL CONSTRUCTION DIAGRAMS

.

PROJECTI FORT STEWART - TANK PURGE

DELIVERY ORDER: 0007

MONITORING WELL ID:	MW-1 Tanker P	urge			
INSTALLATION START:	DATE:	23-97	TIME:		
INSTALLATION FINISH:	DATE:	23-97	TIME:	1920	
ANNULAR SPACE MATERIA	LS INVENTORY:				
GRANULAR FILTER PAC	ж: түре:	DSI Extra Fine Sa	ınd	QUANTITY:	5 bags (250 lbs.)
BENTONITE SEAL:	TYPE:	DSI Pellets 3/8"	-	QUANTITY:	1/2 bucket (25 lbs.)
GROUT:	TYPE:	N/A	_	QUANTITY:	N/A
DESCRIPTION OF WELL SCI	REEN:				
SLOT SIZE (inches):	0.00P"	SLOT CONFIGUR	ATION:	#6 slotted	
TOTAL OPEN AREA PER	FOOT OF SCREE	N:			
OUTSIDE DIAMETER:	2.3"		DIAMET	ER: <u>2.0"</u>	
SCHEDULE/THICKNESS	:40	(COMPOS	BITION:	PVC
MANUFACTURER:	DSI				
TYPE OF MATERIAL BETWE	EN BOTTOM OF	BORING AND SC	REEN;		and the second
DESCRIPTION OF WELL CAS	ING:				
	2.3*	NOMINAL INSIDE	DIAMET	ER: <u>2.0"</u>	
SCHEDULE/THICKNESS:	40	0	OMPOS	ITION:	PVC
MANUFACTURER:	DSI				
JOINT DESIGN AND COMPOS	ITION: Thread	ed PVC			
CENTRALIZERS DESIGN AND	COMPOSITION	: <u>N/A</u>			
DESCRIPTION OF PROTECT	VE CASING:				
NOMINAL INSIDE DIAMET	TER: <u>4×4" squar</u>	• COMPOSI	TION:	steel above (Irade
SPECIAL PROBLEMS ENCOU	INTERED DURIN	IG WELL CONST	NUCTIO	N AND THE	IR RESOLUTION:
					ow causing ~1 ft of sand
above screen top and ~1	ft of bentonite se	al above sand while	stili lett	ing protective	post 2' BGS
Was all well screen and casing i grease, etc.)? YES [4] NO [] Was all well screen and casing i breakage and/or defects? YES [Is deformation or bending of the retrieval of a 1.0-inch bailer thro QUANTITY OF APPROVED WA	material used for Y]NO[] installed well scru ughout the entire	construction free o een and casing mi length of the comp	of unsec Inimized Dieted w	ured coupling to the point rell? YES [4]	gs, ruptures, and other physical of allowing the insertion and NO []
RECORDED BY:		QA CH	ECK BY:		tin ap-light-in-
(Signati	ure & Date)			(S	ignature & Date)



PROJECT: FORT STEWART - TANK PURGE

DELIVERY ORDER: 0007

MONITORING WELL ID:	MW-2 Ta	inker P	urge			
INSTALLATION START:	DATE:	7-2	4-97	TIME	1330	
INSTALLATION FINISH:	DATE:	7-2	4-97	TIME	1430	
ANNULAR SPACE MATERIA	LS INVEN	TORY:				
GRANULAR FILTER PA	ск:	TYPE:	1# DSI	_	QUANTITY:	6 bags (50 lbs.)
BENTONITE SEAL:		TYPE:	1/4" pellet plug		QUANTITY:	3/4 5 gal bucket
GROUT:		TYPE:	N/A	_	QUANTITY:	<u>N/A</u>
DESCRIPTION OF WELL SC	REEN:					
SLOT SIZE (Inches):	0.008"		SLOT CONFIGUR	ATION:	slotted	
TOTAL OPEN AREA PE	R FOOT OF	SCREE	N:		_	
OUTSIDE DIAMETER:	2.4"		NOMINAL INSIDE		'ER: 2.0"	
SCHEDULE/THICKNES	3:	40		COMPO	SITION:	PVC
MANUFACTURER:						
TYPE OF MATERIAL BETWE			BORING AND SC	REEN	DS #1 s	and
DESCRIPTION OF WELL CA						
OUTSIDE DIAMETER:	2.4"	-			TER: 2.0"	
SCHEDULE/THICKNESS		40		COMPO		PVC
MANUFACTURER:	DSI					
JOINT DESIGN AND COMPO	SITION:					
CENTRALIZERS DESIGN AN	D COMPO	SITION	: None			
DESCRIPTION OF PROTECT	IVE CASIN	IG:				
NOMINAL INSIDE DIAMI	ETER: <u>4×4</u>	4" squai	COMPOS	TION:	steel above	grade
SPECIAL PROBLEMS ENCO						
Due to shallow ground	water table	@~5.0	BGS well had to be	screen	ed shallow c	ausing ~1 ft of sand above
screen top and ~1.5 ft (of bentonite	seal ab	ove sand while still	letting	protective po	st 1.5' BGS
Was all well screen and casing grease, etc.)? YES [4] NO []			-	•	
was all well screen and casing breakage and/or defects? YES			CONSTRUCTION ITEE	of Unse	сигва соирш	ngs, ruptures, and other physic
Is deformation or bending of th retrieval of a 1.0-inch bailer thr	e installed	well sci	_		•	-
QUANTITY OF APPROVED W	ATER USE	ed for	FILTER PACK E	NPLAC	EMENT:	
RECORDED BY:					<i>4</i> .	
	iture & Dat	a)	QA Cr	IECK B	*************	Signature & Date)
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PROJECT: FORT STEWART - TANK PURGE

DELIVERY ORDER: 0007

MONITORING WELL ID: _	MW-3 1	anker F	Purge			
INSTALLATION START:	DATE:	7-:	24-97	ТІМЕ	: <u>1715</u>	
INSTALLATION FINISH:	DATE:			ТІМЕ	:	
ANNULAR SPACE MATERIA	ALS INVEI	NTORY:				
GRANULAR FILTER PA	CK:	TYPE:	DSI#1 sand	<u> </u>	QUANTITY:	N/A-used but quantity not know
BENTONITE SEAL:		TYPE:	DSI 3/8" pellets		QUANTITY:	N/A-used but quantity not know
GROUT:		TYPE:	N/A	_	QUANTITY:	N/A
DESCRIPTION OF WELL SC	REEN:					
SLOT SIZE (inches):	0.008"		SLOT CONFIGU	RATION:	#8 slotted	
TOTAL OPEN AREA PE	r foot of	SCREE	N:			
OUTSIDE DIAMETER:	2.3"				ER: _2.0"	
SCHEDULE/THICKNES	S:	40		сомро	SITION:	PVC
MANUFACTURER:	DSI					
TYPE OF MATERIAL BETWE	EN BOTT	OM OF	BORING AND S	CREEN	DSI#1 sa	nd
DESCRIPTION OF WELL CA	SING:					
OUTSIDE DIAMETER:	2.3"		NOMINAL INSID		TER: <u>2.0*</u>	
SCHEDULE/THICKNES						PVC
MANUFACTURER:	DSI					
JOINT DESIGN AND COMPO	SITION:	Thread	led PVC			
CENTRALIZERS DESIGN AN	DCOMPO	SITION	I: <u>N/A</u>			
DESCRIPTION OF PROTECT	IVE CASI	NG:				
NOMINAL INSIDE DIAM	ETER: <u>4 ×</u>	4" squa	COMPOS	TION:	steel above g	grade
SPECIAL PROBLEMS ENCO	UNTERED	DURIN	IG WELL CONST	RUCTIC	ON AND THE	IR RESOLUTION:
Due to shallow ground	water well	set with	bentonite seal ~1.	0' thick a	nd ~1.0 ft of fli	ter pack above the top of
the screen,						
						······································
Was all well screen and casing		ised for	construction free	of foreig	n matter (e.g	., adhesive tape, labels, soil,
grease, etc.)? YES [4] NO [Was all well screen and casing	-	end for	construction from	ofunna	aurod oouolio	gs, ruptures, and other physical
breakage and/or defects? YES			construction nee	UI UIISO	oreu coupiinț	gs, rupiures, and other physical
ls deformation or bending of th retrieval of a 1.0-inch bailer thr	e installed oughout th	well scr e entire	een and casing n length of the con	ninimized opleted v	d to the point vell? YES [4]	of allowing the insertion and NO []
QUANTITY OF APPROVED W	ATER US	ed for	FILTER PACK E	NPLAC	EMENT:	~25 gal
RECORDED BY:			04.0	HECK BY		
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PROJECT: FORT STEWART - TANK PURGE

DELIVERY ORDER: 0007

MONITORING WELL ID: <u>MW-4 Tanker Purge</u>	_
INSTALLATION START: DATE: <u>7-26-97</u>	TIME: <u>1840</u>
INSTALLATION FINISH: DATE: <u>7-27-97</u>	TIME: <u>1105</u>
ANNULAR SPACE MATERIALS INVENTORY:	
GRANULAR FILTER PACK: TYPE: DSI##	and QUANTITY: <u>7 bags (350 lbs)</u>
BENTONITE SEAL: TYPE: DSI 3/6	" pellets QUANTITY: 1/2 5 gal bucket
GROUT: TYPE: DSIP	ortland coment QUANTITY:
DESCRIPTION OF WELL SCREEN:	
SLOT SIZE (Inches): 0.010" SLOT C	ONFIGURATION: #10 slotted
TOTAL OPEN AREA PER FOOT OF SCREEN:	
OUTSIDE DIAMETER; 2.3" NOMINA	AL INSIDE DIAMETER: 2.0"
SCHEDULE/THICKNESS: 40	COMPOSITION: PVC
MANUFACTURER: DSI	
TYPE OF MATERIAL BETWEEN BOTTOM OF BORING	AND SCREEN: DSI #2 sand
DESCRIPTION OF WELL CASING:	
OUTSIDE DIAMETER: 2.3" NOMIN	AL INSIDE DIAMETER: 2.0"
SCHEDULE/THICKNESS: 40	
MANUFACTURER:	
JOINT DESIGN AND COMPOSITION:	
CENTRALIZERS DESIGN AND COMPOSITION:	A
DESCRIPTION OF PROTECTIVE CASING:	
NOMINAL INSIDE DIAMETER: <u>4 × 4" square</u>	COMPOSITION: steel, above grade
SPECIAL PROBLEMS ENCOUNTERED DURING WELL	CONSTRUCTION AND THEIR RESOLUTION:
None.	
Was all well screen and casing material used for construc	tion free of foreign matter (e.g., adhesive tape, labels, soil,
grease, etc.)? YES [1] NO []	
breakage and/or defects? YES [/] NO[]	tion free of unsecured couplings, ruptures, and other physical
Is deformation or bending of the installed well screen and	casing minimized to the point of allowing the insertion and
retrieval of a 1.0-inch bailer throughout the entire length of	
QUANTITY OF APPROVED WATER USED FOR FILTER	PACK ENPLACEMENT: 25 gal
RECORDED BY:	
(Signature & Date)	
(Signature & Date)	(Signature & Date)

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PROJECT: FORT STEWART - TANK PURGE

DELIVERY ORDER: 0007

MONITORING WELLID:	MW-5 Tanker Purg	<u>e</u>		
INSTALLATION START:	DATE:	7 <u> </u>	IE: <u>0910</u>	
INSTALLATION FINISH:	DATE:	97 TIK	IE: <u>1020</u>	and a feature of the second
ANNULAR SPACE MATERIA	LS INVENTORY:			
GRANULAR FILTER PAC	K: TYPE: _#	2 DSI	QUANTITY:	6 1/2 50 ib bags
BENTONITE SEAL:	TYPE: _1	4" pellet plug	QUANTITY:	1/2 5 gal bucket
GROUT:	TYPE:		QUANTITY:	
DESCRIPTION OF WELL SCR	EEN:			
SLOT SIZE (Inches):	<u>0.010"</u> SI	OT CONFIGURATIO	t: slotted	
TOTAL OPEN AREA PER	FOOT OF SCREEN:			
OUTSIDE DIAMETER:	<u>2.4" NC</u>	MINAL INSIDE DIAM	ETER: _2.0"	
SCHEDULE/THICKNESS:	40	сом	OSITION:	PVC
MANUFACTURER:	DSI			······································
TYPE OF MATERIAL BETWEE	N BOTTOM OF BO	RING AND SCREE	 N: #2 DSisa	nd
DESCRIPTION OF WELL CAS				
	2.4" NO	MINAL INSIDE DIAN	IETER: 2.0"	
SCHEDULE/THICKNESS:				PVC
MANUFACTURER:				
JOINT DESIGN AND COMPOS	ITION: Flush thre	aded		
CENTRALIZERS DESIGN AND	COMPOSITION:	None		
DESCRIPTION OF PROTECTIV	/E CASING:			
NOMINAL INSIDE DIAMET	ER: <u>4 × 4" square</u>	COMPOSITION	steel above g	grade
SPECIAL PROBLEMS ENCOU	NTERED DURING V	VELL CONSTRUCT	TION AND THE	R RESOLUTION:
Due to shallow groundwi	ter, well was set with	I ft of sand above top	of screen and 1	ft of bentonite seal above
sand to allow protective	casing to be set at 2.0	ft BGS.		
Was all well screen and casing r grease, etc.)? YES [1] NO [1] Was all well screen and casing n breakage and/or defects? YES is deformation or bending of the retrieval of a 1.0-inch bailer throu QUANTITY OF APPROVED WA	naterial used for con NO [] installed well screen ighout the entire leng	struction free of uns and casing minimiz th of the completed	ecured coupling ed to the point f well? YES [4]	gs, ruptures, and other physical of allowing the insertion and NO[]
RECORDED BY:		OA CHECK	BY:	
(Signatu	re & Date)		(SI	ignature & Date)



PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANKER PURGING STATION FORT STEWART, GEORGIA

APPENDIX C

AQUIFER (SLUG) TEST RESULTS

Conductivity (K) Calcul	Less Date	Ansurg Iteau Evaluation Method Bouwer & Rice (1976) - C		S	el 5.00 ft.BRP	2.00 in Radius of borehole (rw)	8.00 in Effective radius/well radius ratio ln(Re/rw) 3.20	kness (H) 10.00 ft Effective length of screen (Le) 9.50	9.50 ft Distance from static water level at t=0 (Yo) 0.50	10.00 ft Hydraulic conductivity (K) 1.40E-04	MW-1 Rising Head Slug Test							0.1			0.01	0 5 10 15 20 25 30 35	Time (min)	
Well ID	Test Tyne	ACCULT PPC	Derek also berear and a second s	Borenoic Parameters	Pretest water level	Casing diameter	Borehole diameter	Saturated thickness (H)	Screen length	Saturated penetration (Lw)		•		(um	.ор	WB				0.01	0		

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	1 Rising Head Slug Test

		(* TC. V. ()(IC. 7. ()(KG/LM))	Y calc (ft)
0.085	2.148	0.010	0.495
0.09	1.331	0.011	0.495
0.095	1.149	0.011	0.494
0.1	1.49	0.012	0.494
0.1058	1.294	· 0.013	0.494
0.112	1.271	0.013	0.493
0.1185	1.199	0.014	0.493
0.1255	1.186	0.015	0.493
0.1328	1.156	0.016	0.492
0.1407	1.121	0.017	0.492
0.149	1.063	0.018	0.491
0.1578	1.031	0.019	0.491
0.1672	1.003	0.020	0.490
0.177	0.973	0.021	0.490
0.1875	0.943	0.022	0.489
0.1985	0.925	0.024	0.488
0.2102	0.904	0.025	0.488
0.2227	0.883	0.027	0.487
0.2358	0.865	0.028	0.486
0.2498	0.847	0.030	0.485
0.2647	0.837	0.032	0.484
0.2803	0.83	0.034	0.484
0.297	0.814	0.036	0.483
0.3147	0.803	0.038	0.482
0.3333	0.796	0.040	0.480
0.3532	0.787	0.042	0.479
0.3742	0.777	0.045	0.478
0.3963	0.773	0.047	0.477
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	y=n	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
0.4447	0.752	0.053	0.474
0.4697	0.745	0.056	0.473
0.4963	0.738	0.059	0.471
0.5247	0.729	0.063	0.470
0.5547	0.72	0.066	0.468
0.5863	0.713	0.070	0.466
0.6213	0.704	0.074	0.464
0.658	0.694	0.079	0.462
0.6963	0.685	0.083	0.460
0.738	0.678	0.088	0.458
0.7813	0.671	0.094	0.455
0.828	0.662	0.099	0.453
0.8763	0.653	0.105	0.450
0.928	0.644	0.111	0.447
0.983	0.637	0.118	0.444
1.0413	0.627	0.125	0.441
1.103	0.618	0.132	0.438
1.168	0.609	0.140	0.435
1.238	0.597	0.148	0.431
1.3113	0.588	0.157	0.427
1.3897	0.579	0.166	0.423
1.473	0.567	0.176	0.419
1.5613	0.556	0.187	0.415
1.6547	0.544	0.198	0.410
1.753	0.533	0.210	0.405
1.858	0.521	0.222	0.400
1.968	0.51	0.236	0.395
2.0847	0.498	0.250	0-390
2 2097	NAN O	5760	

MW-1 Rising Head Slug Test Hydraulic Conductivity Worksheet

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Elapsed Time (min)	y=ft	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
2.3413	0.473	0.280	0.378
2.4813	0.459	0.297	0.372
2.6297	0.445	0.315	0.365
2.7863	0.431	0.334	0.358
2.953	0.418	0.353	0.351
3.1297	0.406	0.375	0.344
3.3163	0.392	0.397	0.336
3.5147	0.378	0.421	0.328
3.7247	0.364	0.446	0.320
3.9463	0.351	0.472	0.312
4.1813	0.334	0.501	0.303
4.4297	0.321	0.530	0.294
4.693	0.309	0.562	0.285
4.973	0.293	0.595	0.276
5.2697	0.279	0.631	0.266
5.583	0.265	0.668	0.256
5.9147	0.254	0.708	0.246
6.2663	0.24	0.750	0.236
6.6397	0.228	0.795	0.226
7.0347	0.217	0.842	0.215
7.453	0.203	0.892	0.205
7.8963	0.191	0.945	0.194
8.3663	0.182	1.001	0.184
8.8647	0.171	1.061	0.173
9.3913	0.159	1.124	0.162
9.9497	0.15	1.191	0.152
10.5413	0.138	1.262	0.142
11.168	0.129	1.337	0.131
11.8313	0.12	1.416	0.121

RESMW-1.XLS

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	Ycalc (ft)	0.112	0.102	0.093	0.084	0.076	0.067	0.060	0.053	0.047	0.042	0.037	0.033	0.029	0.026	0.023	0.020	0.018	0.016	0.014	0.013	0.011
Hydraulic Conductivity Worksheet	(2*Le*K*t)/(rc^2*ln(Re/rw))	1.500	1.590	1.684	1.784	1.890	2.003	2.121	2.241	2.361	2.481	2.600	2.720	2.840	2.959	3.079	3.199	3.318	3.438	3.558	3.678	3.797
Slug Test	y=ft	0.113	0.106	0.101	0.092	0.085	0.081	0.074	0.072	0.065	0.062	0.06	0.055	0.053	0.053	0.051	0.051	0.048	0.048	0.046	0.046	0.046
MW-1 Rising Head	Elapsed Time (min)	12.5347	13.2797	14.0697	14.9063	15.7913	16.7297	17.723	18.723	19.723	20.723	21.723	22.723	23.723	24.723	25.723	26.723	27.723	28.723	29.723	30.723	31.723

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													Actual			Art		· · ·		100	
		(1976)		,	£	£	ų	: 4 3	ŧ	ft/min									-	. 06	-
tion	8/10/97	Bouwer & Rice (1976)			0.01	0.33	2.56	10.00	0.27	4.00E-05										80	
Slug Test Hydraulic Conductivity (K) Calculation	Ø						n(Re/rw)		t=0 (Yo)											70	
rity (K							us ratio li	(Le)	r level at	(Y)	· Fest								-	60	
onductiv		lethod		a anicicio	ing (rc^2)	cehole (rw)	Effective radius/well radius ratio ln(Re/rw)	Effective length of screen (Le)	Distance from static water level at t=0 (Yo)	Hydraulic conductivity (K)	Slug Test								-	50	Time (min)
raulic C	Test Date	Evaluation Method	Calculation Domination		Kadius of casing (rc^2)	Radius of borehole (rw)	ffective radi	ffective leng	istance fron	(ydraulic co	Rising Head								-	40	F
st Hyd	Ľ	E																	+	30	
		P			II BKP	.u			ų	ŧ	MW-2				Minutes					20	
	MW-2	Rising Head			00.c	2.00	8.00	10.00	10.20	10.00										10	
	Well ID	Test Type	Borehole Parameters		Freiest water level	Casing diameter	Borchole diameter	Saturated thickness (H)	Screen length	Saturated penetration (Lw)		10		(#)	0.1	WB1(0.001	0	

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		1976)			∉	; ∉	₽	:⊄	; ∉	ft/min												
lation	7/24/97	Bouwer & Rice (1976)			0.01	0.33	3.50	9.50	0.45	1.00E-04									÷+		40	
est Hydraulic Conductivity (K) Calculation	Test Date	Evaluation Method		Calculation Parameters	Radius of casing (rc^2)	Radius of borehole (rw)	Effective radius/well radius ratio ln(Re/rw)	Effective length of screen (Le)	Distance from static water level at t=0 (Yo)	Hydraulic conductivity (K)	tising Head Slug Test							ĵ			20 30	Time (min)
Slug Test Hy	5	Rising Head				2.00 in		9.50 ft		8.50 ft	MW-3/GP-2 Rising Head										10	
	Well ID	Test Type	Rorehole Parameters	DUICINGE A ALICERS	Freicst water level	Casing diameter	Borchole diameter	Saturated thickness (H)	Screen length	Saturated penetration (Lw)		10		(ų) u	мор	DWB	Dra		0.01	0	

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Elapsed Time (min)	y=ft	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
0.149	2.173	0.012	0.445
0.1578	1.569	0.012	0.444
0.1672	1.43	0.013	0.444
0.177	1.412	0.014	0.444
0.1875	1.398	0.015	0.443
0.1985	1.382	0.016	0.443
0.2102	1.379	0.016	0.443
0.2227	1.354	0.017	0.442
0.2358	1.347	0.018	0.442
0.2498	1.338	0.020	0.441
0.2647	1.324	0.021	0.441
0.2803	1.312	0.022	0.440
0.297	1.303	0.023	0.440
0.3147	1.294	0.025	0.439
0.3333	1.285	0.026	0.438
0.3532	1.28	0.028	0.438
0.3742	1.269	0.029	0.437
0.3963	1.248	0.031	0.436
0.4198	1.236	0.033	0.435
0.4447	1.229	0.035	0.435
0.4697	1.218	0.037	0.434
0.4963	1.211	0.039	0.433
0.5247	1.199	0.041	0.432
0.5547	1.19	0.043	0.431
0.5863	1.181	0.046	0.430
0.6213	1.165	0.049	0.429
0.658	1.153	0.051	0.427
0.6963	1.137	0.054	0.426
0.738	1.126	0.058	0.425

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crapsed rune (mm)	y=π	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
0.7813	1.11	0.061	0.423
0.828	1.096	0.065	0.422
0.8763	1.082	0.069	0.420
0.928	1.063	0.073	0.419
0.983	1.047	0.077	0.417
1.0413	1.031	0.081	0.415
1.103	1.01	. 0.086	0.413
1.168	0.994	0.091	0.411
1.238	0.973	0.097	0.408
1.3113	0.953	0.103	0.406
1.3897	0.937	0.109	0.404
1.473	0.918	0.115	0.401
1.5613	0.895	0.122	0.398
1.6547	0.872	0.129	0.395
1.753	0.853	0.137	0.392
1.858	0.828	0.145	0.389
1.968	0.805	0.154	0.386
2.0847	0.78	0.163	0.382
2.2097	0.757	0.173	0.379
2.3413	0.734	0.183	0.375
2.4813	0.708	0.194	0.371
2.6297	0.68	0.206	0.366
2.7863	0.655	0.218	0.362
2.953	0.63	0.231	0.357
3.1297	0.604	0.245	0.352
3.3163	0.581	0.259	0.347
3.5147	0.556	0.275	0.342
3.7247	0.531	0.291	0.336
3.9463	0.505	0 308	1000

RESMW-3.XLS

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Triapsen I IIIIE (IIIIII)	y=ft	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
4.1813	0.482	0.327	0.325
4.4297	0.457	0.346	0.318
4.693	0.436	0.367	0.312
4.973	0.413	0.389	0.305
5.2697	0.39	0.412	0.298
5.583	0.369	0.436	0.291
5.9147	0.348	0.462	0.283
6.2663	0.328	0.490	0.276
6.6397	0.309	0.519	0.268
7.0347	0.288	0.550	0.260
7.453	0.27	0.583	0.251
7.8963	0.256	0.617	0.243
8.3663	0.24	0.654	0.234
8.8647	0.226	0.693	0.225
9.3913	0.21	0.734	0.216
9.9497	0.196	0.778	0.207
10.5413	0.182	0.824	0.197
11.168	0.171	0.873	0.188
11.8313	0.159	0.925	0.178
12.5347	0.148	0.980	0.169
13.2797	0.138	1.038	0.159
14.0697	0.129	1.100	0.150
14.9063	0.122	1.165	0.140
15.7913	0.115	1.234	0.131
16.7297	0.106	1.308	0.122
17.723	0.099	1.385	0.113
18.723	0.092	1.464	0.104
19.723	0.09	1.542	0.096
20 723	200.0		

MW-3/GP-2 Rising Head Slug Test Hydraulic Conductivity Worksheet

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RESMW-3.XLS

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Elapsed Time (min)	y=ft	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
21.723	0.076	1.698	0.082
22.723	0.072	1.776	0.076
23.723	0.067	1.854	0.070
24.723	0.062	1.933	0.065
25.723	0.058	2.011	0.060
26.723	0.055	2.089	0.056
27.723	0.053	2.167	0.052
28.723	0.048	2.245	0.048
29.723	0.046	2.323	0.044
30.723	0.044	2.402	0.041
31.723	0.042	2.480	0.038
32.723	0.037	2.558	0.035
33.723	0.037	2.636	0.032
34.723	0.032	2.714	0.030
35.723	0.032	2.793	0.028
36.723	0.03	2.871	0.025
37.723	0.028	2.949	0.024
38.723	0.025	3.027	0.022
39.723	0.025	3.105	0.020
40.723	0.025	2 102	•

MW-3/GP-2 Rising Head Slug Test Hydraulic Conductivity Worksheet

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Slug Test Hy		Rising Head Evaluation Method Bouwer & Rice (1976)	SIG		2.00 in Radius of borehole (rw) 0.33	8.00 in Effective radius/well radius ratio ln(Re/rw) 2.56	kness (H) 35.25 ft Effective length of screen (Le) 9.50	9.50 A	35.25 ft Hydraulic conductivity (K) 3.00E-04	MV4 Ring Heat Sug Test	0 10 20	Time (min)
	well ID	I est 1 ype	Borehole Parameters	Pretest water level	Casing diameter	Borehole diameter	Saturated thickness (H)	Screen length	Saturated penetration (Lw)	Drawdown (ft) 	0	

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RESMW-4.XLS

heet) Ycalc (ft)	1.160	1.158	1.155	1.153	1.150	1.147	1.144	1.141	1.137	1.134	1.130	1.126	1.122	1.117	1.113	1.108	1.102	1.097	1.091	1.085	1.078	1.072	1.064	1.057	1.049	1.041	1.032	1.023	1.014
Hydraulic Conductivity Worksheet	(2*Le*K*t)/(rc^2*ln(Re/rw))	0.034	0.036	0.038	0.040	0.043	0.045	0.048	0.051	0.054	0.057	0.060	0.064	0.067	0.071	0.076	0.080	0.085	0.090	0.095	0.101	0.107	0.113	0.120	0.127	0.135	0.143	0.151	0.159	0.168
Slug Test	y=ft	1.603	1.58	1.569	1.548	1.502	1.532	1.527	1.515	1.509	1.499	1.492	1.481	1.469	1.462	1.453	1.442	1.426	1.421	1.386	1.396	1.384	1.37	1.356	1.342	1.326	1.306	1.299	1.28	1.264
MW-4 Rising Head	Elapsed Time (min)	0.1058	0.112	0.1185	0.1255	0.1328	0.1407	0.149	0.1578	0.1672	0.177	0.1875	0.1985	0.2102	0.2227	0.2358	0.2498	0.2647	0.2803	0.297	0.3147	0.333	0.3532	0.3742	0.3963	0.4198	0.4447	0.4697	0.4963	0.5247

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Elapsed Time (min)	y -f t	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
0.5547	1.246	0.178	1.004
0.5863	1.232	0.188	0.994
0.6213	1.213	0.199	0.983
0.658	1.195	0.211	0.972
0.6963	1.174	0.223	0.960
0.738	1.151	0.237	0.947
0.7813	1.13	0.251	0.934
0.828	1.107	0.265	0.920
0.8763	1.086	0.281	0.906
0.928	1.063	0.298	0.891
0.983	1.04	0.315	0.876
1.0413	1.015	0.334	0.859
1.103	0.99	0.354	0.843
1.168	0.966	0.374	0.825
1.238	0.939	0.397	0.807
1.3113	0.911	0.420	0.788
1.3897	0.883	0.446	0.769
1.473	0.856	0.472	0.748
1.5613	0.823	0.501	0.727
1.6547	0.793	0.531	0.706
1.753	0.766	0.562	0.684
1.858	0.734	0.596	0.661
1.968	0.701	0.631	0.638
2.0847	0.669	0.668	0.615
2.2097	0.639	0.708	0.591
2.3413	0.607	0.751	0.566
2.4813	0.574	0.796	0.542
2.6297	0.542	0.843	0.516
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MW-4 Rising Head Slug Test Hydraulic Conductivity Worksheet

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2353 0.477 0.947 0.466 3.1297 0.447 1.003 0.440 3.5147 0.385 1.103 0.440 3.5147 0.385 1.103 0.440 3.5147 0.385 1.127 0.386 3.547 0.385 1.127 0.386 3.7247 0.385 1.127 0.339 3.747 0.338 1.127 0.364 3.547 0.338 1.1265 0.339 4.873 0.227 1.265 0.230 4.973 0.227 1.505 0.230 4.973 0.227 1.505 0.2367 4.973 0.227 1.505 0.244 4.973 0.227 1.505 0.244 5.883 0.178 1.790 0.200 5.947 0.198 1.690 0.2161 5.883 0.178 1.790 0.200 5.947 0.128 0.126 0.161 5.883 0.104 0.128 0.161 5.883 0.128 1.790 0.020 5.947 0.128 2.129 0.161 5.883 0.068 2.330 0.161 5.883 0.068 2.330 0.161 5.8837 0.068 2.330 0.161 5.8837 0.078 2.330 0.161 5.8837 0.068 2.330 0.161 5.8847 0.088 2.330 0.079 5.947 0.088 2.342	Elapsed Time (min)	y=ft	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
0.447 1.003 0.418 1.127 0.385 1.127 0.385 1.127 0.385 1.194 0.328 1.265 0.328 1.265 0.328 1.265 0.328 1.265 0.328 1.265 0.329 1.341 0.227 1.420 0.227 1.420 0.221 1.505 0.198 1.690 0.178 1.505 0.178 1.505 0.178 1.505 0.178 1.506 0.178 1.690 0.178 1.506 0.178 2.129 0.178 2.129 0.18 2.129 0.19 2.129 0.104 2.532 0.058 2.129 0.067 2.682 0.078 3.011 0.035 3.581 0.035 3.581 0.036 0.035 0.042 3.010 0.03	2.953	0.477	0.947	0.466
0.418 1.063 0.385 1.127 0.385 1.127 0.385 1.124 0.385 1.1265 0.385 1.265 0.381 1.265 0.382 1.341 0.247 1.565 0.247 1.565 0.247 1.565 0.221 1.420 0.221 1.790 0.138 1.690 0.148 1.790 0.157 1.896 0.104 2.129 0.104 2.532 0.105 2.129 0.104 2.532 0.058 2.330 0.067 2.532 0.078 2.532 0.067 2.532 0.078 2.532 0.035 3.011 0.035 3.011 0.035 3.793 0.035 3.793 0.035 3.793 0.048 3.011 0.035 3.793 0.042 3.793 0	3.1297	0.447	1.003	0.440
0.385 1.127 0.355 1.194 0.355 1.194 0.356 1.341 0.356 1.341 0.35 1.341 0.247 1.565 0.247 1.505 0.247 1.505 0.247 1.505 0.247 1.506 0.247 1.506 0.157 1.594 0.167 1.594 0.158 2.009 0.167 1.790 0.138 2.009 0.148 1.790 0.128 2.129 0.138 2.129 0.148 2.129 0.078 2.330 0.087 2.330 0.087 2.330 0.087 2.330 0.087 2.330 0.087 2.330 0.0867 2.3380 0.087 3.011 0.086 3.011 0.035 3.793 0.036 </td <td>3.3163</td> <td>0.418</td> <td>1.063</td> <td>0.414</td>	3.3163	0.418	1.063	0.414
0.355 1.194 0.328 1.265 0.328 1.341 0.274 1.420 0.273 1.420 0.274 1.420 0.271 1.505 0.221 1.420 0.221 1.505 0.198 1.420 0.198 1.506 0.178 1.506 0.178 1.506 0.178 1.509 0.178 1.790 0.178 1.506 0.178 1.790 0.18 2.129 0.104 2.330 0.058 2.42 0.067 2.532 0.058 2.682 0.058 2.682 0.035 3.011 0.035 3.301 0.035 3.301 0.035 3.301 0.035 3.301 0.042 3.011 0.035 3.793 0.042 3.013 0.035 3.793 0.042 3.793 0.01	3.5147	0.385	1.127	0.389
0.328 1.265 0.3 1.341 0.274 1.420 0.271 1.505 0.273 1.420 0.247 1.594 0.247 1.505 0.248 1.505 0.178 1.505 0.178 1.506 0.178 1.596 0.178 1.596 0.138 2.009 0.138 2.009 0.138 2.129 0.104 2.330 0.035 2.330 0.042 2.330 0.058 2.532 0.058 2.532 0.058 2.532 0.058 2.532 0.055 3.190 0.035 3.190 0.035 3.793 0.035 3.793 0.042 3.190 0.035 3.793 0.042 3.190 0.035 3.793 0.041 4.511 0.012 4.779	3.7247	0.355	. 1.194	0.364
0.3 1.341 0.274 1.420 0.247 1.505 0.221 1.505 0.221 1.504 0.198 1.690 0.178 1.594 0.178 1.594 0.178 1.690 0.178 1.790 0.178 1.896 0.178 2.009 0.12 2.129 0.104 2.256 0.104 2.256 0.104 2.330 0.058 2.422 0.067 2.532 0.058 2.682 0.067 2.532 0.058 2.682 0.067 2.533 0.078 3.190 0.035 3.380 0.035 3.380 0.035 3.581 0.035 3.581 0.035 3.793 0.016 4.019 0.011 4.019 0.012 4.779 0.012	3.9463	0.328	1.265	0.339
0.274 1.420 0.221 1.505 0.221 1.505 0.198 1.504 0.178 1.504 0.178 1.594 0.178 1.596 0.178 1.690 0.178 1.690 0.178 1.690 0.178 2.009 0.12 2.129 0.12 2.129 0.138 2.129 0.104 2.256 0.1058 2.330 0.078 2.532 0.067 2.532 0.078 2.532 0.078 2.532 0.078 2.682 0.078 2.682 0.035 3.011 0.035 3.190 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.793 0.016 4.019 0.012 4.719 0.012 4.779	4.1813	0.3	1.341	0.314
0.247 1.505 0.221 1.594 0.198 1.690 0.178 1.790 0.157 1.896 0.157 1.896 0.158 2.009 0.104 2.129 0.103 2.129 0.104 2.532 0.058 2.390 0.067 2.532 0.067 2.532 0.058 2.532 0.067 2.532 0.058 2.532 0.058 2.532 0.058 2.532 0.058 2.532 0.058 2.532 0.056 3.190 0.055 3.380 0.035 3.581 0.021 4.019 0.014 4.511 0.012 4.779	4.4297	0.274	1.420	0.290
0.221 1.594 0.198 1.690 0.157 1.896 0.157 1.896 0.157 1.896 0.138 2.009 0.138 2.129 0.104 2.129 0.105 2.129 0.104 2.532 0.058 2.532 0.067 2.682 0.058 2.533 0.058 2.583 0.058 2.583 0.058 2.583 0.058 2.583 0.058 2.583 0.058 2.682 0.058 2.842 0.035 3.011 0.035 3.190 0.035 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.793 0.014 4.019 0.014 4.511 0.012 4.779	4.693	0.247	1.505	0.267
0.198 1.690 0.178 1.790 0.157 1.896 0.138 2.009 0.138 2.129 0.104 2.129 0.104 2.256 0.01078 2.390 0.0178 2.390 0.0178 2.532 0.057 2.532 0.067 2.532 0.058 2.682 0.042 3.011 0.035 3.190 0.035 3.380 0.035 3.793 0.035 3.793 0.018 4.019 0.018 4.511 0.014 4.511 0.012 4.779	4.973	0.221	1.594	0.244
0.178 1.790 0.157 1.896 0.138 2.009 0.12 2.129 0.104 2.256 0.005 2.390 0.078 2.532 0.067 2.532 0.067 2.682 0.067 2.682 0.058 2.532 0.067 2.682 0.067 2.682 0.067 2.682 0.067 2.682 0.067 2.682 0.067 2.682 0.067 2.682 0.067 2.682 0.068 2.682 0.048 3.011 0.058 3.011 0.035 3.380 0.035 3.380 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.581 0.036 0.035 0.018 4.258 0.014 4.511 0.012 4.779	5.2697	0.198	1.690	0.222
0.157 1.896 0.138 2.009 0.12 2.129 0.104 2.256 0.09 0.09 0.078 2.330 0.078 2.532 0.067 2.532 0.067 2.682 0.058 2.582 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.035 3.011 0.035 3.380 0.035 3.581 0.035 3.581 0.035 3.581 0.036 0.035 0.037 4.019 0.014 4.511 0.014 4.511 0.012 4.779	5.583	0.178	1.790	0.200
0.138 2.009 0.12 2.129 0.104 2.256 0.035 2.390 0.067 2.532 0.058 2.582 0.058 2.842 0.058 2.842 0.058 2.842 0.058 2.842 0.058 2.842 0.058 3.011 0.058 3.011 0.058 3.011 0.035 3.380 0.035 3.380 0.035 3.380 0.035 3.581 0.035 3.581 0.035 3.581 0.036 3.581 0.037 4.019 0.018 4.258 0.014 4.511 0.012 4.779	5.9147	0.157	1.896	0.180
0.12 2.129 0.104 2.256 0.03 2.390 0.078 2.532 0.058 2.532 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.048 3.011 0.042 3.011 0.042 3.011 0.043 3.011 0.042 3.011 0.035 3.380 0.035 3.581 0.035 3.581 0.036 0.035 0.025 3.581 0.026 3.581 0.018 4.019 0.014 4.511 0.012 4.779	6.2663	0.138	2.009	0.161
0.104 2.256 0.03 0.078 2.330 0.067 2.532 0.067 0.067 2.682 0.067 0.058 2.682 0.058 0.048 3.011 0.048 0.048 3.011 0.042 0.048 3.011 0.042 0.042 3.190 0.035 0.035 3.380 0.036 0.035 3.581 0.036 0.035 3.581 0.036 0.035 3.581 0.036 0.035 3.581 0.036 0.014 4.019 4.019 0.014 4.511 0.014 0.012 4.779 4.779	6.6397	0.12	2.129	0.143
0.09 2.390 0.078 2.532 0.067 2.532 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.682 0.058 2.842 0.042 3.011 0.042 3.190 0.035 3.380 0.035 3.380 0.035 3.380 0.035 3.581 0.035 3.581 0.026 3.581 0.027 4.019 0.018 4.258 0.014 4.511 0.012 4.779	7.0347	0.104	2.256	0.126
0.078 2.532 0.067 2.682 0.058 2.682 0.058 2.842 0.058 2.842 0.048 3.011 0.043 3.011 0.043 3.011 0.042 3.190 0.042 3.190 0.035 3.380 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.581 0.036 3.581 0.025 3.793 0.026 3.793 0.021 4.019 0.014 4.511 0.014 4.511 0.012 4.779	7.453	0.09	2.390	0.110
0.067 2.682 0.058 2.842 0.058 2.842 0.048 3.011 0.043 3.190 0.042 3.190 0.035 3.380 0.035 3.380 0.035 3.581 0.03 0.035 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.04 4.019 0.018 4.258 0.014 4.511 0.012 4.779	7.8963	0.078	2.532	0.095
0.058 2.842 0.048 3.011 0.042 3.190 0.042 3.190 0.035 3.380 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.581 0.035 3.581 0.025 3.581 0.026 3.581 0.027 4.019 0.018 4.258 0.014 4.511 0.012 4.779	8.3663	0.067	2.682	0.082
0.048 3.011 0.042 3.190 0.035 3.380 0.035 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.03 3.581 0.021 4.019 0.018 4.258 0.014 4.511 0.012 4.779	8.8647	0.058	2.842	0.070
0.042 3.190 0.035 3.380 0.035 3.581 0.03 3.581 0.03 3.581 0.025 3.793 0.026 3.793 0.027 4.019 0.018 4.258 0.014 4.511 0.012 4.779	9.3913	0.048	3.011	0.059
0.035 3.380 0.03 3.581 0.025 3.581 0.026 3.793 0.021 4.019 0.021 4.019 0.014 4.511 0.012 4.779	9.9497	0.042	3.190	0.049
0.03 3.581 0.025 3.793 0.021 4.019 0.021 4.258 0.018 4.258 0.014 4.511 0.012 4.779	10.5413	0.035	3.380	0.041
0.025 3.793 0.021 4.019 0.018 4.258 0.014 4.511 0.012 4.779	11.168	0.03	3.581	0.033
0.021 4.019 0.018 4.258 0.014 4.511 0.012 4.779	11.8313	0.025	3.793	0.027
0.018 4.258 0.014 4.511 0.012 4.779	12.5347	0.021	4.019	0.022
0.014 4.511 0.012 4.779	13.2797	0.018	4.258	0.017
0.012 4.779	14.0697	0.014	4.511	0.013
	14.9063	0.012	4.779	0.010

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	(1976)			£	æ	Ð	Ð	ų	ft/min		
ation 8/10/97	Bouwer & Rice (1976)			0.01	0.33	2.30	9.00	0.50	8.00E-04		
ESU ITY UTAULIC CONDUCTIVITY (K) Calculation Test Date 8/10/97	Evaluation Method		Calculation Farameters	Kadius of casing (rc ²)	Radius of borehole (rw)	Effective radius/well radius ratio ln(Re/rw)	Effective length of screen (Le)	Distance from static water level at t=0 (Yo)	Hydraulic conductivity (K)	Rising Head Slug Test	Time (min)
			4444	JY O II	đ	п	ىم	£		MW-5	
S-WM	Rising Head							10.00	9.00	M 1 2	·
Well ID	Test Type	Borehole Parameters	Dretect writer level	Contract Marce Jeven	Casing utaniener	Borehole diameter	Saturated thickness (H)	Screen length	Saurated penetration (Lw)	(ft) nwobwa (ft)	

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Elapsed Time (min)	y=ft	(2*Le*K*t)/(rc^2*ln(Re/rw))	Ycalc (ft)
0.149	1.239	0.134	0.437
0.1578	1.176	0.142	0.434
0.1672	1.1	0.151	0.430
0.177	1.045	0.160	0.426
0.1875	0.971	0.169	0.422
0.1985	0.909	0.179	0.418
0.2102	0.856	0.190	0.414
0.2227	0.78	0.201	0.409
0.2358	0.727	0.213	0.404
0.2498	0.676	0.225	0.399
0.2647	0.627	0.239	0.394
0.2803	0.586	0.253	0.388
0.297	0.544	0.268	0.383
<u>0.3147</u>	0.503	0.284	0.376
0.3333	0.471	0.300	0.370
0.3532	0.438	0.318	0.364
0.3742	0.413	0.337	0.357
0.3963	0.388	0.357	0.350
0.4198	0.364	0.378	0.342
0.4447	0.341	0.401	0.335
0.4697	0.325	0.423	0.327
0.4963	0.309	0.447	0.320
0.5247	0.295	0.473	0.312
0.5547	0.281	0.500	0.303
0.5863	0.268	0.529	0.295
0.6213	0.256	0.560	0.286
0.658	0.247	0.593	0.276
0.6963	0.235	0.628	0.267
0.738	0.224	0.665	0 257

MW-5 Rising Head Slug Test Hydraulic Conductivity Worksheet

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Worksheet
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Elapsed Time (min)	y=ft	(2*Le*K*t)/(rc^2*ln(Re/rw))	Vcalc (ft)
0.7813	0.212	0.704	0.247
0.828	0.201	0.746	0.237
0.8763	0.191	0.790	0.227
0.928	0.182	0.837	0.217
0.983	0.173	0.886	0.206
1.0413	0.164	0.939	0.196
1.103	0.157	0.994	0.185
1.168	0.148	1.053	0.174
1.238	0.138	1.116	0.164
1.3113	0.129	1.182	0.153
1.3897	0.122	1.253	0.143
1.473	0.113	1.328	0.133
1.5613	0.104	1.408	0.122
1.6547	0.099	1.492	0.112
1.753	0.092	1.580	0.103
1.858	0.083	1.675	0.094
1.968	0.076	1.774	0.085
2.0847	0.072	1.879	0.076
2.2097	0.065	1.992	0.068
2.3413	0.06	2.111	0.061
2.4813	0.053	2.237	0.053
2.6297	0.046	2.371	0.047
2.7863	0.042	2.512	0.041
2.953	0.037	2.662	0.035
3.1297	0.035	2.822	0.030
3.3163	0.028	2.990	0.025
3.5147	0.023	3.169	0.021
3.7247	0.018	3.358	0.017
3.9463	0.016	3.558	0.014

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MW-5 Rising Head Slug Test Hydraulic Conductivity Worksheet	
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Ycalc (ft)	0.012	0.009	0.007	0.006
(2*Le*K*t)/(rc^2*ln(Re/rw))	3.770	3.994	4.231	4.483
y=ft	0.014	0.00	0.005	0.002
Elapsed Time (min)	4.1813	4.4297	4.693	4.973

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PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANKER PURGING STATION FORT STEWART, GEORGIA

APPENDIX D

QUALITY CONTROL SUMMARY REPORT

PHASE II RCRA FACILITY INVESTIGATION FORMER 724TH TANKER PURGING STATION SWMU 26, FORT STEWART, GEORGIA QUALITY CONTROL SUMMARY REPORT November 1997

1 Introduction

The purpose of this project was to perform a Phase II Resource Conservation and Recovery Act (RCRA) Facility investigation for the former 724th Tanker Purging Station, Solid Waste Management Unit (SWMU) 26 at Fort Stewart, Georgia to determine the nature and extent of contamination and to gather data to support a Corrective Action Plan (CAP).

The Former 724th Tanker Purging Station was an area where tanker trailers used to transport JP-4 jet fuel and mogas were routinely cleaned. During August 1996 the purging station was dismantled and the underground facilities were removed, with approximately 500 yd³ of soil being excavated and replaced with clean backfill. Potential contamination due to leakage at the site was investigated during a Phase I RFI for 24 SWMUs at Fort Stewart (Rust 1993). Analytical results from soil sampling conducted at SWMU 26 indicated fuel product and solvent contamination. Based on these findings, Georgia Environmental Protection Division (GEPD) instructed the Fort Stewart Directorate of Public Works (DPW) to conduct the Phase II RFI. This Quality Control Summary Report (QCSR) consolidates quality control information for the Phase II studies.

1.1 Project Description

Phase II field sampling activities for the site began and were completed in July and August of 1997. Investigation activities consisted of screening soil samples using a push probe at 21 locations; screening groundwater samples from 17 push probe locations, including five vertical profile probes; installation and sampling of five permanent monitoring wells; and collection and analysis of surface water and sediment at five ditch and creek location adjacent to the site.

Sample results were screened against background levels, Georgia Department of Natural Resources action levels, and risk-based action levels for those compounds identified by the Georgia Environmental Protection Division (GEPD).

1.2 Project Objectives

The scope of the project involved performance of site investigation activities relative to the State of Georgia GEPD instructions and preparation of this Phase II RCRA Facility Investigation Report based on the results. The overall purpose of the study was to determine contamination extent and corrective action measures. Specific objectives for the Phase II RFI were defined in the Phase II RFI Sampling and Analysis Plan (SAIC 1997). In summary, the objectives of the project were as follows:

- 1. Determine the horizontal and vertical extent of contamination.
- 2. Determine whether contaminants present constitute a threat to human health or the environment.
- 3. Determine the need for future action or no further action.
- 4. Gather necessary data to support a Corrective Action Plan (CAP), if warranted.

The general quality assurance (QA) objectives of the project are as follows:

- 1. Ensure that the method used for borehole drilling will allow for collection of soil samples representative of surface and subsurface soil contamination conditions, and for description of the hydrogeologic environment.
- 2. Ensure that the method used for collection of groundwater samples will allow for collection of samples representative of water table contamination conditions.
- 3. Ensure that sampling methods used for soil and groundwater collection minimize alteration of contaminant concentrations, and that drilling and sampling equipment decontamination methods prevent cross-contamination between sampling locations.
- 4. Ensure that field measurement and analytical laboratory results are accurate, representative of site conditions, and fulfill data quality objectives (DQOs) defined for the project.

The first three QA objectives were accomplished through implementation of the procedures and requirements described in the Work Plan and the Field Sampling Plan. The fourth QA objective was accomplished through data management practices, associated internal laboratory QC analyses, related procedures and requirements defined in the Quality Assurance Project Plan (QAPjP), and through collection and analysis of field quality control (QC) samples.

1.3 Project Implementation

Phase II SAIC field work was initiated and completed in July and August 1997. A project specific Site Health and Safety Plan was compiled for the work completed by SAIC and sub-tier contractors. Ms. Patty Stoll was designated as Field Team Leader for the project. She was responsible for the collection of samples in accordance with the work plan, completion of the Daily Quality Control Reports (DQCRs), coordination of site access, shipment of samples to the laboratories, and documentation and correction of problems as they occurred. Quality Control Officer for the project was Ms. Sharon Stoller. She was responsible for data quality control for the SAIC sampling effort. This included but was not limited to, validation of both field and laboratory data in accordance with the QAPjP and the Sampling and Analysis Plan. As laboratory and analytical data coordinator, Mr. Nile Luedtke was responsible for maintaining analytical files for the project, approval of payment invoices from the laboratories, and

documentation and correction of problems as they occurred. As the SAIC project manager, Duncan Moss was responsible for overall project success, budgetary control, COE interfaces, and completion of Monthly Progress Reports (MPRs).

One analytical laboratory was utilized by SAIC for testing samples collected by SAIC personnel. General Engineering Laboratory of Charleston, SC completed all water and soil analysis for: volatile organic compounds (VOCs); benzene, toluene, ethylbenzene, and xylenes (BTEX); semivolatile organic compounds (SVOCs) or polyaromatic hydrocarbons (PAHs); gasoline range organics (GRO); diesel range organics (DRO; RCRA metals; and miscellaneous parameters. The laboratory employed EPA analytical methods and is validated through the COE Missouri River Division (MRD) laboratory review process. The QA laboratory for the entire project was the COE South Atlantic Savannah Division (SAS) Laboratory in Marietta, Georgia.

1.4 Purpose of this Report

Environmental data must always be interpreted relative to its known limitations and its intended use. As can be expected in environmental media of this type, there are areas and data points where the user needs to be cautioned relative to the quality of the project information presented. The data validation process and this data quality assessment are intended to provide current and future data users assistance throughout the interpretation of this data.

The purpose of this Quality Control Summary Report (QCSR) is: to describe Quality Control (QC) procedures followed to ensure data generated by SAIC during these investigations at Fort Stewart would meet project requirements; to describe the quality of the data collected; and to describe problems encountered during the course of the study and their solutions. A QA report will be completed by the USACE SAS Laboratory covering data generated from SAIC collected samples remanded to their custody.

This appendix provides an assessment of the analytical information gathered during the course of the 724th Tanker Purging Station investigation and documents that the quality of the data employed for the report met the objectives. Evaluation of field and laboratory quality control (QC) measures will constitute the majority of this assessment, however, references will also be directed toward those quality assurance (QA) procedures which establish data credibility. The primary intent of this assessment is to illustrate that data generated for theses UST investigations can withstand scientific scrutiny, are appropriate for their intended purpose, are technically defensible, and are of known and acceptable sensitivity, precision, and accuracy.

Multiple activities were performed to achieve the desired data quality in this project. As discussed in the text, decisions were made during the initial scoping to define the quality and quantity of data required. Data Quality Objectives (DQOs) were established to guide the implementation of the field sampling and laboratory analysis. A QA program was established to standardize procedures and to document activities. This program provided a means to detect and correct any deficiencies in the process. Upon receipt by the project team, data was subjected to a verification and validation review which identified and qualified problems related to the analysis. These review steps contribute to this final Data Quality Assessment (DQA) which defines that data used in the investigation met the criteria and are employed appropriately.

2 Quality Assurance Program

A QAPjP was developed for this project and may be found as part of the official Work Plan. The purpose of this document was to enumerate the quantity and type of samples to be taken to inspect the various sites, and to define the quantity and type of Quality Assurance/Quality Control (QA/QC) samples to be used to evaluate the quality of the data obtained.

The QAPjP established requirements for both field and laboratory QC procedures. In general: field QC duplicates and QA split samples were required for each environmental sample matrix collected at sites being investigated at a frequency of 10%; volatile organic compound (VOC) trip blanks were to accompany each cooler containing water samples for VOC determinations; and analytical laboratory QC duplicates, matrix spikes, laboratory control samples, method blanks were required for every 20 samples or less of each matrix and analyte.

A primary goal of the QA program was to ensure that the quality of results for all environmental measurements were appropriate for their intended use. To this end, a QAPjP and standardized field procedures were compiled to guide the investigation. Through the process of readiness review, training, equipment calibration, QC implementation, and detailed documentation, the project has successfully accomplished the goals set by the QA Program.

2.1 Monthly Progress Reports

An MPR was completed by the SAIC Project Manager for every month during project implementation. The MPRs contain the following information: work completed, problems encountered, corrective actions/solutions, summary of findings and upcoming work. These reports were issued to the Savannah Corp Project Manager and may be obtained through their office.

2.2 Daily Quality Control Reports (DQCRs)

The Field Team Leader, Patty Stoll, produced all Daily Quality Control Reports. These include information such as, but not limited to; sub-tier contractors on-site, equipment on-site, work performed summaries, QC activities, Health and Safety activities, problems encountered, and corrective actions. The DQCRs were submitted to the SAIC and Savannah Corp Project Managers, and are on file with them.

2.3 Laboratory "Definitive" Level Data Reporting

The QAPjP for this project identified requirements for laboratory data reporting and identified GEL as the lab for the project. EPA "definitive" data has been reported including the following basic information:

- a. laboratory case narratives
- b. sample results
- c. laboratory method blank results
- d. laboratory control standard results

- e. laboratory sample matrix spike recoveries
- f. laboratory duplicate results
- g. surrogate recoveries (VOCs, SVOCs (PAHs), BTEX, GRO, DRO)
- h. sample extraction dates
- i. sample analysis dates

This information from the laboratory along with field information provides the basis for subsequent data evaluation relative to sensitivity, precision, accuracy, representativeness and completeness. These have been presented in Section B.4.

3 Data Validation

The objective when evaluating the quality of the project data is to determine its usability. The evaluation is based on the interpretation of laboratory QC measures, field QC measures, and the project DQOs.

This project implemented the use of data validation checklists to facilitate laboratory data validation. These checklists were completed by the project designated validation staff and were reviewed by the project laboratory coordinator. Data validation checklists for each laboratory sample delivery group (SDG) have been retained with laboratory data deliverables by SAIC.

3.1 Field Data Validation

DQCRs were completed by the Field Team Leader. The DQCRs and other field generated documents such as sampling logs, boring logs, daily health and safety summaries, daily safety inspections, equipment calibration and maintenance logs, and sample management logs were peer reviewed on-site. These logs and all associated field information has been delivered to the Savannah Corp project manager and can be obtained through their office.

3.2 Laboratory data Validation

Analytical data generated for this project have been subjected to a process of data verification, validation, and review. The following describes this systematic process and the evaluation activities performed. Several criteria have been established against which the data are compared and from which a judgment is rendered regarding the acceptance and qualification of the data. Because it is beyond the scope of this report to cite those criteria, the reader is directed to the following documents for specific detail:

- SAIC Technical Support Contractor QA Technical Procedure (TP-DM-300-7) Data Verification and Validation;
- Region I EPA Laboratory Data Validation, Functional Guidelines for Evaluating Inorganic Analyses;
- Region I EPA- Laboratory Data Validation, Functional Guidelines for Evaluating Organic Analyses; and

Sampling and Analysis Plan for the Phase II RCRA Facility Investigation at the Former 724th Tanker Purging Station SWMU 26, Fort Stewart, Georgia, May 1997.

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Upon receipt of field and analytical data, verification staff performed a systematic examination of the reports, following standardized data package checklists to ensure the content, presentation, and administrative validity of the data. Discrepancies identified during this process were recorded and documented utilizing the QA program Analytical Data Nonconformance Report (ADNCR) and Nonconformance Report (NCR) systems.

In conjunction with the data verification, and if standardized laboratory electronic data diskettes were available, the diskette deliverables were subjected to review utilizing SAIC EDD review software. This software performed both a structural and technical assessment of the laboratory-delivered electronic reports. The structural evaluation ensured that all required data had been reported and contract specified requirements were met (i.e., analytical holding times, contractual turnaround times, etc.).

During the validation phase of the review and evaluation process, data were subjected to a systematic technical review by examining all field and analytical QC results and laboratory documentation, following appropriate guidelines for laboratory data validation. These data validation guidelines define the technical review criteria, methods for evaluation of the criteria, and actions to be taken resulting from the review of these criteria. The primary objective of this phase was to assess and summarize the quality and reliability of the data for the intended use and to document factors that may affect the usability of the data. Data verification/validation included but was not necessarily limited to the following parameters:

Inorganic	Organic
Data completeness	Data completeness
Holding times	Holding times
Calibration - Initial - Continuing	Calibration - Initial - Continuing
Blanks	Blanks
Sample results verification	Surrogate recovery
Matrix spike (MS) recovery	
Field duplicate sample analysis	
Laboratory control sample (LCS) analysis	Internal standards performance

Furnace atomic absorption QC (when implemented)	
Detection limits	Compound quantitation and reported detection limits
Secondary dilutions	Secondary dilutions

As an end result of this phase of the review, the data were qualified based on the technical assessment of the validation criteria. Qualifiers were applied to each field and analytical result to indicate the usability of the data for its intended purpose.

3.3 Definition of Data Qualifiers (Flags)

During the data validation process, all laboratory data were assigned appropriate data validation flags and reason codes. Validation flags are defined as follows:

- "U" When the material was analyzed for, but not detected above the level of the associated value.
- "J" When the associated value is an estimated quantity. Indicating there is cause to question accuracy or precision of the reported value.
- "UJ" When the analyte was analyzed for, but not detected, above the associated value, however, the reported value is an estimate and demonstrates an decreased knowledge of its accuracy or precision.
- "R" When the analyte value reported is unusable. The integrity of the analyte's identification, accuracy, precision, or sensitivity have raised significant question as to the reality of the information presented.

SAIC validation flagging codes have been provided in Attachment 1, while copies of validation checklists and qualified data forms are on-file with the analytical laboratory deliverable.

3.4 Data Acceptability

A total of 98 environmental soil, groundwater, and field QC samples were collected with approximately 3,600 discrete analyses (i.e., analytes) being obtained, reviewed, and integrated into the assessment (these totals do not include field measurements and field descriptions). The project produced acceptable results for over 99% of the sample analyses performed and successfully collected all required investigation samples. Rejected data were relegated to PAH determinations in a one soil and two groundwater samples.

Table 1 presents a summary of the number of collected investigation samples. It also tallies the successful collection of appropriate targeted field QC and QA split samples. Table 2 provides

a summary of rejected analyses grouped by media and analyte category. Copies of the project Chain-of-Custody forms are provided in appendices to the report.

Through appropriate data verification, validation, and review analytical information has been identified as estimated and rejected. None of the semivolatile organic, GRO, DRO, TOC, or anion data were rejected. A minimal number of VOCs (4-methyl-2-pentanone and acetone) were rejected related to poor initial or continuing instrument relative response factors, while a single cadmium reporting limit value was rejected due to calibration drift during analysis. A number of metals results were estimated due to method blank levels or instrument drift during analysis. A few VOC results were estimated due to internal standard areas being low or continuing calibration percent differences being greater than 25%. However, none of the results were extremely disparate and the data has been appropriately identified and qualified. Rejected results reflect a tendency to exhibit extreme negative bias and were therefore unable to support the requirements of the project.

4 Data Evaluation

4.1 Accuracy

Accuracy provides a gauge or measure of the agreement between an observed result and the true value for an analysis. Analytical accuracy is evaluated by measuring the agreement between an analytical result and its known or true value. This is generally determined through use of Laboratory Control Samples (LCSs), Matrix Spike (MS) analysis, and Performance Evaluation (PE) Samples. Accuracy as measured through the use of LCSs determine the method implementation accuracy independent of sample matrix. They document laboratory analytical process control. Accuracy determined by the MS is a function of both matrix and analytical process. Tables 3 and 4 present average LCS recovery values for the various parameters under investigation during these studies. Method blank surrogate compound recoveries and method blank target compound spiked analyses are two forms of laboratory control sample analyses. Table 5 consolidates the average sample matrix spike (MS) recovery values for parameters.

Volatile Organic Compounds

Volatile organic compounds LCS recovery, surrogate recovery, and MS recovery information provide measures of accuracy. Recoveries determined for laboratory volatile organic method blank spike and method blank surrogate analyses indicate the analytical processes for procedures were in control. Individual sample surrogate recoveries and sample MS recoveries indicate analytical accuracy for these compounds was in control and the data is usable.

Method blank surrogate recoveries (Table 3) were all within 80-125% for the volatile analyses. Summaries in Table 4 show soil and water LCS values range from 94.5% to 105.9%, while all recoveries were within 80-120% for the four target compounds.

Sample MS recoveries (Table 5) indicate analytical accuracy was in control with average soil MS recoveries ranging from 90.5% to 115.3%. Average groundwater sample MS recoveries ranged from 103.3% to 110.5%. The wider range of spike recovery observed in actual

environmental samples is indicative of matrix and heterogeneity variations, especially when dealing with soil matrices.

Semivolatile Organic Compounds

Average LCS percent recovery values for semivolatile organic compounds in soils/sediments and waters range from 77.5% to 114.0%. These values are well within the normally accepted advisory limits established by the analytical methods. They are also within project accuracy goals of 35-140% for semivolatile compounds. None of the data required qualification based on the LCS. Method blank surrogate recoveries (Table 3) were all well within acceptable ranges for semivolatile compounds. Re-enforcing the analytical process was in control.

Sample MS information (Table 5) for semivolatile organic compounds parallels LCS data. Average percent recoveries range between 65.8% and 93.5%, with the overall accuracy for these measurements being considered acceptable.

Gasoline Range, Diesel Range, and Total Organic Carbon

The laboratory analytical process for these measurements was demonstrated to be under control by maintaining a general 75-125% LCS percent recovery for soil matrices. Average method blank surrogate recoveries were maintained in the range of 80-120%. Matrix spike information demonstrated acceptable accuracy control for soils. A few low soil MS recovery values did cause some data to be estimated.

RCRA Metals and Miscellaneous Parameters

All metal water LCS values fall within an 80-120% range, while the single soil LCS recoveries ranged from 71% to 112%. Matrix spike information (Table 5) were as good as LCS recoveries, with average water MS values ranging from 98.7% to 106.2% and average soil MS values ranging from 91.2% to 106.2%.

LCS and MS recoveries for nitrate, nitrite, sulfate, and sulfide provided satisfactory results for these parameters.

4.2 Precision

Laboratory Precision

As a measure of analytical precision, Table 6 contains average relative percent differences (RPD) for laboratory duplicate sample pairs for the various analytical groups. Data is presented for parameters where both values meet or exceed five times the project required detection limits for that analyte. Data presented compare MS and matrix spike duplicate (MSD) values. As the RPD approaches zero, complete agreement is achieved between the duplicate sample pairs. Sample homogeneity, analytical method performance, and the quantity of analyte being measured all contribute to this measure of sample analytical precision.

Soil and water precision are considered acceptable when the RPD does not exceed 40. Thislimit was not exceeded for any analytes. All average RPD values were well within a 20% window of acceptance. In only a few instances did individual duplicate comparisons fall outside this level as demonstrated by the maximum RPD's presented. RPD values are very good for these samples and reflect great effort on the part of the field and laboratory teams to homogenize the samples prior to aliquotting and analysis.

Duplicate comparison for those data within five times the reporting level have also been reviewed and evaluated. Acceptance limits for these data were set at \pm two times the reporting level. In all cases, laboratory duplicate comparison at these low levels were in agreement.

Individual data points affected by poor precision measures appear in the data set qualified as estimated, when necessary. The precision for those data is considered acceptable and has been determined to be useable for project objectives.

Field Precision

Field duplicate samples were collected to ascertain the contribution to variability (i.e., precision) due to the combination of environmental media, sampling consistency, and analytical precision. Field duplicate samples were collected from the same spatial and temporal conditions as the primary environmental sample. Soil samples were collected from the same sampling device, after homogenization for all analytes except VOCs.

Table 7 provides a summary of field duplicate comparisons by analyte. The tables present both absolute difference and RPD evaluations for field duplicate measurements. RPD was calculated only when both samples were >5 times the analyte reporting level. When one or both sample values were between the quantitation level and 5 times the analyte reporting level the absolute difference was evaluated. If both samples were not detected for a given analyte, precision was considered acceptable. Only duplicate pairs having measurable values are included in the tabulation.

In order to review information, this data quality assessment has implemented general criteria for comparison of absolute difference measurements and RPDs. RPD criteria are identified below. Absolute difference criteria were set at three times the analyte reporting level.

Matrix	Good	Fair	Poor	Unacceptable	
Water	<30%	<60%	<100%	> 100%	
Soil	<50%	<90%	<150%	> 150%	

RPD Evaluation Categories

While soil field duplicates exhibit some high RPD values the comparison is considered Fair given the high levels of BTEX contamination in the one sample. Sediment metal, VOC, SVOC comparison is Good, with all analytical values being within 5X the reporting levels. Most groundwater and surface water analyte concentrations were not high enough to provide RPD evaluation, however, absolute difference considerations indicate a Good comparison for the data.

A subset of field duplicate analysis compares groundwater filtered and total values. This comparison is presented in Table 8. Evaluation was made with the same criteria as for the other field duplicates and the results show a Good agreement between each of the sample pairs.

4.3 Sensitivity

Determination of minimum detectable values allows the investigation to assess the relative confidence which can be placed in a value in comparison to the magnitude or level of analyte concentration observed. The closer a measured value comes to the minimum detectable concentration, the less confidence and more variation the measurement will have. Project sensitivity goals were expressed as quantitation level goals in the QAPjP. These levels were achieved or exceeded throughout the analytical process. There were individual exceptions which have generated qualification of the data or elevation of detections levels when the original goal was not achieved. Variations observed were caused by fluctuations in moisture content or the need to dilute high concentration analytes into linear range for analysis.

Evaluation of overall project sensitivity can be gain through review of field blank information. These actual sample analysis may provide a comprehensive look at the combined sampling and analysis sensitivity attained by the project. Field QC blanks obtained during sampling activities included samples of VOC trip blank waters. Summary information for those blank determinations exhibiting detectable levels is presented in Table 9.

There were a minimal number of detected VOCs in project trip blanks. These were all below their associated reporting levels and only just above the laboratory instrument detection levels. These levels are not considered significant and have not caused data qualification. It is therefore determine that VOC analysis have not been affected through the transportation and storage process, and that the procedures and precautions employed were effective in preserving the integrity of the sample analysis.

4.4 Representativeness and Comparability

Representativeness expresses the degree to which data accurately reflect the analyte or parameter of interest for the environmental site and is the qualitative term most concerned with the proper design of the sampling program (EPA 1987). Factors that affect the representativeness of analytical data include proper preservation, holding times, use of standard sampling and analytical methods, and determination of matrix or analyte interferences. No data points were rejected based on extended holding times, while only a few analyses were estimated and qualified. Sample preservation, analytical methodologies, and soil sampling methodologies were documented to be adequate and consistently applied. Both soil and groundwater sampling methods have been proven to be effective, application for this study. Comparability, like representativeness, is a qualitative term relative to a project data set as an individual. These investigations employed appropriate sampling methodologies, site surveillance, use of standard sampling devices, uniform training, documentation of sampling, standard analytical protocols/procedures, QC checks with standard control limits, and universally accepted data reporting units to ensure comparability to other data sets. Through the proper implementation and documentation of these standard practices, the project has established the confidence that the data will be comparable to other project and programmatic information.

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4.5 Completeness

Usable data are defined as those data which pass individual scrutiny during the verification and validation process and are accepted for unrestricted application to the human health risk assessment evaluation or equivalent type applications. It has been determined that estimated data are acceptable for project objectives.

Objectives for this investigation have been achieved. The project produced valid results for over 99% of the sample analyses performed and successfully collected all required investigation samples.

5 Data Quality Assessment Summary

The overall quality of Fort Stewart 724th Tanker Purging Station information meets or exceeds the established project objectives. Through proper implementation of the project data verification, validation, and assessment process, project information has been determined to be acceptable for use

Data, as presented, have been qualified as usable, but estimated when necessary. Data which have been estimated provide indications of either accuracy, precision, or sensitivity being less than desired but adequate for interpretation.

Data produced for this study demonstrates that it can withstand scientific scrutiny, is appropriate for its intended purpose, is technically defensible, and is of known and acceptable sensitivity, precision, and accuracy. Data integrity has been documented through proper implementation of Quality Assurance and Quality Control measures. The environmental information presented has an established confidence which allows utilization for the project objectives and provides data for future needs.

6 References

SAIC (Science Applications International Corporation) 1995. Data Validation Guidelines for Analytical Data, Quality Assurance Technical Procedure TP-DM-300-7, Rev.1.

Sampling and Analysis Plan for the Phase II RCRA Facility Investigation at the Former 724th Tanker Purging Station SWMU 26, Fort Stewart, Georgia, May 1997.

ATTACHMENT 1

SAIC Validation Flagging Codes

PHASE II RCRA FACILITY INVESTIGATION FORMER 724TH TANKER PURGING STATION SWMU 26, FORT STEWART, GEORGIA

November 1997

<u>Blanks</u>

- F01 Sample data were qualified as a result of the method blank.
- F02 Sample data were qualified as a result of the field blank.
- F03 Sample data were qualified as a result of the equipment rinsate.
- F04 Sample data were qualified as a result of the trip blank.
- F05 Gross contamination exists.
- Concentration of the contaminant was detected at a level below the CRQL. F06
- Concentration of the contaminant was detected at a level less than the action limit, but F07 greater than the CRQL.
- F08 Concentration of the contaminant was detected at a level that exceeds the action level.
- F09 No laboratory blanks were analyzed.
- F10 Blank had a negative value $>5 \times$'s the IDL.
- FIL Blanks were not analyzed at required frequency.
- F12 Professional judgement was used to qualify the data.

Surrogate Recovery

- G01 Surrogate recovery was above the upper control limit.
- G02 Surrogate recovery was below the lower control limit.
- G03 Surrogate recovery was <10%.
- G04 Surrogate recovery was zero.
- G05 Surrogate was not present.
- G06 Professional judgement was used to qualify the data.

Matrix Spike/Matrix Spike Duplicate

- H01 MS/MSD recovery was above the upper control limit.
- H02 MS/MSD recovery was below the lower control limit.
- H03 MS/MSD recovery was <10%.
- H04 MS/MSD pairs exceed the RPD limit.
- H05 No action was taken on MS/MSD results.
- H06 Professional judgement was used to qualify the data.

Matrix Spike

- 101 MS recovery was above the upper control limit.
- MS recovery was below the lower control limit. 102
- I03 MS recovery was < 30%.
- No action was taken on MS data. 104
- Professional judgement was used to qualify the data. I05

Laboratory Duplicate

Internal Area Summary

- **JO1** Duplicate RPD was outside the control limit.
- J02 Duplicate sample results were $>5 \times$ the CRDL.
- J03 Duplicate sample results were $<5 \times$ the CRDL.
- 104 Professional judgement was used to qualify the data.

Laboratory Control Samples (LCSs)

- P01 LCS recovery was above upper control limit.
- LCS recovery was below lower control limit. P02
- P03 LCS recovery was < 50%.
- P04 No action was taken on the LCS data.
- P05 LCS was not analyzed at required frequency.

Target Compound Identification

- M01 Incorrect identifications were made.
- M02 Qualitative criteria were not met.
- M03 Cross contamination occurred.
- M04 Confirmatory analysis was not performed.
- M05 No results were provided.
- M06 Analysis occurred outside 12 hr GC/MS window.
- Professional judgement was used to qualify the data. M07
- M08 The %D between the two pesticide/PCB column checks was >25%.

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Initial/Continuing Calibration - Organics

- C01 Initial calibration RRF was < 0.05.
- C02 Initial calibration RSD was > 30%.
- C03 Initial calibration sequence was not followed as required.
- C04 Continuing calibration RRF was <0.05. COS
- Continuing calibration %D was >25%.
- C06 Continuing calibration was not performed at the required frequency.
- C07 Resolution criteria were not met.
- C08 RPD criteria were not met.
- C09 RSD criteria were not met.
- Retention time of compounds was outside windows. C10
- CH Compounds were not adequately resolved.
- C12 Breakdown of endrin or DDT was >20%.
- C13 Combined breakdown of endrin/DDT was > 30%.
- C14 Professional judgement was used to qualify the data.
- K01 Area counts were outside the control limits.
- K02 Extremely low area counts or performance was exhibited by a major drop off.
- K03 IS retention time varied by more than 30 seconds.
- K04 Professional judgement was used to qualify the data.

Sample Type	Media	Environmental Samples	Field Duplicates	Trip Blanks	QA QA Split Trip Samples Blanks	QA Trip Blanks
VOC Screening	Soil	24	7	1		ŧ
	Groundwater	28	ŝ	Q		ŧ
All Definitive Parameters	Soils/ Sediments	4		ŀ	ю	a e
	Groundwaters/ Surface Waters	12	а	Ŷ	8	6
Totak		82	∞			

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Table B-1. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations - QCSR

Media	Analysis Group	Re	jected/Total	Percent Rejected
Soil	Metals	0/	72	0.0
	Volatile Organics	0/	1,292	0.0
	Semivolatile Organics	0/		0.0
	TOC	0/		0.0
	Subtotal	0/	1,526	0.0
Sediment	Metals	0/	48	0.0
<i>o</i> cannon,	Volatile Organics	0/	102	0.0
	Semivolatile Organics	6 /	204	2.9
	Subtotal	6/	354	1.6
Surface Water	Metals	0/	40	0.0
	Volatile Organics	0/	85	0.0
	Semivolatile Organics	5/	150	2.9
	Subtotal	5/	295	1.6
Groundwater	Alkalinity	0/	6	0.0
Giblindwater	Anions	0/	24	0.0
	Metals	1/	64	0.0
	Volatile Organics	5/	1,258	0.4
	Semivolatile Organics	0/	102	0.0
	GRO/DRO	0/	18	0.0
	Subtotal	6/	1,472	0.4
Project Total		17/	3,647	0.5

Table B-2. Ft. Stewart 724th Tanker Purging Station Phase II RCRA InvestigationsSummary of Rejected Analytes(grouped by media and analysis group)

	C Innan from			with the second of the second of the second stank Average Surrogate Percent Recovery (%Rec)	çe Surro ga te	Percent R	covery (%)	Rec)
Analysis	Average %Rec	Soil Min. %Rec	Max. %Rec	Z	Water Average Min. %Rec %Rec	Water Min. %Rec	Max. SRee	Z
<u>Volatile Organic Compounds</u> TOLUENE-d8 BROMOFLUOROBENZENE DIBROMOFLUOROMETHANE	98.5 91.2 105.2	2 2 8	118 105 125	<u>8 8 8</u>	101.3 93.9 101.8	888	110 108 118	14 14 14
<u>Semivolatile Organic Compounds</u> NITROBENZENE-d5 2-FLUOROBIPHENYL TERPHENYL-d14	80.3 87.0 91.0	81 82	28 25 25		82.5 78.0 83.0	5 69 20	91 87 96	0 0 0
<u>BTEX/GRO Compounds</u> N-PROPYLBENZENE	90.2	3	98	و	,	1		
DRO Compounds 0-TERPHENYL	102			1	1		ſ	

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Table B-3. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations Laboratory Control Sample Evaluation - Method Blank Average Surveyer Percent Parcenter (200

Tal Laboratory C	Table B-4. Ft. y Control Sam	Stewart ple Eval	724th Ta uation - N	Table B-4. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations Laboratory Control Sample Evaluation - Method Blank Matrix Spike Average Percent Recovery (%Rec)	nase II RCI Nike Averag	tA Investi e Percent	gations Recovery (9	(Rec)
Analysis	Average %Rec	Soil Min. %Rec	Max. %Rec	Z	Average %Rec	Water Min. %Rec	Max. %Rec	z
Volatile Organic Compounds BENZENE CHLOROBENZENE 1,1-DICHLOROETHENE TOLUENE TRICHLOROETHENE	105.8 105.9 102.8 100.5 103.9	4 6 8 8 8 8 8 8	120 112 1110 1110	10 10 10 10	104.5 104.4 103.2 101.6 102.0	* * * * * *	112 115 116 113 113	13 13 13 13
BTEX Compounds BENZENE TOLUENE ETHYLBENZENE XYLENE	94.5 98.0 103.0 99.5	8 <u>5</u> 8 3	8 10 10 10 10		4 4 1 1 1			
<u>Methane/Ethene</u> METHANE ETHENE ETHENE	1 1 1	1 1 1		1 1 1	2			Poil 6-01 6-01
Semivolatile Organic Compounds ACENAPHTHENE 1,4-DICHLOROBENZENE 2,4-DINITROTOLUENE n-NITROSODI-n-PROPYLAMINE PYRENE 1,2,4-TRICHLOROBENZENE	84.3 78.7 78.3 88.7 103.7 88.0	28 27 75 28 58 28 56 58 58 58 58 58 58 58 58 58 58 58 58 58	88 88 98 98 88 88 88	ლ ლ ლ ლ ლ ლ	84.0 77.5 81.0 98.5 114.0 81.0	8 8 F 8 9 F	88 88 88 1124 124 124 124 124 124 124 124 124 12	00000

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Laboratory (Control San	iple Eval	uation - N	Laboratory Control Sample Evaluation - Method Blank Matrix Spike Average Percent Recovery (%Rec)	Spike Avera	se Percent	Recovery (9	eRec)
Analysis	Average %Rec	Soil Min. %Rec	Max. SkRee	Z	Average %Rec	Water Min. %Rec	Max. S.Roc	2
<u>Gasoline Range Organies</u> GRO	102.5	6	108	2	1	1		
<u>Diesel Range Organies</u> DRO	121	ŀ	1	I	,	1	a	
<u>Metals (ICP and AA)</u> ARSENIC BARIUM	78 112			-	100.4	56	101	3
CADMIUM CHROMIUM	12 83				101.0	8; § 8	<u>8</u> 8 8	п п,
SELENIUM SELENIUM	<u>ጽ</u> ሺ				101.1	8 8 8	2 8 2	n en er
SILVER MERCURY	87 75	в н	1 1		103.3 98.1	8 <u>6</u> 8	108	ილი იილი
Anions and TOC SULFIDE NITRATE NITRITE SULFATE		4 4 1 1		1 1 1 1	98.5 98.0 102.0 94.5	8 8 8 8 8 8 8 8 8 8	8 10 10 20 20 20 20	8 8 8 8
TOC	•	ı	ſ	ı	0.66	94	104	3

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Table B-4 continued. Pt. Stewart 724th Tanker Purging Station Phase II RCRA Investigations pratory Control Sample Evaluation - Method Blank Matrix Snike Average Derect Derect (

Analysis	Average %Rec	Soil Min. %Rec	Max. %Rec	Z	Average %Rec	Water Min. %Rec	Max. %Rec	Z
Volatile Organic Compounds 1,1-DICHLOROETHENE BENZENE TRICHLOROETHANE TOLUENE CHLOROBENZENE	107.9 115.3 113.9 94.4 109.0	82 100 101 101 101	162 143 114 115	60 60 60 60 60	110.5 106.4 104.8 103.6 103.3	5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	133 124 124 124 118	14 14 14 14 14
Semivolatile organic Compounds ACENAPTHENE 1,4-DICHLOROBENZENE n-NITROSODI-n-PROPYLAMINE 1,2,4-TRICHLOROBENZENE 2,4-DINOTROTOLUENE PYRENE	88.0 2.5 88.5 85.0 85.0 2.5	87 88 84 83 84 84 84 84 84 84 84 84 84 84 84 84 84	882288	~~~~	8.05 8.05 8.25 8.25 8.25 7.25	7 2 8 8 2 2	55 88 10 10 10 10	44444
BTEX Compounds BENZENE TOLUENE ETHYLBENZENE XYLENE	97.0 80.5 106.0 90.5	96 102 89	98 81 92	аааа	F I F I		1 3 1 1	

Table B-5. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations Sample Matrix Sike Evaluation - Average Percent Recovery (S.R.e.)

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	Sample	e Matrix	Sike Eval	Sample Matrix Sike Evaluation - Average Percent Recovery (%Rec)	ent Recover	r (%Rec)	0	
Analysis	Average %Ree	Soil Min. %Rec	Max. %Rec	Z	Water Average Min. %Rec %Rec	Water Min. %Rec	Max. %Rec	Z
GRO Compounds	0.66	16	107	7	4	,		
DRO Compounds	94.0	68	8	м		1	ł	
Metals (ICP and AA) ARSENIC BARIUM CADMIUM CHROMIUM CHROMIUM LEAD MERCURY SELENIUM SILVER SILVER Anions and TOC	91.2 106.2 97.4 95.3 92.9 101.2	8 10 7 7 7 7 8 8 8 8 9 7 8 9 8 8 8 8 8 9 8 9	94 117 101 107 95 107	ო ო ო ო ო ო ო	99.7 100.2 99.6 99.6 99.1 106.2 99.1	% % % % % % % % % % % % % % % % % % %	20 20 20 20 20 20 20 20 20 20 20 20 20 2	
NITRITE SULFATE				й т.т.	102.2 99.1 100.7	888	8 <u>8</u> 8	4 4 4
TOC		a		1	100.2	66	101	4

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Table B-5 continued. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations Common Matrix Sike Realmation - Average Pervent Renvery (%Rec)

	5	Soil Min.	Max.		Average	Water Min.	Max.	
Analysis	RPD	a	UAN	Z	RPD RPD	RPD	RPD	N
Volatile Organic Compounds								
1,1-DICHLOROETHENE	5.3	6	6	4	8.1	ŝ	15	7
BENZENE	3.8	1	10	4	9.4	. 6	5	
TRICHLOROETHANE	2.8	0	6	4	7.4)	15	
TOLUENE	4.0	1	¢	ব	2.3	0	i vi	L
CHLOROBENZENE	2.5	0	4	4	3.4	0	16	
Semivolatile organic Compounds A CEN A DTUENTE	Ċ							
	4 ·	•	•	1	20.5	10	31	2
I,4-DICHLOKOBENZENE	-	ı	ı	-	19.0	ø	32	2
n-NITROSODI-n-PROPYLAMINE	m	ı	ı	1	19.0	9	32	1 (7
1,2,4-TRICHLOROBENZENE	-	•	•	1	20.0	00	. 32	2
2,4-DINUTKOTOLUENE	2	t	ł	1	19.5	••	31	6
ANANA	-	ı	ı	-1	19.5	ø	31	2
BTEX Compounds								
TOLLIFNE	r1 -		,		,	ı	ı	1
ETHYLBENZENE	- oC			-4	ı	ı	ı	ı
XYLENE) m	ł	,	4 +-4	1 1			• •

Table B-6. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations

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EX.	nple Matrix S	ike Dupi	icate or D	Sample Matrix Sike Duplicate or Duplicate Evaluation - Relative Percent Difference (RPD)	telative Perc	ent Differ	ace (RPD)	
Analysis	Average RPD	Soil Min. RPD	Max. RPD	Z	Average RPD	Water Min. RPD	Max. RPD	N
GRO Compounds	16	ŧ	£	-	1			
DRO Compounds	Ξ	1	. 1		I	ť	,	
Metais (ICP and AA) ARSENIC BARUM CADMIUM CHROMIUM LEAD MERCURY SELENIUM SILVER	1.0 4.5 0.9 0.9 1.3 3 2.4 2.4	000001-0	るロータータルダ		7.5 6.9 6.4 7.0 7.0 3.5 3.9	-0000	61 20 20 10 11 12 12 12 10 10 10	ფფფიფფფი ფფფიფფი ფფფიფფი ფფფი ფფფი ფფფ
Anions and TOC NITRATE NITRITE SULFATE				t [°] 1 - 1	0.5 0.8 1.1	000	0 T B	444
TOC	,	4	T	•	1.5	1.5	1.5	2

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Table B-6 continued. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations Sample Matrix Sike Duplicate or Duplicate Evaluation - Relative Percent Difference (RPD)

Analysis	Sediment 262111/262121 RPD(%)	Soil 265B11/265B21 RPD(%)	Soli 265111/265121 RPD(%)	Surface Water 263411/263421 RPD(%)
Volatile Organic Compounds				9403-0416-0646-6-48
All Compounds	*	*	*	*
except BENZENE			132	
ETHYLBENZENE			97	
TOLUENE			4.2	
XYLENES			92	
Semivolatile Organic Compounds All Compounds	*			*
Metals (ICP and AA)				
ARSENIC	*			*
BARIUM	*			*
CADMIUM	*			*
CHROMIUM	*		·	*
LEAD	*			*
MERCURY	*			*
SELENIUM	* -			*
SILVER	*			*

Table B-7. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations Soil/Sediment and Water Field Duplicate Evaluation - Relative Percent Difference (RPD) and Absolute Difference

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* Acceptable = At least one value is <5X the reported detection level and duplicate comparison is within 3X the reported detection level.

UNAC Unacceptable = At least one value is <5X the reported detection level and duplicate comparison is greater than 3X the reported detection level.

Analysis	Groundwater 266W11/266W21 RPD(%)	Groundwater 266N11/266N21 RPD(%)	Groundwater 266212/266222 RPD(%)	Groundwater 264111/264121 RPD(%)
Volatile Organic Compounds				
All Compounds	*	*	*	*
except BENZENE	7.0			
ETHYLBENZENE	23			
TOLUENE	17			
XYLENES	22			
1,1-DICHLOROETHANE	6.8			
METHANE				49
Semivolatile Organic Compounds All Compounds				*
Metals (ICP and AA)				
ARSENIC				*
BARIUM				*
				*
				*
EAD				5.9
MERCURY				0
ELENIUM				*
ILVER				25

Table B-7 continued. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations Soil/Sediment and Water Field Duplicate Evaluation - Relative Percent Difference (RPD) and Absolute Difference ĺ

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 $\left(\right)$

* Acceptable = At least one value is <5X the reported detection level and duplicate comparison is within 3X the reported detection level.

UNAC Unacceptable = At least one value is <5X the reported detection level and duplicate comparison is greater than 3X the reported detection level.

Anolasia	Groundwater 264411	Groundwater 264511
Analysis	RPD(%)	RPD(%)
Metals (ICP and AA)		
ARSENIC	*	*
BARIUM	2.3	1.1
CADMIUM	*	*
CHROMIUM	*	*
LEAD	*	*
MERCURY	*	*
SELENIUM	*	*
SILVER	*	*

Table B-8. Ft. Stewart 724th Tanker Purging Station Phase II RCRA Investigations Groundwater Total vs Filtered Sample Evaluation - Relative Percent Difference (RPD) and Absolute Difference

* Acceptable = At least one value is <5X the reported detection level and duplicate comparison is within 3X the reported detection level.

UNAC Unacceptable = At least one value is <5X the reported detection level and duplicate comparison is greater than 3X the reported detection level.

Analysis	ТВТОО1 07/10/97 (µg/L)	TBT002 07/11/97 (μg/L)	ТВТ003 07/17/97 (µg/L)	TBT004 07/24/97 (μg/L)
Volatile Organic Compounds				
METHYLENE CHLORIDE TOLUENE	3 U 2.2	2.9 U 2.4	2 U 2.4	2.5 U 2.2
				Rossener y segure secondos
Analysis	TBT005 07/25/97 (μg/L)	TBT006 07/26/97 (μg/L)	TBT007 07/27/97 (µg/L)	TBT008 08/11/97 (μg/L)
Volatile Organic Compounds				
METHYLENE CHLORIDE TOLUENE	2.4 U 2.2	2.8 U 2.1	2.9 U 3.1	2.9 4.7
Analysis	TBT010 08/12/97 (μg/L)	TBT012 08/13/97 (μg/L)	TBT013 08/14/97 (μg/L)	
Volatile Organic Compounds				
METHYLENE CHLORIDE FOLUENE	3.0 4.7	2.5 U 3	2.8 4.3	

PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANKER PURGING STATION FORT STEWART, GEORGIA

APPENDIX E

GEOCHEMICAL LABORATORY TEST RESULTS



GRAIN SIZE DATA SHEET

Job Name: SAIC - Ft. Stewart

Job Number: 1439-97-416C

Date: 7/14/97 í. de s GRAIN SIZE DISTRIBUTION CURVE 100 90 80 70 PASSIN 60 150 **7** 9 40 £. 30 20 0 **1**57 100 10¥ 20,1 **\$0.001** GRAIN SIZE in millimeters

Gravel	< 75 mm	and > 4.75 mm		Fine Sand	< 0.425 mm and	1 > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm			Silt	< 0.075 and 2	
Medium Sand	< 2.00 mm and > 0.425 mm			Clay	< 0.005 mm	
Boring No.:	n/a	Sample No.:	265211	Elevation (ft):	n/a	
Log No.:	7564	Sample Name:	·····	SWMU-26		
ATTERBERG	LIMIT (-#40,MA	TERIAL)		G	RAIN SIZE DATA	
LIQUID LIMI		n/a		% GRA		CALLS AND
PLASTIC LIMIT				0		<u> </u>

n/a
п/а
n/a
n/a
n/a

GRAIN SIZE DAT	A
% GRAVEL	0
% SAND	60
%FINES	40
Uniformity Coef.	n/a
Effective Size	n/a

ASTM:

D422
.

Feature: Station: Range : Boring :			Sample: 2 Part :	7.0' 265211		FILE : 54 TESTED BY : reg Computed By:reg Checked By : (free Report Date:07-16-97
Specific (Gravity =2.	650(Assumed	1)			
Dry Wt.+ Sieve and Total Dry	Hydrometer Weight(gm	345.10 Analysis) = 248.9	Tare Wi	:(gm)	= 96	5.20
Sieve	Wt.Ret.	<pre>% Pass.</pre>	Size(mn			
3 in. 2 in.	0.0	100.0	76.2000			
2 in. 1.5 in.	0.0	100.0	50.8000			
	0.0	100.0	38.1000			
	0.0	100.0	25.4000			
3/4 in.	0.0	100.0	19.0500			
3/8 in.	0.0	100.0	9.5300			
NO.4	0.0	100.0	4.7500			
NO.10	1.0	99.6	2.0000			
NO.20	7.3	97.1	0.8500			•
NO.40	19.6	92.1	0.4250			
NO.50	29.8	88.0	0.3000			
NO.100	82.5	66.9	0.1500			
NO.200	148.1	40.5	0.0750			
D10(mm) Gravel(%)	=0.0000 = 0	D30(mm)= (Sand(%)=6(D60(mm)= Silt(웅)=		00 Clay(%)= 0



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STATISTICS OF STATISTICS

GRAIN SIZE DATA SHEET

GRAIN SIZE DISTRIBUTION CURVE	Job Name: <u>SAIC - Fi</u>			ASTM: D	942
	Job Number: 1439-9/	/•416C		Date: 7/	14/9
		GRAIN SIZE DI			
	100				
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	S for				
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0.1 100, 0.1	10				- 14 2 1 1 1
100, 1, 0.1, 0.1, 0.01	0				-8
	,100, 	105	0.1[.	£0.01(.001
GRAIN SIZE in millimeters		GRAIN	SIZE in millimeters		

Gravel	< 75 mm a	and > 4.75 mm		Fine Sand	< 0.425 mm	
Coarse Sand		and > 2.00 mm				ind > 0.075 mm
Medium Sand		and > 0.425 mm		Silt		l > 0.005 mm
	< 2.00 mm	and > 0.425 mm		Clay	< 0.0	05 mm
Boring No.: _	n/a	Sample No.:	265411	Elevation (ft):	n/a	_
Log No.:	7565	Sample Name:		SWMU-26	·····	_
ATTERBERG	LIMIT (#40 MA	TERIAL)		<u> </u>	RAIN SIZE DATA	
		n/a		% GR/		
PLASTIC LIN	SIT	n/a		% SA	ND	85
PLASTICITY IN	DEX	n/a		%FIN	***	
NATURAL MOISTURE (%)		n/a			15	
	1					

Uniformity Coef.

Effective Size

n/a

n/a

Project: 1439-97-416C Feature: SWMU-26 FILE : 55 Station: TESTED BY : reg El. : 6.0' Range Computed By:reg Checked By : : Sample: 265411 Boring : Part : Report Date:07-16-97 Specific Gravity =2.650(Assumed) Moisture Determination Dry Wt.+Tare(gm)= 462.90 Tare Wt(gm) Non-Plastic Soil 98.20 = Sieve and Hydrometer Analysis Total Dry Weight(gm) = 364.7Sieve Wt.Ret. % Pass. Size(mm) 3 in. 0.0 100.0 76.2000 2 in. 0.0 100.0 50.8000 1.5 in. 0.0 100.0 38.1000 1 in. 0.0 100.0 3/4 in. 25.4000 0.0 100.0 19.0500 3/8 in. 0.0 100.0 9.5300 NO.4 0.6 99.8 4.7500 NO.10 2.0 99.5 2.0000 NO.20 12.4 96.6 0.8500 NO.40 41.5 88.6 0.4250 NO.50 63.4 82.6 0.3000 NO.100 213.6 41.4 0.1500 NO.200 309.4 15.2 0.0750 Soil Symbol= SM (Silty sand) D10(mm) =0.0654 $\bar{D}30(mm) = 0.1109$ Gravel(%) = 0D60(mm) = 0.2050Sand(%)=85 Silt(%)= 15 Clay(윙)= 0

{



GRAIN SIZE DATA SHEET

Job Name: SAIC -		ASTM:	D422
Job Number: 1439-	37-416C	Date:	7/14/9
	GRAIN SIZE DISTRIBUTION CURVE		
100		eran (b) e sin al e-4 a Sin ang Tang Sin ang tang	
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		·····	
80		· · · · · · · · · · · · · · · · · · ·	
ONISS 4606			
L L			
30			
20			
10			197.7
0			
100	10	wo.01	0.001
	GRAIN SIZE in millimeters	在 有些了了。	
			送福祉

Gravel	< 75 mm a	and > 4.75 mm				
Coarse Sand		and >2.00 mm		Fine Sand		ind > 0.075 mm
				Silt	< 0.075 and	i > 0.005 mm
Medium Sand	< 2.00 mm a	and > 0.425 mm		Clay	< 0.0	05 mm
Boring No.:	n/a	Sample No.:	265811	Elevation (ft):	n/a	
Log No.:	7566	Sample Name:		SWMU-26		_
ATTERBER	G LIMIT (#40 MA	TERIAL)		Manager and Constrained and Co	RAIN SIZE DATA	NE COMPANY
	1IT	n/a		% GRA		
PLASTIC LI	МІТ	n/a		% SA		<u> </u>
PLASTICITY I	NDEX	n/a				81
NATURAL MOIST		n/a		%FIN	<u> </u>	<u> 19</u>
······································				Uniformit	y Coef.	n/a

Effective Size

n/a

Project: 1439-97-416C Feature: SWMU-26 FILE : 56 Station: TESTED BY : reg E1. Range : : --Computed By:reg Checked By : Sample: 265811 Boring : Part : Report Date:07-16-97 Specific Gravity =2.650(Assumed) Moisture Determination Dry Wt.+Tare(gm)= 235.30 Tare Wt(gm) Non-Plastic Soil = 68.30 Sieve and Hydrometer Analysis Total Dry \overline{W} eight(gm) = $1\overline{6}7$ Sieve Wt.Ret. % Pass. Size(mm) 3 in. 0.0 100.0 76.2000 2 in. 0.0 100.0 50.8000 1.5 in. 0.0 100.0 38.1000 1 in. 0.0 100.0 25.4000 3/4 in. 0.0 100.0 19.0500 3/8 in. 0.0 100.0 9.5300 NO.4 0.3 99.8 4.7500 NO.10 1.5 99.1 2.0000 NO.20 8.0 95.2 0.8500 NO.40 24.9 85.1 0.4250 NO.50 38.4 77.0 0.3000 NO.100 91.6 45.1 0,1500 NO.200 135.5 18.9 0.0750 Soil Symbol= SM (Silty sand) D10(mm) =0.0594 D30(mm) = 0.1006D60(mm) = 0.2072Gravel(%)= 0 Sand(%)=81 Silt(%)= 19 Clay(%) = 0



128-1371 - F

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GRAIN SIZE DATA SHEET

Job Name: SAIC - Ft. Stewart Job Number: 14

ASTM: D422

<u>39-97-416C</u>	Date:	7/14/97
		- 21 A
GRAIN SIZE DISTRIBUTION CURVE	A Second	5 4
		42.4
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60		
70 60 50		
50		
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		N.

< 75 n	nm and > 4.75 mm		Fine Sand	< 0.425 mm an	d > 0.075 mm
< 4.75	mm and >2.00 mm		Silt	< 0.075 and	
< 2.00 r	nm and > 0.425 mm		Clay	< 0.00	
).: <u>n/a</u>	Sample No.:	265911	Elevation (ft):	n/a	
.: 7567	Sample Name:		SWMU-26		
RGLIMIT (#40	MATERIAL)		G	RAIN SIZE DATA	
IMIT	n/a		% GRA		0
LIMIT	n/a		% SA	ND	78
Y INDEX	n/a		%FIN		22
NATURAL MOISTURE (%)					

Uniformity Coef.

Effective Size

n/a

n/a

Project: 1439-97-416 Feature: SWMU-26 Station: Range : Boring : Specific Gravity =2.		El. : Sample: Part :)	 265911		FILE : 57 TESTED BY : reg Computed By:reg Checked By : Report Date:07-16-97
Moisture Determinati Dry Wt.+Tare(gm)= Sieve and Hydrometer Total Dry Weight(gm Sieve Wt.Ret.	352.70 Analysis) = 256.3	Tare W		= 96	.40
3 in. 0.0	% Pass. 100.0	Size(mn	1)		
2 in. 0.0	100.0	76.2000			
1.5 in. 0.0	100.0	50.8000			
1 in. 0.0	100.0	38.1000			
3/4 in. 0.0	100.0	25.4000			
3/8 in. 0.0	100.0	19.0500			
NO.4 0.0	-	9.5300			
NO.10 0.4	100.0	4.7500			
NO.20 11.5	99.8	2.0000			
==10	95.5	0.8500			
	82.5	0.4250			
	73.0	0.3000			
	34.8	0.1500			
NO.200 200.9	21.6	0.0750			
D10(mm) =0.0000 Gravel(%)= 0	D30(mm)= 0 Sand(%)=78	.0000	D60(mm)= Silt(웅)=	0.000 22	00 Clay(%)= 0

.



GRAIN SIZE DATA SHEET

Job Name: SAIC - Ft. Stewart

Job Number: 1439-97-416C

ASTM: D422 Date: 7/14/97

n/a

n/a

Effective Size

	GRAIN SIZE DISTRIBUTION CU	RVE
1100		
90		
580		
20. 170. 20.		
30/		
20	π	
05 <mark>-</mark> 1100		
	GRAIN SIZE In millimeter	

Gravel	< 75 mm a	ind > 4.75 mm		Fine Sand	< 0.425 mm an	d > 0.075
Coarse Sand	< 4.75 mm	and > 2.00 mm		Silt	< 0.075 and	
Medium Sand	< 2.00 mm a	and > 0.425 mm		Clay	< 0.00	-
Boring No.:	n/a	Sample No.:	265D11	Elevation (ft):	n/a	
Log No.:	7568	Sample Name:		SWMU-26		
ATTERBER	G LIMIT (-#40 MA1	rerial)		G	RAIN SIZE DATA	
ATTERBER LIQUID LIM		rer(AL) n/a		G % GRA	RAINSIZE DATA	
	IIT				VEL	0
	IIT MIT	n/a		% GRA	ND	0 72
LIQUID LIM PLASTIC LII	IIT MIT NDEX	n/a n/a		% GRA % SA	ND	0

E-11

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Feature: Station: Range : Boring :			Sample: 2 Part :	4.0'-5.0' 265D11		FILE : 58 TESTED BY : reg Computed By:reg Checked By : Report Date:07-16-97
Specific (Gravity =2.	650(Assumed)			
Dry Wt.+ Non-Plast Sieve and Total Dry	Determinati Tare(gm)= tic Soil Hydrometer y Weight(gm	442.70 Analysis	Tare Wt	:(gm)	= 104	4.20
Sieve	Wt.Ret.	<pre>% Pass.</pre>	Size(mm	n -		
3 in.	0.0	100.0	76.2000			
2 in.	0.0	100.0	50.8000			
1.5 in.	0.0	100.0	38.1000			
1 in.	0.0	100.0	25.4000			
3/4 in.	0.0	100.0	19.0500			
3/8 in.	0.0	100.0	9.5300			
NO.4	0.0	100.0	4.7500			
NO.10	1.6	99.5	2.0000			
NO.20	6.2	98.2	0.8500			
NO.40	22.1	93.5	0.4250			
NO.50	34.9	89.7				
NO.100	167.9	50.4	0.3000			
NO.200	243.4	28.1	0.1500			
		20.1	0.0750			
Soil Symb	ol= SM (Si]	ty sand)				
D10(mm)	=0.0427	D30(mm) = 0	0796		A 1	
Gravel(%)	= 0	Sand(%)=72	/ 30	D60(mm)= Silt(왕)=		77 Clay(%)= 0



GRAIN SIZE DATA SHEET

Job Name: SAIC - Ft. Stewart

Job Number: 1439-97-416 C

ASTM: <u>D422</u> Date: <u>8/21/97</u>

	GRAIN SIZE	DISTRIBUTION C	LIRVE		
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		Minister and American Contract of the American A	(1 4 1 1 1 1	

Gravel	< 75 mm and > 4.75 mm
Coarse Sand	< 4.75 mm and >2.00 mm
Medium Sand	< 2.00 mm and > 0.425 mm

 Fine Sand
 < 0.425 mm and > 0.075 mm

 Sift
 < 0.075 and > 0.005 mm

 Clay
 < 0.005 mm</td>

Boring No.: n/a

Log No.: 7618

261113

Sample No.:

Sample Name:

SV

SWMU 26

Elevation (ft):

ATTERBERG LIMIT (#40 MATERIAL)

PLASTICITY INDEX	<u>35</u> 32.8
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% GRAVEL	0
% SAND	52
%FINES	48
Uniformity Coef.	n/a
Effective Size	n/a

Project: 1439-97-416C FILE : 89 Feature: SWMU-26 TESTED BY : bd Station: E1. : Computed By:bd Range : Sample: 261113 Checked By : Boring : Part : 7618 Report Date:08-11-97 Specific Gravity = 2.614 Flask No. = 9.00 Temp.(deg.c.) = 25.00Soil Wt.(gm) = 50.00 Total Wt.(gm) =706.40 Moisture Determination Dry Wt.+Tare(gm)= 494.60 Tare Wt(gm) = 104.20Liquid Limit Plastic Limit Blows = 28.00Wet Wt.(gm) = 15.08Wet Wt.(gm) = 16.70Dry Wt.(gm) = 13.58Dry Wt.(gm) = 12.41Tare Wt.(gm) = 4.02 Tare Wt.(gm) 3.81 = Liquid Limit(\$) = 50.57 Plastic Limit(%)= 15.69 Plasticity Index= 34.88 Sieve and Hydrometer Analysis Total Dry Weight(gm) = 390.4 Sieve Wt.Ret. % Pass. Size(mm) 3 in. 0.0 100.0 76.2000 2 in. 0.0 100.0 50.8000 1.5 in. 0.0 100.0 38.1000 1 in. 0.0 100.0 25.4000 3/4 in. 0.0 100.0 19.0500 3/8 in. 0.0 100.0 9.5300 NO.40.0 100.0 4.7500 NO.10 0.1 100.0 2.0000 NO.20 1.3 99.7 0.8500 NO.40 6.9 ·98.2 0.4250 NO.50 11.5 97.1 0.3000 NO.100 32.6 91.6 0.1500 NO.200 201.4 48.4 0.0750 Soil Symbol= SC/GC (Clayey Gravel/Sand) D10(mm)=0.0405 D30(mm) = 0.0558D60(mm) = 0.0903Gravel(%)= 0 Sand(%)=52 Silt(%)= 48 Clay(%)= 0



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ATTERBERG LIMITS

Job No:	1439-97-416C	ASTM D:	4318
Job Name:	SAIC, SWMU-26	Operator:	bd
Sample No:	261113	Date:	8/11/97

	LL=51		PL=16	I	PI=35
Moisture Content; %	15.7	15.2	16.3		
Tare Wt.	4.02	4.02	3.73		
Soil & Tare Dry Wt.	13.58	14.96	13.91		
Soil & Tare Wet Wt.	15.08	16.62	15.57		
Tare No.	31	10	61		
		PLASTIC LIMIT	DETERMINATI	ON	<u></u>
No. of Blows; N	35	32	28	25	16
Moisture Content; %	48.2	49.6	49.9	50.2	56.7
Tare Wt.	3.85	4.03	3.81	3.85	3.83
Soil & Tare Dry Wt.	12.36	13.13	12.41	13.39	13.69
Soil & Tare Wet Wt.	16.46	17.64	16.70	18,18	19,28
Tare No.	50	J T	B1	37	38



*** PERMEABILITY ANALYSIS ***

PROJECT: 1439-97-416 C FEATURE: SAIC - Ft. Stewart TEST NO: 261113

RUN NO. 1 2 3 4	3.0	AREA P IN CM2 0.7184 0.7184 0.7184 0.7184	PIPETTE OUT CM2 0.3656 0.3656 0.3656 0.3656	AREA SPEC CM2 39.98 39.98 39.98 39.98	HT SPEC CM 7.16 7.16 7.16 7.16	SEC 2700.0	HEAD D INITIAL CM 96.00 84.79 71.19 96.00	IFF FINAL CM 84.79 71.19 62.02 79.01	0.0000021081
--------------------------------	-----	---	---	---	--	---------------	---	--	--------------

Avg= 1.99466E-06

REMARKS:

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SAMPLE DATA: Initial Moisture Content= 32.9% Final Moisture Content= 41.0% Dry Unit Weight= 78.0 pcf



GRAIN SIZE DATA SHEET

Job Name: SAIC - Ft. Stewart

Job Number: 1439-97-416 C

ASTM: D422 Date: 8/21/97

		T COLORATING CONTRACTOR STATISTICS		WHITE THE POLY AND
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	┉┉┥			
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202			Nei	
Angelitari (1 / 1				
10				
0				
100				-0.01

Gravel	< 75 mm and > 4,75 mm
Coarse Sand	< 4.75 mm and >2.00 mm
Medium Sand	< 2.00 mm and > 0.425 mm

Boring No.: n/a

Log No.: 7651

Sample Name:

Sample No.:

261213

SWMU 26

Elevation (ft):

Sift

Clay

THE REPORT OF THE REAL PROPERTY OF THE PROPERT

LIQUID LIMIT	NP
PLASTIC LIMIT	NP
PLASTICITY INDEX	NP
NATURAL MOISTURE (%)	21.8

% GRAVEL	0
% SAND	79
%FINES	21
Uniformity Coef.	n/a
Effective Size	n/a

Fine Sand < 0.425 mm and > 0.075 mm

< 0.075 and > 0.005 mm

< 0.005 mm

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	1439-97-416 SAIC, SWMU		El. : Sample: Part :	261213 7651	TESTI Compu Checl	: 98 ED BY : bd uted By:bd ked By : ct Date:08-2	1-97
Specific (Gravity =2.	650(Assumed)		·		
Dry Wt.+ Non-Plast Sieve and Total Dry	Determinati Fare(gm)= tic Soil Hydrometer / Weight(gm	423.30 Analysis	Tare Wi	t(gm)	= 65.90		
Sieve	Wt.Ret.	<pre>% Pass.</pre>	Size(m	n)			
3 in.	0.0	100.0	76.2000				
2 in.	0.0	100.0	50.8000				
1.5 in.	0.0	100.0	38.1000				
1 in.	0.0	100.0	25.4000				
3/4 in.	0.0	100.0	19.0500				
3/8 in.	0.0	100.0	9.5300				
NO.4	0.0	100.0	4.7500				
NO.10	0.3	99.9	2.0000				
NO.20	6.3	98.2	0.8500				
NO.40	30.9	91.4	0.4250				
NO.50	52.2	85.4	0.3000				
NO.100	207.2	42.0	0.1500				
N 500	281.5	21.2	0.0750				
(0.0750				
Soil Symb	ol= SM (Sil	tv sand)					
D10(pm)		D30(mm) = 0	1005		0 1000		
Gravel(%)		Sand(%)=79		D60(mm)= Silt(욱)=	21	Clay(१)=	0

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GRAIN SIZE DATA SHEET

Job Name: SAIC - Ft. Stewart

Job Number: 1439-97-416 C

ASTM: <u>D422</u> Date: <u>8/21/97</u>

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Gravel	< 75 mm and > 4.75 mm	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm	Sitt	< 0.075 and > 0.005 mm
Medium Sand	< 2.00 mm and > 0.425 mm	Clay	< 0.005 mm
		City	L

Boring No.: r√a Sample No.: 261413

Log No.: 7651

Sample Name:

E-20

SWMU 26

Elevation (ft):

ADDREASS VALUE	RO SHIT AND MATERIAL

	NP
PLASTIC LIMIT	NP
PLASTICITY INDEX	NP
NATURAL MOISTURE (%)	21.9

% GRAVEL	14
% SAND	63
%FINES	23
Uniformity Coef.	n/a
Effective Size	n/a

Project: I :ure: Station: Range : Boring :	1439-97-416 SAIC, SWMU	C 26	El. : Sample: Part :	261413 7651		FILE : 99 TESTED BY : bd Computed By:bd Checked By : Report Date:08-21-97
Specific (Gravity =2.	650(Assumed)			
Dry Wt.+7 Non-Plast Sieve and Total Dry	Determinati Fare(gm)= Lic Soil Hydrometer VWeight(gm	570.90 Analysis	Tare W	t(gm)	= 103	.50
Sieve	Wt.Ret.	<pre>% Pass.</pre>	Size(m	a)		
3 in.	0.0	100.0	76.2000			
2 in.	0.0	100.0	50.8000)		
1.5 in.	0.0	100.0	38.1000)		
1 in.	0.0	100.0	25.4000) .		
3/4 in.	0.0	100.0	19.0500			
3/8 in.	0.0	100.0	9.5300			
NO.4	63.3	86.5	4.7500			
NO.10	137.1	70.7	2.0000			
NO.20	202.7	56.6	0.8500			
NO.40	241.9	48.2	0.4250			
NO.50	260.3	44.3	0.3000			
NO.100	320.0	31.5	0.1500			
N 200	358.6	23.3	0.0750			
۰, ۱			0.0750			
Soil Symbo	ol= SM (Sil	ty sand)				
D10(mm)	=0.0246	D30(mm) = 0	.1319	D60(mm) =	1 042	7
Gravel(%):	=14	Sand(%)=63		D60(mm)= Silt(%)=	23	/ Clay(%)= 0



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GRAIN SIZE DATA SHEET

Job Name: SAIC - Ft. Stewart

Job Number: 1439-97-416 C

ASTM: <u>D422</u> Date: <u>8/21/97</u>

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			-			GI											i i i	ua -				

< 75 mm and > 4.75 mm
< 4.75 mm and >2.00 mm
< 2.00 mm and > 0.425 mm

Boring No.: n/a

Sample No.:

261513

Log No.: 7651

Sample Name:

SWMU 26

<u>AU 26</u>

Elevation (ft):

Fine Sand

Silt

Clay

LIQUID LIMIT	NP
PLASTIC LIMIT	NP
PLASTICITY INDEX	NP
NATURAL MOISTURE (%)	24.1

% GRAVEL	0
% SAND	96
%FINES	4
Uniformity Coef.	n/a
Effective Size	

< 0.425 mm and > 0.075 mm

< 0.075 and > 0.005 mm

< 0.005 mm

Proiect: 1 F ure: S Station: Range : Boring :	439-97-416 AIC, SWMU 2		El. : Sample: Part :			FILE : 97 TESTED BY : bd Computed By:bd Checked By : (Report Date:08-21-97
Specific G	ravity =2.6	550(Assumed)			
Moisture De Dry Wt.+Ta Non-Plast Sieve and H Total Dry	are(gm)= 7 ic Soil Hydrometer	721.70	Tare W	t(gm)	= 104	.10
Sieve	Wt.Ret.	<pre>% Pass.</pre>		n)		
3 in.	0.0	100.0	76.2000			
2 in.	0.0	100.0	50.8000			
1.5 in.	0.0	100.0	38.1000			
1 in.	0.0	100.0	25.4000			
3/4 in.	0.0	100.0	19.0500			
3/8 in.	0.0	100.0	9.5300			
NO.4	0.5	99.9	4.7500			
NO.10	32.5	94.7	2.0000			
NO.20	288.1	53.4	0.8500			
NO.40	482.9	21.8	0.4250			
NO.50	521.6	15.5	0.3000			
NO.100	564.3	8.6	0.1500			
	593.4	3.9	0.0750			
	=0.1721	r-graded sa D30(mm)= 0 Sand(%)=96	.5088	D60(mm)= Silt(%)=		2 Clay(%)= 0

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APPENDIX F

PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANK PURGING STATION (SWMU 26) FORT STEWART, GEORGIA

BACKGROUND DATA SUMMARY

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F. BACKGROUND DATA SUMMARY

F.1 BACKGROUND DATA ANALYSIS

The reference background criteria for the Former 724th Tanker Purging Station (TPS) have been developed based on data from background samples collected from solid waste management units (SWMUs) across the Fort Stewart Military Reservation (FSMR). In general, reference background samples were collected in each medium at locations upgradient or upstream of each site so as to be representative of naturally occurring conditions at SWMUs under Phase II investigation. In addition, soil samples collected during the Phase I investigation [i.e., Burn Pits (SMWUs 4A, 4B, 4D, 4E, and 4F), Active Explosive Ordnance Disposal (EOD) Area (SWMU 12A), etc.] were included as reference background samples if they were upgradient of the site and if the data were of sufficient quality to be representative of natural background conditions at the FSMR. A summary of the sample SWMUs, and the source of the data (Phase I or II RFI), is presented in Table F-1 for each medium. Figures F.1 and F.2 present the locations of the background sample locations.

U.S. Environmental Protection Agency (EPA) Region IV methodology (EPA 1996b) was used as guidance for the development of the background data set for screening metals data. In cases where enough samples (e.g., more than 20) are collected to define background, a background upper tolerance level can be calculated. In cases where fewer samples (e.g., less than 20) are collected to define background, background can be calculated as two times the mean background concentration (EPA 1996b). Given that fewer than 20 background samples were collected for the FSMR, the latter method was used for calculating reference background concentrations for metals.

Tables F-2 through F-6 present the analytical results for the individual background samples as well as the two-times-mean background concentrations for surface soil, subsurface soil, groundwater, surface water, and sediment, respectively. If a chemical was not detected at a site then one-half the detection limit was used as the concentration in calculating the mean background concentration. Given the limited number of background samples, the mean concentration for soils in the eastern United States is also presented for comparative purposes only. A statistical analysis of the surface soil, subsurface soil, groundwater, surface water, and sediment data is presented in Tables F-7 through F-11, respectively.

The use of background data from multiple SWMUs across the FSMR is appropriate for soil and groundwater for the following reasons:

- 1. The soil types for both surface and subsurface soils consist of similar coastal plain deposits (both former barrier island and backwater marsh deposits) with varying amounts of sands, silts, and clays. The variation in soil types occurs vertically at a given site to the same extent that it occurs across the installation. No correlation between the metal concentration and either soil type or geological facies is apparent. The range of variation in the concentration of any given analyte across the background samples is relatively narrow, and generally significantly less than the mean concentration for soils in the eastern United States.
- 2. The turbidity of groundwater samples was minimized through the use of low-flow micropurging techniques during sample collection. The turbidity values ranged from 1.8 to

136 across all samples. No correlation between the metal concentration and turbidity is apparent. All samples were collected at the water table in the same type of aquifer unit.

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Definitions of acronyms and abbreviations used in Appendix F tables

SWMU: Sample ID:	Solid Waste Management Unit sample identification number on chain-of-custody
USGS:	United States Geological Survey
Det. Limit:	detection limit reported by the analytical laboratory
CV:	coefficient of variation
Min. Detect:	minimum detected value
Distr.:	distribution of data (normal, lognormal)
Site-specific	
background criteria:	Surface water and sediment background samples were collected upgradient of this particular SWMU and are specific to this site only. No installation-wide background data set has been established for surface water or sediment.

				Station		
SWMU Number	Waste Permit HW-045	Surface Soil	Subsurface Soil	Groundwater	Surface Water	Sedimen
1	South Central Landfill	SC-M17*	SC-M17	MW10'	NA	NA
2	Camp Oliver Landfill	MW5°	MW5°	MW5 ^c	NA	NA
3	TAC-X Landfill	MW5°	MW5 ^c	MW5 [°]	NA	NA
4A	Bum Pit A		MW1 ^b (Phase I)	MW1 ^ª	NA	NA
4B	Burn Pit B		MW3 ^b (Phase I)	MW3 ^d	NA	NA
4C	Burn Pit C	MW7 ^d	MW7 ^d	MW7 ^d	NA	NA
4D	Bum Pit D		MW2 ^b (Phase I)	MW2 ^d	NA	NA
4E	Bum Pit E		MW3 ^b (Phase I)	MW3 ^d	NA	NA
4F	Burn Pit F		MW1 ^b (Phase I)	MW1 ^d	NA	NA
12A	Active EOD containing Open Detonation Unit and Open Burn Pit	MW1 ^r	MW1 ['] (Phase I)	MW1 ^b	NA	NA
14	Old Fire Training Area			MW8 ^b	NA	NA
	DRMO Hazardous Waste Storage Area	MW1 ⁵	MW1 ^b	MW1 ⁸	NA	NA
	Industrial Wastewater Treatment Plant	MW1 ^b	MW1 ⁵	MW1 ⁵	NA	NA
26	Former 724th Tanker Purging Station	MW1 ^b	MW1 ^b	MW1 ^b	SWS-1	SWS-1
29	Evans Army Heliport POL Storage Facility	MW5 ^b	M₩5 ⁶	MW5 ^b	NA	NA
	DEH Asphalt Tanks	MW1 ^b	MW1 ^b	MW1 ^b	NA	NA
	Supply Diesel Tank	MW1 ^b	MW1	MW1 ^b	NA	NA
	DEH Equipment Wash Rack	MW1 ^b	MW1 ^b	MW1 ^b	NA	NA
	Wright Army Airfield Bulk Fuel System	HA-05 ⁸ (Phase I)	HA-05 ^s (Phase I)	MW9 ^s (Phase I)	NA	NA

Table 5.1. Background Media Summary	Former 724th Tanker Purging Station, Fort Stewar	•
	FOUND 74400 TAUKEL FULLING STATION, FOUND STAR	1

DEH = Directorate of Engineering and Housing.

DRMO = Defense Reutilization and Marketing Office.

EOD = Explosive Ordnance Disposal.

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NA = Not applicable; surface water and sediment background are site specific.

POL = Petroleum Oil and Lubricant.

Bold indicates background groundwater sample collected from the same borehole as sample for soil (i.e., monitoring well was constructed in the borehole).

⁶Science Applications International Corporation (SAIC), September 1998. Phase II RCRA Facility Investigation Report for the South Central Landfill (SWMU 1), Fort Stewart, Georgia (Final Report), U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order 0012.

^bRust Environment and Infrastructure, May 1996. Phase I RCRA Facility Investigation Report for 24 Solid Waste Management Units at Fort Stewart, Georgia, Volume I of III (Corrected Final Report), U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-93-D-0029, Delivery Order 0005.

⁶Science Applications International Corporation (SAIC), September 1998. Phase III RCRA Facility Investigation Report for 16 Solid Waste Management Units at Fort Stewart, Georgia, Volume 1 (Draft Report), U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order 0009.

⁴Science Applications International Corporation (SAIC), March 1998. Phase II RCRA Facility Investigation Report for the Burn Pits (SHMUs 4A - 4F) at Fort Stewart, Georgia (Final Report), U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order 0008.

Radian International, LLC, January 1997. Site Characterization Report, Open Burn/Open Detonation Units, Fort Stewart, Georgia (Draft Report), U.S. Army Corps of Engineers, Mobile District.

⁴Metcalf & Eddy, Inc., December 1996. Final Phase 1 RFI Report for Bulk Fuel Storage System at Wright Army Airfield, Fort Stewart, Georgia, U.S. Army Corps of Engineers, Contract No. DACA21-93-D-0049, Delivery Order 0018. THIS PAGE INTENTIONALLY LEFT BLANK

Location			SUSI	SWMU 2	SWMU 3	SWMU 17	SWMU 18	SWMU 29	SWMU 31	SWMT132
Station			Fastern	02-MW5	03-MW5	17-MW1	18-MW1	29-MW5	31-MW1	32_MW1
Sample ID			U.S.	021511	031511	171111	181111	291511	31111	321111
Date	Mean	2 × Mean	Reference	01/14/98	01/16/98	01/30/98	02/01/98	01/29/98	01/28/98	01/30/98
Depth (feet)	Background	Background	Value	0 to 2	0 to 2	1 to 2	0 to 1	0 to 1	0 to 1	0 to 1
			Volatile	Organic Con	Organic Compounds (mg/kg,					
1,1-Dichloroethene	0.00			<0.0057	<0.0059	0.00037	<0.006	<0.006	<0.0055	0.0003
2-Butanone	0.01	0.01		<0.0114	<0.0118			0.0016	<0.011	
2-Hexanone	0.01	0.01		<0.0114	<0.0118	<0.0103	<0.0119	0.0011	<0.011	<0.011
4-Methyl-2-pentanone	0.01	0.01		<0.0114	<0.0118	<0.0103	<0.0119	0.0011	<0.011	<0.01
Acetone	0.01			<0.0114	<0.0118			0.0053	<0.0325	
Benzene	00.00	0.01		<0.0057	<0.0059	<0.0052	<0.006	<0.006	<0.0055	<0.0055
Bromomethane	0.01	0.01		<0.0114	<0.0118	<0.0103	<0.0119	0.0018	<0.011	<0.011
Carbon disulfide	00.00	0.01		<0.0057	<0.0059	<0.0052	<0.006	0.0016	<0.0055	<0.0055
Ethylbenzene	0.00	0.01		<0.0057	<0.0059	0.00044	<0.006	<0.006	<0.0055	
Toluene	0.01	0.01		<0.0057	0.00043	0.0266		0.0114	0.004	
Trichloroethene	0.00	0.01		<0.0057	<0.0059	0.00035		<0.006	<0.0055	<0.0055
		Pes	ticides/Poly	Pesticides/Polychlorinated Biphenyls (PCBs) (mg/kg)	iphenyls (PC	Bs) (mg/kg)				
4,4'-DDE	00.0	0		0.0011	<0.0015					
4,4'-DDT	0.00	00.00		0.0024	<0.0015					
Methoxychlor	0.00	10.0		0.0029	<0.0077					
				Metals (mg/kg)	g/kg)			-		-
Arsenic	1.05		7.4	2.2	<0.35	<0.33	<0.38	0.45	5.1	0.62
Barium	7.37	-	420	21.9	7.1	2.3	0.77	3.7	7	8.4
Cadmium	0.09		2	<0.05	<0.04	<0.04	<0.05	0.05	0.1	0.33
Chromium	3.10		52	12.1	2.5	0.98	0.21	1	1.5	3.1
Lead	4.41	8.81	17	6.8	1.6	0.91	0.48	11	2.6	7.4
Mercury	0.02	0.03	0.12	0.04	<0.02	<0.02	<0.01	0.02	<0.02	0.03
Selenium	0.20	0.41	0.45	<0.16	<0.15	<0.14	<0.16		<0.16	
Silver	0.08		2.8	<0.07	<0.07	≥0.06		<0.07	<0.06	<0.07
			,	Radionuclides (pCi/g)	s (pCi/g)					
Radium-226	0.43	0.86								
Radium-228	0.85	1.70								

Table F-2. Surface Soil Background

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Location			11SGS	SWMU 34	SWMU 35	Burn Pit C	Former 774th TPC	A CLUMMS	CULTURE 1
Station			Eastern	34-MWI	HA-05	MW-7	IMMI		T DWIMS
Sample ID			U.S.	341111	WAHA-0501	4C1711	261111	SRSI 1	011711
Date	Mean	2 × Mean	Reference	01/30/98	03/20/96	07/11/97	07/23/97	9/24/96	11/17/02
Deptn (Teet)	Background	Background	Value	0 to 1	0 to 2	0 to 1	0 to 2	0 to 2	0 to 1
			Volatile	Organic Con	Volatile Organic Compounds (mg/kg)				
1, I-Dichloroethene	0.00	0.00					<0.0073		1100/
2-Butanone	0.01	0.01		<0.0054			200:02		-0.0114
2-Hexanone	0.01	0.01					600.02		1770.02
4-Methyl-2-pentanone	0.01	0.01		<0.0109			1000.02		<0.022/ 20.0227
Acetone	0.01	0.01		<0.0109			2500.02		1220.02
Benzene	00.00	0.01		0.0036	<0.0055		<0.003		1770.04
Bromomethane	0.01	0.01		0.00042			200.02		4110.0
Carbon disulfide	00.00	0.01		<0.0109					20.02/
Ethylbenzene	0.00	0.01		<0.0054	20.0055				<0.0114
Toluene	0.01	0.01		1200.02	2000		<0.0025		<0.0114
Trichloroethene		1000	Ī	+00.0/	cc00.0>		<0.0023		<0.0114
	00.0	110-0		0.0024			<0.0023		<0.0114
4 41 555		Pest	icides/Polyc	hlorinated Bi	Pesticides/Polychlorinated Biphenyls (PCBs) (mg/kg)	(mg/kg)			
4,4-DUE	0.00	0.00							~0.0015
4,4'-DDT	0.00	00.0							CT00.07
Methoxychlor	00.00	0.01							CI00.02
				Metals (malea)	5/ka)				<0.00/4
Arsenic	1.05	2.10	7 4	0.42	5/ 1.6/				
Barium	7.37	14.70	420	0	C 1	70.0~	/1.0>		1.8
Cadmium	60.09	0.18	7	0.12	V 5 05	2.7	0.94		9.3
Chromium	3.10	6.21	52	2.2	3.5	0.67	20.02	, ,	CU.U>
Lead	4.41	8.81	17	7.5	7.5		1 2	6	4. r
Mercury	0.02	0.03	0.12	0.04	<0.03	<0.02	100>	0.0	<u>100</u>
Selenium	0.20	0.41	0.45		V	<0.21	0.62		10.0
Silver	0.08	0.15	2.8	<0.07		0.05	<0.02		-0.41 0.06
			Y	Radionuclides (pCi/g,	(pCi/g)				~~~
Radium-226	0.43	0.86							0470
Radium-228	0.85	1.70							0.051
		i.							1.0.7

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Table F-2. Surface Soil Background (continued)

Location			LICCO	SWMU 2	SWMT 3	21 IIMMS	SWMII 17 SWMII 18	CUMITING CUMATER	CUMATT 21	CULTURE CONTRACT
Station			Eastern	02-MW5	03-MW5	17-MW1	18-MW1		1C UMAN C	27 MMU 32
Sample ID		,	U.S.	021512	031512	171112	181112	201512	11112	TMIN-70
Date	Mean	2 × Mean	Reference	01/14/08	01/16/08	01 /20/00	00/10/CU	7101/7	711110	71175
Denth (feet)	Rackaround Rack	Rackmond	Volue	0/144170	02/07/170	06/02/10	06/T0/70	86/67/TO	86/82/10	01/30/98
(may make	THAT IS THAT I	DACKEI VUILU		CT 01 CT	3 to 5	8 to 9	3 to 3	3 to 4	5 to 6	3 to 4
			Volatile C	Volatile Organic Compounds (mg/kg)	ounds (mg/l	(g)				
2-Butanone	0.01	0.01		<0.0116	<0.0118			0.0012	<0.0115	
2-Hexanone	0.01	0.01		<0.0116	<0.0118	<0.0128	<0.0119	0.0011	<0.0115	<0.011
4-Methyl-2-pentanone	0.01	0.01		<0.0116	<0.0118	<0.0128	<0.0119	0.0011	<0.0115	1100>
Acetone	0.02	0.05		<0.015	<0.0118	0.0495		0.005	<0.0598	0.0062
Bromomethane	0.01	0.01		<0.0116	<0.0118	<0.0128	<0.0119	0.002	<0.0115	<0.011
Carbon disulfide	0.00	0.01		<0.0058	<0.0059	<0.0064	<0.006	0.0018	<0.0057	<0.0055
Methylene chloride	0.00	0.01		<0.0058	<0.0059	<0.0064	<0.006	<0.006	<0.0069	<0.0055
I etrachloroethene	0.00	0.01		<0.0058	<0.0059	<0.0064	<0.006	<0.006	<0.0057	<0.0055
Toluene	0.00	0.01		<0.0058	<0.0059	<0.0064	<0.066	0 00048	0.0010	3300.02
Xylenes, total	0.00	0.01		<0.0058	<0.0059	<0.0064	<0.006	900.0>	0.0012	10000
			Semivolatile	Semivolatile Organic Compounds (me/ke	sm) spunoau	p/ko)		1222-2	1100000	CC00.04
1,2,4-Trichlorobenzene	0.24	0.48		<0.388	<0.391	<0.427	102 02	<1 50	<0.282	775 0/
Bis(2-ethylhexyl)phthalate	0.32	0.64		<0.388	<0.391	<0.427	<0.397	1 50	<0.383	20.200
Di-N-butyl phthalate	0.26	0.52		<0.388	<0.391	<0.427	<0.397	<1 59	<0.383	20.200
Fluoranthene	7.14	14.30		<0.388	<0.391	<0.427	<0.397	<1 59	CO.202	00000
Pyrene	7.31	14.60		<0.388	<0.391	<0.427	<0.397	<1.59	<0.383	<0.366
		Pesti	Pesticides/Polychlorinated Biphenyls (PCBs) (mg/kg)	orinated Bip	henyls (PCB	's) (mg/kg)				
alpha-BHC	0.00	0.00		0.00093	<0.00078					

Table F-3. Subsurface Soil Background

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Location			usgs	SWMU 2	SWMU 3	SWMU3 SWMU17 SWMU18 SWMU29 SWMU31 SWMU32	SWMU 18	SWMU 29	SWMU 31	SWMU 32
Station			Eastern	02-MW5	03-MW5	17-MW1	18-MW1	29-MW5	31-MW1	32-MW1
Sample ID			U.S.	021512	031512	171112	181112	291512	311112	321112
Date	Mean	2 × Mean	Reference	01/14/98	01/16/98	01/30/98	02/01/98	01/29/98	01/28/98	01/30/98
Depth (feet)	Background Back	Background	Values	13 to 15	3 to 5	8 to 9	3 to 3	3 to 4	5 to 6	3 to 4
				Metals (mg/kg)	/kg)					
Arsenic	4.02	8.04	7.4	1.3	2.8	0.78	1.6	0.44	15	<0.36
Barium	8.49	17.00	420	1.8	4.5	9.2	6.1	3.7	3.1	3.1
Cadmium	0.12	0.24	2	<0.05	<0.04	<0.05	<0.05	<0.05	<0.04	<0.04
Chromium	5.81	11.60	52	6.4	4.1	16.2	5.4	1.6		1.5
Lead	5.56	11.10	17	2.2	1.1	10.4	4.5	1.8	1.3	
Mercury	0.02	0.05	0.12	<0.02	<0.02	0.03	<0.02	0.04	<0.02	0.04
Selenium	0.56	1.12	0.45	<0.16	<0.16	<0.18	<0.79		<0.2	
Silver	0.23	0.46	2.8	<0.07	<0.07	<0.08		<0.07	<0.07	<0.07
			Ra	Radionuclides (pCi/g)	(pCi/z)					
Radium-226	0.55	1.09			ò					
Radium-228	0.45	0.89								
			(IIO	Other Analytes (mg/kg)	(mg/kg)					
Total organic carbon	1,100.00	2,200.00								

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Table F-3. Subsurface Soil Background (continued)

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Location			TISCS	SWMU 34	SWMI135	Rurn Pit C	Former 724th TDC	0	
Station			Postor	34-MW1	HA-05	A H T MIN	CJT III+7/ IIII	Purn Fit A	Burn Pit F
Sample ID	.		Lasteru			- 1	TMM	IMM	IWM
Data				- 1	WAHA-USU2	- 1	261112	FST004A-SL	FST004F-SL
DAIC	Mean	2 × Mean	Reference	01/30/98	03/20/96	07/11/97	07/23/97	06/25/93	06/29/93
Uepth (feet)	Background Background	Background	Values	5 to 8	5 to 7	3 to 5	2 to 3	4 to 6	6 to 8
			Volatile	Organic Co	Volatile Organic Compounds (mg/kg)	(<i>E</i>)			
2-Butanone	0.01	0.01				<0.0054	<0.0052		
2-Hexanone	0.01	0.01		<0.0115		<0.0054	8200.02		
4-Methyl-2-pentanone	0.01	0.01		<0.0115		<0.0054	8200.02 AD 0058		
Acetone	0.02	0.05		<0.0115		<0.0054	0.0108	220.02	1000
Bromomethane	0.01	0.01		<0.0115		<0.000>	00100	100.04	/ 50.02
Carbon disulfide	0.00	0.01		<0.0057		<0.054 <0.0054	030002		
Methylene chloride	0.00			<0.0057		10000	90000	/ 200.02	<0.00>
Tetrachloroethene	00.0	0.01		<0.0057		7700.07	000.02	/200.0>	0.006
Tolnene		100		10000		77.0.72	<0.0023	0.0061	<0.0057
Vilance tatel	0.00	10.0		<0.0057	<0.0056	<0.0022	0.0026	0.0081	<0.0057
Aylencs, total	0.00	0.01		<0.0057	<0.0056	<0.0022	<0.0023	0.0061	<0.0057
			Semivolati	le Organic (Semivolatile Organic Compounds (me/ke)	o/ko)			
1,2,4-Trichlorobenzene	0.24	0.48		< 0.383		ò			
Bis(2-ethylhexyl)phthalate	0.32	0.64		0.712					
Di-N-butyl phthalate	0.26	0.52		0.193					
Fluoranthene	7.14	14.30		<0.383	<0.37		720 02		
Pyrene	15.7	14.60		<0.383	<0.37		26.07		
		Pe	sticides/Polyc	hloringted R	Pesticides/Polychloringted Rinhemyls (PCRs) /malic	c) (malle)	0/0-0-		
alpha-BHC	00.0	000				<u>2 (1115/12)</u>			
		122-2							

Table F-3. Subsurface Soil Background (continued)

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Location			USGS	SWMU 34		Burn Pit C	SWMU 35 Burn Pit C Former 724th TPS	Burn Pit A	Rurn Pit F
Station			Eastern	34-MW1	HA-05	MW-7	IWM	IWM	MW1
Sample ID			U.S.	341112	WAHA-0502	4C1712	261112	FST004A-SL FST004F-SI	FST004F-SL
Date	Mean	$2 \times Mean$	Reference	01/30/98	03/20/96	26/11/20	07/23/97	06/25/93	06/29/93
Depth (feet)	Background Backgro	Background	Values	5 to 8	5 to 7	3 to 5	2 to 3	4 to 6	6 to 8
				Metals (mg/kg)	ng/kg)				
Arsenic	4.02	8.04	7.4	<0.37	56	<0.3	0.56	<11	- - -
Barium	8.49	17.00	420	5.2	30	1.1	6.4	57	6.5
Cadmium	0.12	0.24	2	<0.05	<0.5	<0.1	90.0≥	<0.57	<
Chromium	5.81	11.60	52	2.8	19	1.2	43	0	51
Lead	5.56	11.10	17	2.1	23	1.6	47	04	14
Mercury	0.02	0.05	0.12	0.05	<0.03	0.03	<0.01	0.050	<0.011
Selenium	0.56	1.12	0.45		₽	<0.2	0.67	<57	
Silver	0.23	0.46	2.8	<0.07	\ \ \	<0.07	<0.06		1.12
				Radionuclides (pCi/g)	es (pCi/e)			•	* • • •
Radium-226	0.55	1.09							
Radium-228	0.45	0.89							
				Other Analytes (mg/kg)	es (mg/kg)				
Total organic carbon	1,100.00	2,200.00					1,100		

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Table F-3. Subsurface Soil Background (continued)

Location			USGS	Burn Pit D	Burn Pit B	Burn Pit E	SWMU 12A	SWMU 12A	SWMII 1
Station			Eastern	MW2	MW3	MW3	SB01-MW-1	SR01-MW-1	SC-M17
Sample ID			U.S.	FST004D-SL	FST004B-SL	FST004E-SL	SB1SL2	SRISL3	011712
Date	Mean	2 × Mean	Reference	06/24/93	06/28/93	06/30/93	9/24/96	9/24/96	11/16/97
Depth (feet)	Background	Background Background	Values	4 to 6	6 to 8	6 to 8	2 to 4	4 to 6	5 to 8
			Volatile (Volatile Organic Compounds (mg/kg)	unds (mg/kg)				
2-Butanone	0.01	0.01							<0.07
2-Hexanone	0.01	0.01							<0.0222
4-Methyl-2-pentanone	0.01	0.01							<0.0222
Acetone	0.02	0.05		0.11	<0.057	<0.058			0.0754
Bromomethane	0.01	10.0							<0.022
Carbon disulfide	00.0	0.01		<0.0056	<0.0057	<0.0058			<0.0111
Methylene chloride	00.0	0.01		<0.0056		<0.0058			<0.0111
Tetrachloroethene	00.0	0.01		<0.0056					1110.02
Toluene	00.0	0.01		0.021					<0.0111
Xylenes, total	00.0	0.01		0.022					1110.0>
			Semivolatil	Semivolatile Organic Compounds (mg/kg)	ounds (me/ke)				1110.00
1,2,4-Trichlorobenzene	0.24	0.48			<i>7</i> 0 0				0.007
Bis(2-ethylhexyl)phthalate	0.32	0.64							V.V042
Di-N-butyl phthalate	0.26	0.52							292.02
Fluoranthene	7.14	14.30					83		20:02
Рутеле	7.31	14.60					85		292.02
		Pest	icides/Polych	lorinated Biphe	Pesticides/Polychlorinated Biphenyls (PCBs) (me/ko)	e/ko)			
alpha-BHC	0.00)				ò			<0.00073
									21000-02

Table F-3. Subsurface Soil Background (continued)

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Location			UCOT	Rurn Pit D	Burn Dit B	Durn Dit F	A CLUTTER S		
Station			0363	A WYN		T IL I ING	ALVIU 12A	_	-
	_		Lastern	7 M M	IN W3	MW3	SB01-MW-I SB01-MW-I	SB01-MW-1	SC-M17
Sample IU			U.S.	FST004D-SL	FST004B-SL	FST004E-SL	SB1SL2	SB1SL3	011712
Date	Mean	$2 \times Mean$	Reference	06/24/93	06/28/93	06/30/93	9/24/96	9/74/96	11/16/07
Depth (feet)	Background	Background Background	Values	4 to 6	6 to 8	6 to 8	2 to 4	4 to 6	5 to 8
				Metals (mg/kg	(A)				2
Arsenic	4.02	8.04	7.4		1 1	<1 2			
Barium	8.49	17.00	420	5.9		58	00	00	<0.15
Cadmium	0.12	0.24	2	<0.56	V	5:0 25 U>		20	1./
Chromium	5.81	11.60	52	3.3	45	50	V	G	>0.04
Lead	5.56		17	37	2.7		+ +	1 1	0.7
Mercury	0.02	0.05	0.12	0.016		7.0	+	<u>c</u> ,	5.2
Selenium	0.56		0.45	<11		20.00			10.0
Silver	0.23		2 8						<0.29
			Å.	Radionuclides (nCi/a)		7.12			<0.02
Radium-226	0.55	1 09			<i>Cu 6/</i>				
Radium-228	0.45	0.80							0.547
			ĪČ	har Analita ha	- 11-1				0.445
Total organic carbon	1 100 00	00 000 0	5	Omer Anutytes (mg/kg)	R/KR/				
	77-77-T								

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Table F-3. Subsurface Soil Background (continued)

Location			C TIMINS	SWAMP 2	VELIMARI S LIMAN S LIMANS						
Station	,		201110 C	C D IVI V C	AVINU 14A	-	SWMU 17	1	SWMU 29	SWMU 31	SWMU 32
Stauon			02-MW5	03-MW5	12A-MW10	14-MW8	17-MW1	18-MW1	29-MW5	31-MW1	32-MWI
Sample ID	Mean		024511	034511	124111	144811	174111	184111	294511	314111	324111
Date	Background	Background	35841	35842	35851	35840	35844	35851	35852	35850	35844
			Vo	latile Organ	Volatile Organic Compounds (µg/L)	s (ug/L)					
1,1,1-Trichloroethane	1.75	3.50		0.23		S	Ş	S5	55	<u> </u>	X
1,1-Dichloroethane	1.77	3.53	Ś	Ş		\$	\ V		∑ \	<u>}</u>	150
1,3-trans-Dichloropropene	1.75		≎	Ş		Ŷ	\\$	0.24	° √	5	<u> </u>
Acetone	3.61	7.21	<10	3.6		<10	<10		<10	17	7
Chloromethane	3.71	7.42	<10			1012	<10	v		<101>	10
Ethylbenzene	1.49		Ş	Ŷ		8	\$		0.21	0 34	52
Methylene chloride	2.04	4.07	Ş	Ŷ		\$	\$		\$	5	2
Toluene	0.97	1.94	\$	0.26		8	8	0.35	2	035	
Trichloroethene	1.75	3.50	Ś	€		2	8		<u>ک</u>	¢۲	2
Xylenes, total	1.55	3.10	Ş	S		S	2	0.42	0.69	0 71	V V
				Me	Metals (µg/L))
Aluminum	1,200.00	2,400			1,200						
Arsenic	1.51	3.02	Ŷ	Ŷ	Ø	Ø	Ø	Ø	Ű	v	v
Barium	35.86	71.72	3.8	18.8	35.5	41.8	27.5	ň	177	57.4	7 6
Cadmium	0.21	0.43		<0.21	<0.21		<0.21		<0.21	100>	20.7
Calcium	1,630.00	3,260			1.630				1	17:0	17-04
Chromium	1.78	3.56	<0.42	0.85	2.6	0.53	0.52	19	66	-	CV 0.V
Copper	2.00	4.00			2				4	7.7	77.07
Iron	2,189.00	4,378			598						
Lead	2.35	4.69	25.5	<0.96	<0.96	<0.96	<0.96	96 0>	90 U>	20 0V	1 4
Magnesium	814.00	1,628			814			Ē		0000	
Manganese	17.30	34.60			17.3						
Mercury	0.07	0.14	0.2	€0.1	<0.1	≤0.1	<u>60.1</u>	1 U>	<01 1		
Nickel	1.90	3.80			1.9				*	1-22	1.07
Potassium	643.00	1,286			643						
Selenium	0.95	1.90	2.5	2.5	<2.5	£.£ €.5	2.5	25	205	05	¢
Silver	0.56	1.12	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	202	<0.8K
Sodium	3,520.00	7,040			3,520						2012
Vanadium	2.00	4.00			2						
10 mm											

Table F-4. Groundwater Background

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Tandian											
LUCAUUII			SWMU 2	SWM13	MU 2 SWMII 3 SWMII 12 SWMII 14 SWMII 17 SHARIF 16 SHARIF 16 SHARIF 17	SWW1111	SVAVATT 17	OTTACT 10	0 4 1 4 4 A A A		
Station	•						T OWWO	SWINU 18	SWMU 29	SWMU 31	SWIMU 32
Dtauou	F -		UZ-MW5	03-MWS	<u>1W5 03-MW5 12A-MW10 14-MW8 </u>	14-MW8	17-MW1	18-MW1	18-MW1 79-MWE	21 AAXVT	PART CC
Sample ID	Mean	2 × Mon-	112400	111100				7 4.7		T AA TAT-TC	T M INI-7C
			TTC+70	11chcn	114111	144811	174111	184111	294511	314111	324111
Dale	Background	Background Background	35841	35842	35851	35840	250AA	75051	01010		TTTLAC
						01022	110000	ICSCC	20805	35850	35844
				Radi	Radionuclides (pCi/L)	$\langle T \rangle$					
Radium-226	0 58	911									
Kadium-228	1.71	3.42									
					_						
				Y	Anions (mo/l.)						
Alkalinity	45 100 00	00000									
C. 15											
Sullate	13,358.75	26,717.50			1,100		000 0	20.000		22.222	
							7,2,00	1004,00		52,900	10,600
				Olhei	Uiner Analytes (mg/L)	(T)					
Methane	53.70	107.40									
Total armanic corken	24 62 4 6										
A VIAL VIEALITY CALUUT	UU.U01,c	6,320			3.160						

Table F-4. Groundwater Background (continued)

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Location			SWMU 34	Burn Pit A	Burn Pit F	Burn Pit D	Burn Pit B Burn Pit E	Burn Pit E	Burn Pit C	Former 724th TPS	
Station			34-MW1	MW-1	MW-1		MW-3	MW-3		IWW	SC-MID
Sample ID	Mean	2 × Mean	344111	4A4111	4F4111	4D4211	4B4311	4E4311	4C4711	264111	012711
Date	Background	Background	35844	08/08/97	07/30/97	07/29/97	08/09/97	07/29/97	76/10/80	08/13/97	12/11/97
			Vc	Volatile Organic Compounds (µg/L)	ic Compound	's (µg/L)					
1,1,1-Trichloroethane	1.75	3.50	<5	8	₽	7	8		8	Ŷ	<u></u>
1,1-Dichloroethane	1.77	3.53	\$	4	4	8	8	Ø	0	'∇ 	
1,3-trans-Dichloropropene	1.75	3.50	<5	\$	8	8	4	0	' ♥ 	° ∇	
Acetone	3.61	7.21	<10	\$	\$	Ş	Ş	V	V		
Chloromethane	3.71	7.42	<10	4	8	8	7	Ŷ	ŶŶ	71	10
Ethylbenzene	1.49	2.97	\$	4	2	7	0	Ŷ	' €		
Methylene chloride	2.04	4.07	\$	4	0	8	V V	Ŷ	, <u>,</u>		
Toluene	76.0	1.94	8	4	8	7			° €		
Trichloroethene	1.75		Ŷ	4	8	0	0	' \ \	∛ ∿	2 1	
Xylenes, total	1.55		Ŷ	\$	V	Q	0		? ?	7 \$ 	-
				Metals	1/01/		ł	Ţ	7	7	7
Aluminum	1.200.00	2.400					-				
Arsenic	1.51	3.02	Ø	<0.6	<0.6	<0.6	9.05	9 U>	202	101	202
Barium	35.86	71.72	15	18.5	22.8	58	<14.6	6.0	26.02		0.07
Cadmium	0.21	0.43	<0.21	0.34		0 43	C U 2		0.04		
Calcium	1,630.00	3,260				P->	7.07	7.0~	7-7~	2.02	7-0>
Chromium	1.78	3.56	1.1	2.4	<u><0.6</u>	<0.6	37	1	20.6	~10	C L
Copper	2.00	4.00							2.27	277	
Iron	2,189.00	4,378									2 700
Lead	2.35	4.69	<0.96	1.1	0.08	0.2	2.2	V	20 05	ч, ц	
Magnesium	814.00	1,628						1	2		
Manganese	17.30	34.60									
Mercury	0.07	0.14	<0.1	<0.06	<0.04	<0.04	<0.05	<0 05	0.78	0	10.03
Nickel	1.90	3.80							2	7:0	
Potassium	643.00	1,286									
Selenium	0.95	1.90	2.5	<0.4	<0.4	<0.82	<0.4	4 0 ▼	<0>	0.62	
Silver	0.56	1.12	<0.86	0.14	<0.07	0.37	0.14	<0.07	0.08		20.07
									>>>>		

Table F-4. Groundwater Background (continued)

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Location			SWMU 34	Burn Pit A Burn Pit F Burn Pit D Burn Pit B Burn Pit F Burn Dit C	Burn Pit F	Burn Pit D	Rurn Pit R	Rurn Pit F	Dit Dit C	Former	
Station			34-MW1	MW-1	MW-1	WW 2	A TAY O			C11 11-7/	TOWMO
Semula ID	;	;				7- M W	C-VY IVI	MW-3	L-WIM	IMM	SC-M10
		2 × Mean	344111	4A4111	4F4111	4D4211	4B4311	4E4311	4C4711	264111	012T11
Date	Background Background	Background	35844	08/08/97	07/30/97	7/29/97	76/60/80	07/29/97	08/07/97	08/13/07	12/11/07
Sodium	3,520.00	7,040.00								1/10100	12/11/71
Vanadium	2.00	4.00									
				Dadiou	Dadioundida Lat						
D-1. 27				Muluny	icines pur	/					
Kauluin-220	86.0	1.16									0.501
Radium-228	1.71	3.42									100.0
											1.71
				Anic	Anions (mg/L)	•					
Alkalinity	45,100.00	90,200								101 21	
Sulfate	13,358.75	26,717.50	14.100	-						43,100	
										0/0,5	2,000
N.C2.				N Lauro	Other Anulytes (mg/L)	/					
INternane	53.70	107.40			-					53 7	
Total organic carbon	3,160.00	6.320								1.00	
								_			

Table F-4. Groundwater Background (continued)

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	Former		
Location	724th TPS		
Station	SWSI		
Sample ID	263111	Mean	2 x Mean
Date	08/13/97	Background	Background
	Metals (µg/L)	/µg/L)	
Arsenic	<0.94	0.47	0.94
Barium	22.4	22.4	44.8
Cadmium	<0.2	0.1	0.2
Chromium	9 ⁻⁰ >	0.3	0.6
Lead	2.6	2.6	5.2
Mercury	60.0	0.09	0.18
Selenium	<0.4	0.2	0.4
Silver	0.15	0.15	0.3

Station	I-SWS-1		
Sample ID	262111	Mean	2 × Mean
Date	08/13/97	Background	Background
	RCRA Metals (mg/kg)	s (mg/kg)	
Arsenic	<0.37	0.185	0.37
Barium	1.5	1.5	3.0
Cadmium	<0.12	0.06	0.12
Chromium	<0.37	0.185	0.37
Lead	0.69	0.69	1.38
Mercury	<0.02	0.01	0.02
Selenium	<0.24	0.12	0.24
Silver	<0.17	0.085	0.17

Table F-6. Sediment Background

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	USGS Eastern U.S.	Results	%Results	Average		Min	May		Reference
Analyte	Reference	>Det. Limit	>Det. Limit	Result	S	Detect	Detect	Dist.	Dackground Criteria
			Metals (mg/kg						
Arsenic	7.4	7/12	58.33	1.05	139	0.43	5.10	-	21
Barium	420	12/12	100.00	7.37	79	0.77	21.90		14.7
Cadmium	5	4/12	33.33	0.0875	116	0.05	0.33	۵	0.175
Caromum	52	12/13	92.31	3.1	116	0.21	12.10	Ľ	6.21
Lead	17	13/13	100.00	4.41	74.4	0.48	11.00	Ц	8.81
Mercury	0.12	5/12	41.67	0.0171	74.3	0.01	0.04	۵	0.0342
Selenum	0.45	1/9	11.11	0.203	105	0.63	0.63	۵	0.406
SILVET	2.8	1/11	9.09	0.075	189	0.06	0.06	۵	0.15
		esticides/Polycl	Pesticides/Polychlorinated Biphenyls (PCBs)	enyls (PCBs)	(mg/kg)				
4,4-DDD		0/3	0.00	0.00075	0			c	0.0015
4,4'-DDE 4 41 P.P.T.		1/3	33.33	0.000867	23.3	0.00	0.00	ρ	0.00173
4,4-UUI		1/3	33.33	0.0013	73.3	0.00	0.00		0 0076
Aldrin		0/3	0.00	0.000375	2.31			С	0.00075
alpha-Chlordane		0/3	0.00	0.000375	2.31				0.00075
alpha-BHC		0/3	0.00	0.000375	2.31			0	0 00075
Aroclor-1016		0/3	00.0	0.00187	1.55			0	0.00373
Aroclor-1221		0/3	0.00	0.00187	1.55			0	0.00373
ATOCIOF-1232		0/3	0.00	0.00187	1.55			0	0.00373
Aroclor-1242		0/3	0.00	0.00187	1.55			0	0.00373
Aroclor-1248		0/3	0.00	0.00187	1.55			0	0.00373
Arocior-1254		0/3	0.00	0.00187	1.55		-	0	0.00373
Alocior-1.20U		0/3	0.00	0.00187	1.55			0	0.00373
beta-BHC		0/3	0.00	0.000375	2.31			0	0.00075
Gelia-BHC		0/3	0.00	0.000375	2.31			0	0.00075
		0/3	0.00	0.00075	0			0	0.0015
Endosuitan I		0/3	0.00	0.000375	2.31			0	0.00075
		0/3	0.00	0.00075	0			0	0.0015
		0/3	0.00	0.00075	0			0	0.0015
mmg		0/3	0.00	0.00075	0			0	0.0015

Table F-7. Statistical Analysis of Surface Soil Background Data

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	NSGS								Reference
Analyte	Eastern U.S. Reference	Results	%Results >Det Timit	Average Decult	ĉ	Min	Max		Background
Endrin ketone		0/3	0.00	0 00075	50	חבובנו	Delect	UISIL	Criteria ⁻
gamma-Chlordane		0/3	0.00	0.000375	2.31				0.00075
gamma-BHC (Lindane)		0/3	0.00	0.000375	2.31				0.00075
Heptachlor		0/3	0.00	0.000375	2.31				0.00075
Heptachlor epoxide		0/3	0.00	0.000375	2.31				0.00075
Methoxychlor		1/3	33.33	0.00348	14.7	0.00	0.00	Ω	0.00697
Toxaphene		0/3	0.00	0.0188	1.93	-		0	0.0376
		Semivolatile	Organic	Compounds (mg/kg)					
1,2,4-Trichlorobenzene		0/10	0.00	0.245	69.1			0	0.49
1,2-Dichlorobenzene		0/10	0.00	0.245	69.1			0	0.49
I,3-Dichlorobenzene		0/10	00.00	0.245	69.1			0	0.49
1,4-Dichlorobenzene		0/10	0.00	0.245	69.1			0	0.49
1-Methylnaphthalene		0/1	0.00	0.18				0	0 36
2,2'-Oxybis (1-chloropropane)		6/0	0.00	0.251	70.9				0 503
2,4,5-Trichlorophenol		0/10	00.0	0.554	82.7				111
2,4,6-Trichlorophenol		0/10	0.00	0.245	69.1			0	0.49
2,4-Dichlorophenol		0/10	0.00	0.245	69.1			0	0.49
2,4-Dimethylphenol		0/10	0.00	0.245	69.1			0	0.49
2,4-Dinitrophenol		0/10	0.00	0.593	72.7			0	1.19
2,4-Dimitrotoluene		0/10	0.00	0.245	1.69			0	0.49
2,6-Dinitrotoluene		0/10	0.00	0.245	69.1			0	0.49
2-Chloronaphthalene		0/11	0.00	0.24	67.5			0	0.479
2-Chiorophenol		0/10	0.00	0.245	69.1			0	0.49
2-Methylnaphthalene		0/11	0.00	0.239	67.7			0	0.478
2-Methylphenol		0/10	0.00	0.245	69.1			0	0.49
2-Nitroaniline		0/10	0.00	0.554	82.7			0	1.11
Z-Nitrophenol		0/10	0.00	0.245	69.1			0	0.49
3,3'-Dichlorobenzidine		0/10	0.00	0.605	63.4			0	1.21
3-Nitroaniline		0/10	0.00	0.554	82.7			0	1.11
4,0-Dinitro-o-cresol		0/10	0.00	0.593	72.7			0	1.19

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Table F-7. Statistical Analysis of Surface Soil Background Data (continued)

	USGS Eastern U.S.	Results	%Results	Average		Min	Mou		Reference
Analyte	Reference	>Det. Limit	>Det. Limit	Result	C	Detect	Detect	Dist."	Background Criteria ⁶
4-Bromophenyl-phenyl ether		0/10	0.00	0.245	69.1				0.40
4-Chloroaniline		0/10	00.0	0.245	69.1				0.49
4-Chlorophenyl-phenyl ether		0/10	0.00	0.245	69.1				0.49
4-Methylphenol		0/10	0.00	0.245	1.69				0.49
4-Nitroaniline		0/10	0.00	0.554	82.7			0	111
4-Nitrophenol		0/10	0.00	0.593	72.7			0	1.19
4-Chloro-3-methylphenol		0/10	0.00	0.245	69.1			0	0.49
Acenaphthene		0/12	0.00	0.235	66.1			0	0.469
Acenaphthylene		0/12	0.00	0.235	66.1			0	0.469
Anuracene		0/12	0.00	0.235	66.1			0	0.469
Benzo(a)anthracene		0/12	0.00	0.235	66.1			0	0.469
Benzo(a)pyrene		0/12	0.00	0.235	66.1			0	0.469
Benzo(b)tluoranthene		0/13	0.00	0.23	64.8			0	0.461
Benzo(g,h,i)perylene		0/12	0.00	0.235	66.1			0	0.469
Benzo(k)tluoranthene		0/12	0.00	0.235	66.1			0	0.469
Benzoic acid		0/1	0.00	0.373				0	0.746
Benzyl alcohol		0/1	0.00	0.187				0	0.373
Bis(2-chloroisopropyl)ether		0/1	0.00	0.187				0	0.373
Bis(2-chloroethoxy)methane		0/10	0.00	0.245	69.1			0	0.49
Bis(2-chloroethyl)ether		0/10	0.00	0.245	69.1			0	0.49
Bis(2-etnyInexyI)phthalate		0/10	0.00	0.245	69.1			0	0.49
Buryl benzyl phthalate		0/10	0.00	0.245	69.1			0	0.49
Carbazole		0/10	0.00	0.245	69.1			0	0.49
Curysene		0/12	0.00	0.235	66.1			0	0.469
Di-N-butyl phthalate		0/10	0.00	0.245	69.1			0	0.49
DI-/v-octyl puthalate		0/10	00.00	0.245	69.1			0	0.49
DIDENZO(a, n)anthracene		0/12	0.00	0.235	66.1			0	0.469
Ulbenzoturan		0/10	0.00	0.245	69.1			0	0.49
Ulethyl phthalate		0/10	0.00	0.245	69.1			0	0.49
Unneunyl pathalate		0/10	0.00	0.245	69.1			0	0.49
r ruorantnene		0/12	0.00	0.235	66.1			0	0.469

Table F-7. Statistical Analysis of Surface Soil Background Data (continued)

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	Eastern U.S.	Results	%Results	Average		Min	Max		Reference Rackoround
Analyte	Reference	>Det. Limit	>Det. Limit	Result	CV	Detect	Detect	Dist."	Criteria"
Fluorene		0/12	0.00	0.235	66.1			0	0.469
Hexachlorobenzene		0/10	0.00	0.245	69.1			0	0.49
Hexachlorobutadiene		0/10	0.00	0.245	69.1			0	0.49
Hexachlorocyclopentadiene		0/10	0.00	0.245	69.1			0	0.49
Hexachloroethane		0/10	00.0	0.245	69.1			0	0.49
Indeno(1,2,3-cd)pyrene		0/12	0.00	0.235	66.1			0	0.469
Isophorone		0/10	00.00	0.245	69.1			0	0.49
N-Nitroso-di-N-propylamine		0/10	0.00	0.245	69.1			0	0.49
N-Nitrosodiphenylamine		0/10	0.00	0.245	69.1			0	0.49
Naphthalene		0/12	0.00	0.235	66.1			0	0.469
Nitrobenzene		0/10	0.00	0.245	69.1			0	0.49
Pentachlorophenol		0/10	0.00	0.554	82.7			0	1.11
Phenanthrene		0/12	0.00	0.235	66.1			0	0.469
Phenol		0/10	0.00	0.245	69.1			0	0.49
Pyrene		0/12	0.00	0.235	66.1			0	0.469
		Volatile (Organic Compounds (mg/kg)	unds (mg/kg)					
1,1,1-Trichloroethane		0/10	0.00	0.00295	37.7			0	0.00589
1,1,2,2-Tetrachloroethane		0/10	0.00	0.00295	37.7			0	0.00589
1,1,2-Trichloroethane		0/10	0.00	0.00295	37.7			0	0.00589
1,1-Dichloroethane		0/10	00.00	0.00295	37.7			0	0.00589
1, 1-Dichloroethene		2/10	20.00	0.00248	63.6	0.00	0.00	Ω	0.00495
1,2-Dichloroethane		0/10	0.00	0.00295	37.7			0	0.00589
1,2-Dichloroethene		8/0	0.00	0.00283	5.27			0	0.00565
1,2-Dicnloropropane		0/10	0.00	0.00295	37.7			0	0.00589
1,2-cis-Dichloroethene		0/2	0.00	0.00343	93.9			0	0.00685
1,2-trans-Dichloroethene		0/2	0.00	0.00343	93.9			0	0.00685
1,3-cts-Dichloropropene		0/10	0.00	0.00295	37.7			0	0.00589
1,3-trans-Dichloropropene		0/10	0.00	0.00295	37.7			0	0.00589
2-Butanone		1/6	16.67	0.00548	61.4	0.00	0.00	٩	0.011
2-Hexanone		1/10	10.00	0.00545	47.9	0.00	0.00	D	0.0109
4-Methyl-2-pentanone		1/10	10.00	0.00545	47.9	0.00	0.00	٩	0.0109

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Table F-7. Statistical Analysis of Surface Soil Background Data (continued)

	USGS			-					
	Eastern U.S.	Results	%Results	Average		Min	May		Reterence
Analyte	Reference	>Det. Limit	>Det. Limit	Result	CV	Detect	Defect	Dict ²	Background
Acetone		2/7	28.57	0.00728	99	0.00	0.01	301A	CLITELIA D D1 A C
Benzene		1/11	9.09	0.00272	47.8				0.0140
Bromodichloromethane		0/10	0.00	0.00295	37.7	^^^	8.0		0.00500
Bromoform		0/10	0.00	0.00295	27.7				680000
Bromomethane		1/10	10.00	0.00535	112	000		2	0.00289
Carbon disulfide		1/10	10.00	802000	345	800	0.0		0.0107
Carbon tetrachloride		0/10	0.00	0.00295	37.7	8.0	00.0		C6CUU.U
Chlorobenzene		0/10	0.00	0.00295	37.7				68000.0
Chloroethane		0/10	0.00	0.00576	C C T				40CUU-U
Chloroform		0/10	000	0.0005	27.7				CI10.0
Chloromethane		0/10	000	0.00576	47.7				0.00089
Dibromochloromethane		0/10	0.00	0.00295	377			50	CL10.0
Ethylbenzene		1/1	0 00	0.0072		000	0000	5	6800.0
Methylene chloride		01/0	000	C/70010	† 0 4	00.0	0.00		0.00546
Styrene		010	00.0	1 200.0	40.8			0	0.00739
Totmahlamaathana		01/0	0.00	0.00295	37.7			0	0.00589
		0/10	0.00	0.00295	37.7			0	0.00589
		6/11	54.55	0.00609	122	0.00	0.03	<u>ц</u>	0.0122
		1/10	10.00	0.00272	50.8	0.00	0.00		0.00544
v inyl chloride		0/10	0.00	0.00576	42.2			С	0.0115
Xyienes, total		0/11	0.00	0.00293	36) c	0.00585
		R	Radionuclides (pCi/g)	Ci/z)				>	00000
Radium-226		1/1	100.00	0.428		0.43	0.43	×	0.856
Kadium-228		1/1	100.00	0.851		0.85	0.85	: >	2000
"Results less than the detection limit were set to c	vere set to one-half	Due-half the reported detection limit For radionuclides the renorded could could be the second could be the se	ction limit. For ra	dionuclidee th	A renorted	Tacult was up			1./
Distribution codes:				nioincinates, a	ic reputed	resuit was us	sed to calcula	te the mea	÷.
D = Distribution not determined because fewer than 5 detects or less than 50 nercent detects (t-distribution)	use fewer than 5 de	tects or less than	50 nercent detects	e (t-dietrikution	_				
L = Distribution most similar to lownermal fland anticipion to the potential of the	urmal fland ctatictic	initia and to man		s (r-uisu tourior	÷				
	יווומו נומות אומור	used for upper co	ontidence limit (L	CL)].					

Table F-7. Statistical Analysis of Surface Soil Background Data (continued)

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L = Distribution most similar to lognormal [land statistic used for upper confidence limit (UCL)]. N = Distribution most similar to normal (t-distribution used for UCL). O = Analyte not detected in any sample.

X = Distribution significantly different from normal and lognormal (t-distribution used for UCL). ^bIf a chemical was not detected, the reference background criterion was the mean of the detection limit. However, organic constituents were screened against zero because they are considered man-made.

CV = Coefficient of variation.

Amalida	USGS Eastern U.S.	Results	%Results	Average		Min	Max		Reference Background
Aualyte	Kelerence	>Det. Limit	>Det. Limit	Result	S	Detect	Detect	Dist. ^a	Criteria
Arconic			Metals (mg/kg)						
Bailine	/.40	8/1/	47.06	4.02	334	0.44	56.00	Ω	8.04
	420.00	19/19	100.00	8.49	101	1.10	30.00	I.	17
	2.00	0/17	0.00	0.115	109			c	0.731
Chromium č	52.00	19/19	100.00	5.81	84.5	0.76	19 00	, .	11 6
Lead	17.00	19/19	100.00	5.56	103	1.10	23.00	<u>ا</u> ب	0.11
Mercury	0.12	9/17	52.94	0.024	81.4	0.01	0.06	۹⊢	1.11
Selenium	0.45	1/14	7.14	0.558	131	0.67	0.67	4 C	0.040
SILVET	2.80	0/16	0.00	0.227	115			c	0.452
			Other Analytes					>	0000
Total organic carbon		1/1	100.00	1,100		1,100.00	1.100.00	X	2 200
	Pe	sticides/Polychl	Pesticides/Polychlorinated Biphenyls (PCBs) (me/ke	ls (PCBs) (m	10/ko)				22-12
4,4'-DDD		0/3	00.0	0 00075	6 67				
4,4'-DDE		0/3	0000	0.00075	6.67				0.0015
4,4'-DDT		0/3	00.0	0.00075	5 K7			2	C100.0
Aldrin		٤/0	000	0.0000	2.00			5	0.0015
alpha-Chlordane		200	00.0	8/ CUUU-U	20.0			0	0.000757
alnha-BHC		C/0 -	0.00	0.000378	3.33			0	0.000757
Aroclor-1016		£/1	33.33	0.000562	56.8	0.00	0.00	Δ	0.00112
A-color 1011		0/3	0.00	0.00188	4.06			0	0.00377
Arocior-1221		0/3	0.00	0.00188	4.06				0.00377
ALOCIOI-1232		0/3	0.00	0.00188	4.06			0	0.00377
ALUCIOF-1242		0/3	0.00	0.00188	4.06			С	0.00277
Arocior-1248		0/3	0.00	0.00188	4.06				0.00377
Aroclor-1234		0/3	0.00	0.00188	4.06				0.00277
Aroclor-1260		0/3	0.00	0.00188	4.06	-			110000
beta-BHC		0/3	0.00	0.000378	3 33		T		1100000
delta-BHC		0/3	000	0.000378	000				/ 000.0</td
Dieldrin		50		0/00000				Ъ	0.000757
Endosulfan I			00.0	c/000.0	6.0			0	0.0015
Endosulfan II		C.)	0.00	0.000378	3.33			0	0.000757
		c/0	0.00	0.00075	6.67			0	0.0015

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Table F-8. Statistical Analysis of Subsurface Soil Background Data

	USGS Eastern U.S.	Results	%Results	Average		Min	Max		Reference
Analyte	Reference	>Det. Limit	>Det. Limit	Result	S	Detect	Detect	Dist."	Criteria ⁶
Endosulfan sulfate		0/3	0.00	0.00075	6.67			0	0.0015
Endrin		0/3	0.00	0.00075	6.67			0	0.0015
Endrin ketone		0/3	0.00	0.00075	6.67			0	0.0015
Gamma chlordane		0/3	0.00	0.000378	3.33			0	0.000757
gamma-BHC (Lindane)		0/3	0.00	0.000378	3.33			0	0.000757
Heptachlor		0/3	0.00	0.000378	3.33			0	0.000757
Heptachlor epoxide		0/3	0.00	0.000378	3.33		-	0	0.000757
Methoxychlor		0/3	0.00	0.00378	3.33			0	0.00757
1 oxaphene		0/3	0.00	0.0189	3.58			0	0.0378
		Semivolatile	Semivolatile Organic Compounds (mg/kg,	nds (mg/kg)					
1,2,4-Trichlorobenzene		1/9	11.11	0.241	90.5	0.00	0.00	۵	0.481
1.2-Dichlorobenzene		6/0	0.00	0.26	77.1			0	0.521
1,3-Dichlorobenzene		6/0	0.00	0.26	77.1			0	0.521
1,4-Dichlorobenzene		6/0	0.00	0.26	77.1			0	0.521
1-Methylnaphthalene		0/1	0.00	0.185				0	0.37
2,2'-Uxybis (1-chloropropane)		6/0	0.00	0.26	77.1			0	0.521
2,4,5-Trichlorophenol		6/0	0.00	0.618	84.4			0	1.24
2,4,6-Trichlorophenol		6/0	0.00	0.26	77.1			0	0.521
2,4-Dichlorophenol		6/0	0.00	0.26	77.1			0	0.521
2,4-Dimethylphenol		6/0	0.00	0.26	77.1			0	0.521
2,4-Dinitrophenol		6/0	0.00	0.64	79			0	1.28
2,4-Diniuotoluene		6/0	0.00	0.26	77.1			0	0.521
2,0-Dinitrotoluene		6/0	0.00	0.26	77.1			0	0.521
2-Chloronaphthalene		0/10	0.00	0.253	75.3			0	0.506
2-Chlorophenol		6/0	0.00	0.26	77.1			0	0.521
2-Methyinaphthalene		0/10	0.00	0.253	75.4			0	0.506
2-Methylphenol		6/0	0 <u>.</u> 00	0.26	77.1			0	0.521
2-Nitroaniline		6/0	0.00	0.618	84.4			0	1.24
2-INITOPRENOL		6/0	0.00	0.26	77.1			0	0.521
unicitation obenzique		6/0	0.00	0.586	72.5			0	1.17

Table F-8. Statistical Analysis of Subsurface Soil Background Data (continued)

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	USGS Eastern U.S.	Results	%Reculte	Averaco		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			Reference
Analyte	Reference	>Det. Limit	>Det. Limit	Result	CV	Detect	Max	Dist ^a	Background Criteria ^b
3-Nitroaniline		6/0	0.00	0.618	84.4			С	1 74
4,6-Dinitro-o-cresol		6/0	0.00	0.64	79				1 28
4-Bromophenyl-phenyl ether		6/0	0.00	0.26	77.1				0.521
4-Chloroaniline		6/0	0.00	0.26	77.1			C	0 521
4-Chlorophenyl-phenyl ether		6/0	00.0	0.26	77.1			0	0 521
4-Methylphenol		6/0	0.00	0.26	77.1	-			0 521
4-Nitroaniline		6/0	0.00	0.618	84.4			c	1 74
4-Nitrophenol		6/0	0.00	0.64	62				1.28
4-Chloro-3-methylphenol		6/0	0.00	0.26	77.1			0	0.521
Acenaphthene		0/11	0.00	0.247	73.7			0	0.494
Accriaphinylene		0/11	0.00	0.247	73.7			0	0.494
Anthracene		0/11	0.00	0.247	73.7			0	0.494
Benzo(a)anthracene		0/11	0.00	0.247	73.7			0	0.494
Benzo(a)pyrene		0/11	0.00	0.247	73.7			0	0.494
Benzo(b)iluoranthene		0/11	0.00	0.247	73.7			0	0.494
Benzo(g,h,i)perylene		0/11	0.00	0.247	73.7			0	0.494
Benzo(K)Iluoranthene		0/11	0.00	0.247	73.7			0	0.494
Benzoic acid		6/0	0.00	0.26	77.1			0	0.521
Benzyl alcohol		6/0	0.00	0.26	77.1			0	0.521
Bis(2-chloroisopropyl)ether		1/9	11.11	0.318	77.9	0.71	0.71	Ω	0.637
Bis(2-chloroethoxy)methane		6/0	0.00	0.26	77.1			0	0.521
Dis(2-caloroethyl)ether		6/0	0.00	0.26	77.1			0	0.521
Dist z-emylnexyl)phthalate		0/11	0.00	0.247	73.7			0	0.494
Duty Denzyl primalate		1/9	11.11	0.261	77	0.19	0.19	Ω	0.521
Cardazoie		6/0	0.00	0.26	77.1			0	0.521
Curysene		0/11	0.00	0.247	73.7			0	0.494
Di-/v-outyl putnalate		6/0	0.00	0.26	77.1			0	0.521
Difference (2) and a large		6/0	0.00	0.26	77.1			0	0.521
Dihenzofinn		6/0	0.00	0.26	77.1			0	0.521
Diathyl abtholoto		1/12	8.33	7.14	334	83.00	83.00	D	14.3
		11/0	0.00	0.247	73.7			0	0.494

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Table F-8. Statistical Analysis of Subsurface Soil Background Data (continued)

	USGS Fastern ILS	Results	%Recults	Å verage		Min	May		Reference
Analyte	Reference	>Det. Limit	>Det. Limit	Result	C	Detect	Detect	Dist."	Criteria
Dimethyl phthalate		6/0	00.0	0.26	77.1			0	0.521
Fluoranthene		6/0	0.00	0.26	77.1			0	0.521
Fluorene		6/0	0.00	0.26	77.1			0	0.521
Hexachlorobenzene		6/0	0.00	0.26	77.1			0	0.521
Hexachlorobutadiene		0/11	0.00	0.247	73.7			0	0.494
Hexachlorocyclopentadiene		6/0	0.00	0.26	77.1			0	0.521
Hexachloroethane		6/0	0.00	0.26	77.1			0	0.521
Indeno(1,2,3-cd)pyrene		6/0	0.00	0.26	77.1			0	0.521
Isophorone		0/11	0.00	0.247	73.7			0	0.494
N-Nitroso-di-N-propylamine		, 0/9	0.00	0.26	77.1			0	0.521
N-Nitrosodiphenylamine		0/0	0.00	0.618	84.4			0	1.24
Naphthalene		0/11	0.00	0.247	73.7			0	0.494
Nitrobenzene		0/0	0.00	0.26	77.1			0	0.521
Pentachlorophenol		1/12	8.33	7.31	335	85.00	85.00	Ω	14.6
Phenanthrene		0/16	0.00	0.00285	33.2			0	0.00569
Phenol		0/10	0.00	0.00285	42.9			0	0.00569
Pyrene		0/11	0.00	0.00285	40.7			0	0.00569
		Volatile O	Volatile Organic Compounds (mg/kg)	ds (mg/kg)					
1,1-Dichloroethane		0/11	0.00	0.00285	40.7			0	0.00569
1, 1-Dichloroethene		0/11	0.00	0.00285	40.7			0	0.00569
1,2-Dichloroethane		0/11	0.00	0.00285	40.7			0	0.00569
1,2-Dichloroethene		8/0	0.00	0.00294	4.62			0	0.00588
1,2-Dichloropropane		0/11	0.00	0.00285	40.7			0	0.00569
1,2-cis-Dichloroethene		0/3	0.00	0.0026	98.3			0	0.0052
1,2-trans-Dichloroethene		0/3	0.00	0.0026	98.3			0	0.0052
1,3-cis-Dichloropropene		0/11	0.00	0.00285	40.7			0	0.00569
1,3-trans-Dichloropropene		0/11	0.00	0.00285	40.7			0	0.00569
2-Butanone		1/7	14.29	0.00505	64.3	0.00	0.00	D	0.0101
2-Hexanone		1/11	9.09	0.00535	48.2	0.00	0.00	D	0.0107
4-Methyl-2-pentanone		1/11	60.6	0.00535	48.2	0.00	0.00	Q	0.0107
Acetone		6/15	40.00	0.0249	110	0.01	0.11	Ω	0.0498

Table F-8. Statistical Analysis of Subsurface Soil Background Data (continued)

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	Eastern U.S.	Results	%Results	Average		Min	May		Reference
Analyte	Reference	>Det. Limit	>Det. Limit	Result	S	Detect	Detect	Dist."	Datriground Criteria ^b
Benzene		0/17	0.00	0.00284	32.2			c	0.00560
Bromodichloromethane		0/11	0.00	0.00285	40.7				000000
Bromoform		0/11	0.00	0.00285	40.7			c	000000
Bromomethane		1/11	9.09	0.00513	55.8	0.00	0.00		0.0000
Carbon disulfide		1/16	6.25	0.00298	25	0.00	0.00		0.00596
Carbon tetrachloride		0/11	0.00	0.00285	40.7			0	0.00569
Chlorobenzene		0/11	0.00	0.00285	40.7			c	0.00569
Chloroethane		0/11	0.00	0.00549	48.6			c	0.011
Chloroform		0/11	0.00	0.00285	40.7				0.00560
Chloromethane		0/11	0.00	0.00549	48.6				0.011
Dibromochloromethane		0/11	0.00	0.00285	40.7			0	0.00569
Ethylbenzene		0/17	0.00	0.00284	32.2				0.00569
Methylene chloride		1/16	6.25	0.0032	35.1	0.01	0.01		0.00630
Styrene		0/11	0.00	0.00285	40.7				0.00560
Tetrachloroethene		1/16	6.25	0.00305	40.9	0.01	0 01		0.0051
Toluene		5/17	29.41	0.00406	115	000	600		0.0013
Trichloroethene		0/11	0.00	0.00285	40.7		*>->		0.00540
Vinyl chloride		0/11	0.00	0.00549	48.6				1100
Xylenes, total		2/17	11.76	0.00416	114	0.01	000	ہ د	0.00832
		Ra	Radionuclides (nCi/o				=>:>		CC000-0
Radium-226		1/1	100.00	0 547		0.55	0.55	>	1 00
Radium-228		1/1	100.00	0.445		24.0	44.0	$\langle \rangle$	60-T
"Results less than the detection limit were	were set to one half the read						0.4.0	۲	0.89

Table F-8. Statistical Analysis of Subsurface Soil Background Data (continued)

Results less than the detection limit were set to one-half the reported detection limit. For radionuclides, the reported result was used to calculate the mean. Distribution codes:

D = Distribution not determined because fewer than 5 detects or less than 50 percent detects (t-distribution).

L = Distribution most similar to lognormal [land statistic used for upper confidence limit (UCL)]. N = Distribution most similar to normal (t-distribution used for UCL).

O = Analyte not detected in any sample. X = Distribution significantly different from normal and lognormal (t-distribution used for UCL). ^bIf a chemical was not detected, the reference background criterion was the mean of the detection limit. However, organic constituents were screened against zero

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CV = Coefficient of variation.

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	Results	%Results	Average					Reference Background
Analyte	>Det. Limit	>Det. Limit	Result	CV	Min Detect	Max Detect	Dist."	Criteria
			Anions (mg/L	(<u>g/L)</u>				
Alkalinity	1/1	100.00	45,100.00		45,100.00	45,100.00	×	90,200.00
Nitrate	0/1	0.00	250.00				0	500.00
Nitrite	0/1	0.00	250.00				0	500.00
Sulfate	8/8	100.00	13,400.00	110.00	1,100.00	38,900.00	r	26,717.50
Sulfide	0/1	0.00	50.00				0	100.00
			Metals (m	g/L)				
Aluminum	1/1	100.00	1,200.00		1,200.00	1,200.00	×	2,400.00
Antimony	0/1	0.00	1.20				0	2.40
Arsenic	1/18	5.56	1.51	147.14	10.10	10.10	D	3.02
Barium	17/18	94.44	35.90	109.00	3.80	177.00	L L	71.72
Beryllium	0/1	0.00	0.08				0	0.15
Cadmium	4/16	25.00	0.21	121.03	0.32	1.10	Ω	0.43
Calcium	1/1	100.00	1,630.00		1,630.00	1,630.00	×	3,260.00
Chromium	12/18	66.67	1.78	107.61	0.52	7.30	L	3.56
Cobalt	0/1	0.00	0.23				0	0.46
Copper	1/1	100.00	2.00		2.00	2.00	×	4.00
Iron	2/2	100.00	2,190.00	102.79	598.00	3,780.00	z	4,378.00
Lead	8/18	44.44	2.35	250.54	0.08	25.50	۵	4.69
Magnesium	1/1	100.00	814.00		814.00	814.00	×	1,628.00
Manganese	1/1	100.00	17.30		17.30	17.30	×	34.60
Mercury	3/18	16.67	0.07	107.16	0.20	0.28	۵	0.14
Nickel	1/1	100.00	1.90		1.90	1.90	×	3.80
Potassium	1/1	100.00	643.00		643.00	643.00	×	1,286.00
Selenium	2/17	11.76	0.95	68.62	0.62	2.50	Q	1.90
Silver	5/18	27.78	0.56	196.74	0.08	4.90	D	1.12
Sodium	1/1	100.00	3,520.00		3,520.00	3,520.00	x	7,040.00
Thallium	0/1	0.00	1.60				0	3.20

Table F-9. Statistical Analysis of Groundwater Background Data

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Analyte	Results >Det. Limit	%Results >Det. Limit	Average Result	5	Min Defect	March March		Reference Background
dium	1/1	100.00	2.00	>	2 00		DISL.	Criteria
Zinc	0/1	0.00	8.45		7.00	-7 7	~ <	4.00
			Other Analytes	Intec	_		5	10.90
Total organic carbon	1/1	100.00	3,160.00	an - (3.160.00	3 160 00	X	6 370 00
		Volatile	Volatile Organic Compounds (mg/L	npounds (me/			<	00.020,0
Ethane	0/1	00.0	2.50					404
Ethene	0/1	0.00	2.50					00.0
Methane	1/1	100.00	53.70		53.70	53 70	>>	107.40
	:		Explosives (mg/L)	(me/L)			4	101.40
1,3,5-Trinitrobenzene	0/1	0.00	1.00	C				00 0
1,3-Dinitrobenzene	0/1	0.00	1.50					00.2
2,4,6-Trinitrotoluene	0/1	0.00	1.50					3.00 2.00
2,4-Dinitrotoluene	0/1	0.00	0.05				s	3.00
2,6-Dinitrotoluene	0/1	0.00	0.05				50	0.10
2-Nitrotoluene	0/1	0.00	5.00					01.0
3-Nitrotoluene	0/1	0.00	5.00					10.00
4-Nitrotoluene	0/1	0.00	5 00			-		10.00
HMX	0/1	000	10.00				5	10.00
Nitrobenzene	0/1	000	00.21				0	20.00
RDX	1/0	000	0001				0	10.00
Tetryl	1/0	0.00	25.00				0	20.00
		Pesticides/Polychlorinated Biphenyls (PCBs) (ma/1	chlorinated Bi	phenvls (PCR	() (ma/I)		э	50.00
4,4'-DDD	0/3	0.00	0.02	0.00	1 1118.11			
4,4'-DDE	0/3	0.00	0.02	0.00				0.04
4,4'-DDT	0/3	0.00	0.02	0.00				0.04
Aldrin	0/3	0.00	0.01	0.00				0.04
alpha-Chlordane	0/3	0.00	10.0	0000				0.02
alpha-BHC	0/3	0.00	100	0000			o	0.02
Aroclor-1016	0/3	000	10.0	0.50			0	0.02
Aroclor-1221	50	000	20.0	00			0	0.10
	3	0.00	5.5	8C-0			0	0.10

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Table F-9. Statistical Analysis of Groundwater Background Data (continued)

Analyte	Results >Det. Limit	%Results >Det. Limit	Average Result	CV	Min Detect	Max Detect	Diet "	Reference Background
	0/3	0.00	0.05	0.58				010
	0/3		0.05	0.58				010
	0/3		0.05	0.58				0.10
	0/3	0.00	0.05	0.58			0	0.10
260	0/3		0.05	0.58			0	0.10
	0/3		0.01	0.00			0	0.02
IC	0/3		0.01	0.00			0	0.02
	0/3	0.00	0.02	00.00			0	0.04
	0/3		0.01	0.00			0	0.02
	0/3		0.02	0.00			0	0.04
lfan sulfate	0/3		0.02	0.00			0	0.04
	0/3		0.02	0.00			0	0.04
de	0/2		0.02	0.00			0	0.04
	0/3	0.00	0.02	0.00			0	0.04
	0/3		0.01	0.00			0	0.02
IC (Lindane)	0/3		0.01	0.00			0	0.02
	0/3	0.00	0.01	0.00			0	0.02
oxide	0/3		0.01	0.00			0	0.02
lor	0/3		0.10	0.00			0	0.20
Toxaphene	0/3		0.50	0.58			0	66-0
		Semivola	tile Organic C	Compounds (mg/L)	(T)			
1,2,4-1 nchlorobenzene	0/11	0.00	0.00 5.05	2.28			0	10.10
1,2-Dichlorobenzene	0/11	0.00	5.05	2.28			0	10.10
1,	0/11	0.00	5.05	2.28			0	10.10
1,4-Dichlorobenzene	0/11	0.00	5.05	2.28			0	10.10
2,2'-Uxybis (1-chloropropane)	0/11	0.00	5.05	2.28			0	10.10
2,4,5-1 richlorophenol	0/10	0.00	12.60	2.14			0	25.20
2,4,6-I richlorophenol	0/10	0.00	5.03	2.16			0	10.06
2,4-Dichlorophenol	0/10	0.00	5.03	2.16			0	10.06
2,4-Dimethylphenol	0/10	0.00	5.03	2.16			0	10.06
2,4-Dinitrophenol	0/10	0.00	12.60	2.14			0	25.20

Table F-9. Statistical Analysis of Groundwater Background Data (continued)

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Analyte	Results >Det. Limit	%Results >Det Limit	Average	Č			Reference Background
	0/11	0.00	5.05	2.28	I INIAX DETECT	Dist.	Criteria
	0/11	0.00	5.05	2.28			1010
alene	0/12	0.00	4.23	45.64			8.46
	0/10	0.00	5.03	2.16		0	10.06
alene	0/11	0.00	5.05	2.28		0	10.10
0	0/10	0.00	5.03	2.16		0	10.06
	0/11	0.00	12.60	2.26		0	25.20
	0/10	0.00	5.03	2.16		0	10.06
enzidine	0/11	0.00	10.10	2.28		0	20.20
	0/11	0.00	12.60	2.26		0	25.20
	0/10	0.00	12.60	2.14		0	25.20
-phenyl ether	0/11	0.00	5.05	2.28		0	10.10
	0/11	0.00	5.05	2.28		0	10.10
-phenylether	0/11	0.00	5.05	2.28		0	10.10
0	0/10	0.00	5.03	2.16		0	10.06
	0/11	0.00	12.60	2.26		0	25.20
	0/10	0.00	12.60	2.14		0	25.20
sthylphenol	0/10	0.00	5.03	2.16		0	10.06
	0/12	0.00	4.23	45.64		0	8.46
lene	0/12	0.00	4.23	45.64		0	8.46
	0/12	0.00	4.23	45.64		0	8.46
ene	0/12	0.00	4.23	45.64		0	8.46
	0/12	0.00	4.23	45.64	-	0	8.46
•	0/12	0.00	4.23	45.64		0	8.46
	0/12	0.00	4.23	45.64		0	8.46
	0/12	0.00	4.23	45.64		0	8.46
thane	0/11	0.00	5.05	2.28		0	10.10
Bis(2-chloroethyl)ether	0/11	0.00	5.05	2.28		0	10.10
Bis(2-ethylnexyl)phthalate	0/11	0.00	5.05	2.28		0	10.10
Butyl benzyl phthalate	11/0	0.00	5.05	2.28		0	10.10
Carloazoic	N/11	0.00	5.05	2.28		0	10.10

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Table F-9. Statistical Analysis of Groundwater Background Data (continued)

Analyte	Results >Det. Limit	%Results >Det. Limit	Average Result	CV	Min Detect	Max Detect	Dist."	Reference Background Criteria ^b
Chrysene	0/12		4.23	45.64			0	8.46
Di-N-butyl phthalate	0/11		5.05	2.28			0	10.10
Di-N-octyl phthalate	0/11	0.00	5.05	2.28			0	10.10
Dibenzo (a, h) anthracene	0/12		4.23	45.64			0	8.46
Dibenzofuran	0/11		5.05	2.28			0	10.10
Diethyl phthalate	0/11	0.00	5.05	2.28			0	10.10
Dimethyl phthalate	0/11		5.05	2.28			0	10.10
Fluoranthene	0/12		4.23	45.64			0	8.46
Fluorene	0/12		4.23	45.64			0	8.46
Hexachlorobenzene	0/11	0.00	5.05	2.28			0	10.10
Hexachlorobutadiene	0/11		5.05	2.28			0	10.10
Hexachlorocyclopentadiene	0/11		5.05	2.28			0	10.10
Hexachloroethane	0/11		5.05	2.28			0	10.10
Indeno(1,2,3-cd)pyrene	0/12		4.23	45.64			0	8.46
Isophorone	0/11	0.00	5.05	2.28			0	10.10
N-Nitroso-di-N-propylamine	0/11	Ē	5.05	2.28			0	10.10
N-Nitrosodiphenylamine	0/11		5.05	2.28			0	10.10
Naphthalene	0/12		4.23	45.64			0	8.46
Nitrobenzene	0/11		5.05	2.28			0	10.10
Pentachlorophenol	0/10	0.00	12.60	2.14			0	25.20
Phenanthrene	0/12		4.23	45.64			0	8.46
Phenol	0/10	0.00	5.03	2.16			0	10.06
ryrene	0/12	0.0	4.63	30.87			0	9.26
		Volatile	Volatile Organic Compounds (mg/L	l/Bm) spunodi	(
1,1,1-Trichloroethane	1/17	5.88	1.75	48.08	0.23	0.23	Q	3.50
1,1,2,2-Tetrachloroethane	0/17	0.00	1.88	40.43			0	3.76
1,1,2-Trichloroethane	0/17	0.00	1.88	40.43			0	3.76
1,1-Dichloroethane	1/17	5.88	1.77	45.82	0.53	0.53	D	3.54
1,1-Dichloroethene	0/17	0.00	1.88	40.43			0	3.76
1,2-Dichloroethane	0/17	0.00	1.88	40.43			0	3.76
1,2-Dichloroethene	6/0	0.00	2.50	0.00			0	5.00

Table F-9. Statistical Analysis of Groundwater Background Data (continued)

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	0/17 0.00 0/8 0.00 0/8 0.00 0/17 0.00 0/17 0.00 0/17 5.88 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00	40.43 44.66 44.66 44.66 36.08 36.08 31.94 37.06 37.06 48.31	0.24			V111114
ichloroethene $0/8$ 0.00 -Dichloroethene $0/17$ 0.00 -Dichloropropene $0/17$ 0.00 ne $0/17$ 0.00 Dichloromethane $0/17$ 0.00 Chloromethane $0/17$ 0.00 n $0/17$ 0.00 chloromethane $0/17$ 0.00	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	44.66 44.66 40.43 40.43 36.08 31.94 21.23 37.06 48.31 40.43	0.24		C	376
Dichloroptonethene $0/8$ 0.00 Dichloroptopene $0/17$ 0.00 Dichloroptopene $0/17$ 0.00 Dichloroptopene $0/17$ 0.00 Dichloroptopene $0/17$ 0.00 ne $0/12$ 0.00 2.2 -pentanone $0/17$ 0.00 0.12 0.17 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.00 0.00 0.00 0.00 0.00	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	44.66 40.43 48.00 36.08 31.94 21.23 37.06 48.31 40.43	0.24		0	2.38
vichloropropene $0/17$ 0.00 -Dichloropropene $1/17$ 5.88 ne $0/9$ 0.00 Dichloropropene $1/17$ 5.88 ne $0/17$ 0.00 Dichloropropene $0/17$ 0.00 Dichloropropene $0/17$ 0.00 Dichloropropene $0/17$ 0.00 Dichloromethane $0/17$ 0.00 Chloromethane $0/17$ 0.00 m $0/17$ 0.00 me $0/17$ 0.00 m $0/17$ 0.00 me	0/17 0.00 1/17 5.88 0/9 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00 0/17 0.00	40.43 48.00 36.08 31.94 21.23 37.06 48.31 40.43	0.24		0	2.38
-Utchloropropene $1/17$ 5.88 ne $0/9$ 0.00 ne $0/17$ 0.00 -2 -pentanone $0/12$ 0.00 -2 -pentanone $0/17$ 0.00 -2 -pentanoe $0/17$ 0.00 -2 -pentane $0/17$ 0.00 -2 -pente $0/17$ 0.00 -2 -pente $0/17$ 0.00	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	48.00 36.08 31.94 21.23 37.06 48.31 40.43	0.24		0	3.76
me $0/9$ 0.00 Date $0/17$ 0.00 -2 -pentanone $0/17$ 0.00 -2 -pentanone $0/17$ 0.00 $3/14$ 21.43 0.00 $3/14$ 21.43 0.00 $3/14$ 21.43 0.00 $0/17$ 0.00 0.00 m $0/17$ 0.00 ethane $0/17$ 0.00 isulfide $0/17$ 0.00 m $0/17$ 0.00 n $0/17$ 0.00 m $0/17$ 0.00 m $0/17$ 0.00 m $0/17$ 0.00 ethane $0/17$ 0.00 chloromethane $0/17$ 0.00 m $0/17$ 0.00 other 0.17 0.00 m $0/17$ 0.00 other 0.177 0.00 ethane 0.177	0.00 0.00 0.00 0.00 0.00 0.00 0.00	36.08 31.94 21.23 37.06 48.31 40.43	1.70	0.24	٩	3.50
Date $0/17$ 0.00 -2-pentanone $0/12$ 0.00 $3/14$ 21.43 0.00 chloromethane $0/17$ 0.00 m $0/17$ 0.00 chloromethane $0/17$ 0.00 m $0/17$ 0.00 ethane $0/17$ 0.00 isulfide $0/17$ 0.00 isulfide $0/17$ 0.00 intrachloride $0/17$ 0.00 m $0/17$ 0.00 name $0/17$ 0.00 name $0/17$ 0.00 m $0/17$ 0.00 chane $0/17$ 0.00 chane $0/17$ 0.00 chore $0/17$ 0.00 ethane $0/17$ 0.00 chore $0/17$ 0.00 ordethane $0/17$ 0.00	0.00 0.00	31.94 21.23 37.06 48.31 40.43	1.70		0	6.12
-3-pentanone $0/12$ 0.00 $3/14$ 21.43 0.00 $3/14$ 21.43 0.00 $0/17$ 0.00 0.00 $0/17$ 0.00 0.00 $0/17$ 0.00 0.00 10 $0/17$ 0.00 10 $0/17$ 0.00 117 0.00 0.00 117 0.00 0.00 117 0.00 0.00 117 5.88 0.00 117 5.88 0.00 117 5.88 0.00 117 5.88 0.00 117 5.88 0.00 117 5.88 0.00 0.017 0.00 0.00 0.17 0.00 0.00 0.17 0.00 0.00 0.00 0.17 0.00 0.00 0.00 0.00 0.00 <t< td=""><td>0.00 0.00 0.00 0.00 0.00</td><td>21.23 37.06 48.31 40.43</td><td>1.70</td><td></td><td>0</td><td>7.94</td></t<>	0.00 0.00 0.00 0.00 0.00	21.23 37.06 48.31 40.43	1.70		0	7.94
3/14 21.43 m $0/17$ 0.00 ethane $0/17$ 0.00 isulfide $0/17$ 0.00 isulfide $0/17$ 0.00 isulfide $0/17$ 0.00 isulfide $0/17$ 0.00 isule $0/17$ 0.00 inter 0.0	21.43 0.00 0.00 0.00 0.00	37.06 48.31 40.43	1.70		0	9.16
0/17 0.00 tm $0/17$ 0.00 tm $0/17$ 0.00 tm $0/17$ 0.00 ethane $0/17$ 0.00 isulfide $0/17$ 0.00 isulfide $0/17$ 0.00 trachloride $0/17$ 0.00 trachloride $0/17$ 0.00 trachloride $0/17$ 0.00 tm $0/17$ 0.00 tothordene $0/17$ 0.00 tothordene $0/17$ 0.00 tothordene $0/17$ 0.00	0.000	48.31		5.20	۵	7.22
0/17 0.00 m $0/17$ 0.00 m $0/17$ 0.00 ethane $0/17$ 0.00 ethane $0/17$ 0.00 isulfide $0/17$ 0.00 ethane $0/17$ 0.00 ane $0/17$ 0.00 m $0/17$ 0.00 m $0/17$ 0.00 m $0/17$ 0.00 ethane $0/17$ 0.00 chloromethane $0/17$ 0.00	0.000	40.43			0	3.06
mm $0/17$ 0.00 ethane $0/17$ 0.00 isulfide $0/17$ 0.00 isulfide $0/17$ 0.00 etrachloride $0/17$ 0.00 ane $0/17$ 0.00 nzene $0/17$ 0.00 ne $0/17$ 0.00 ne $0/17$ 0.00 ethane $1/17$ 5.88 chloromethane $0/17$ 0.00 zene $3/17$ 17.65 echone $0/17$ 0.00 rotethene $0/17$ 0.00	0.00				0	3.76
0/17 0.00 isulfide $0/17$ 0.00 isulfide $0/17$ 0.00 inachloride $0/17$ 0.00 nzene $0/17$ 0.00 nzene $0/17$ 0.00 nm $0/17$ 0.00 nm $0/17$ 0.00 intee $0/17$ 0.00 intee $0/17$ 0.00 intee $0/17$ 0.00 chloromethane $0/17$ 0.00 zene $3/17$ 17.65 echloride $0/17$ 0.00 rotethene $0/17$ 0.00	0.00	40.43			0	3.76
isulfide $0/17$ 0.00 isulfide $0/17$ 0.00 trachloride $0/17$ 0.00 nzene $0/17$ 0.00 nane $0/17$ 0.00 nane $0/17$ 0.00 nane $1/17$ 5.88 chloromethane $0/17$ 0.00	000	60.52			0	6.70
trachloride $0/17$ 0.00 nzene $0/17$ 0.00 nzene $0/17$ 0.00 nm $0/17$ 0.00 nm $0/17$ 0.00 tm $0/17$ 0.00 tm $0/17$ 0.00 tm $0/17$ 0.00 tm $0/17$ 0.00 tene $1/17$ 5.88 chloromethane $0/17$ 0.00 tene $0/17$ 0.00 tene $0/17$ 0.00 orothene $0/17$ 0.00 orothene $0/17$ 17.65	0.00	0.00			0	5.00
nzene 0/17 0.00 lane 0/17 0.00 m 0/17 0.00 m 0/17 5.88 chloromethane 1/17 5.88 chloromethane 0/17 0.00 zene 3/17 17.65 echloride 1/17 5.88 orothene 0/17 0.00 orothene 0/17 0.00 orothene 0/17 0.00	0.00	40.43			0	3.76
Jane $0/17$ 0.00 Im $0/17$ 0.00 thane $1/17$ 5.88 chloromethane $0/17$ 0.00 zene $3/17$ 17.65 celloride $1/17$ 5.88 chloromethane $0/17$ 0.00 zene $3/17$ 17.65 cechloride $1/17$ 5.88 otothene $0/17$ 0.00 roethene $0/17$ 0.00	0.00	40.43			0	3.76
mm $0/17$ 0.00 $cthane$ $1/17$ 5.88 $chloromethane$ $0/17$ 0.00 $cene$ $3/17$ 17.65 $cene$ $3/17$ 17.65 $cene$ $3/17$ 17.65 $cechone$ $0/17$ 0.00 $roothene$ $0/17$ 0.00 $roothene$ $0/17$ 0.00	0.00	60.52			0	6.70
1/17 5.88 chloromethane $0/17$ 0.00 zene $3/17$ 17.65 zene $3/17$ 17.65 echloride $1/17$ 5.88 or of the chloride $0/17$ 0.00 or of the chloride $0/17$ 0.00 or of the chloride $0/17$ 0.00	00.00	40.43			0	3.76
chloromethane 0/17 0.00 zene 3/17 17.65 zene 3/17 5.88 echloride 1/17 5.88 or of the chloride 0/17 0.00 roethene 0/17 0.00 sthene 0/17 0.00	5.88	57.23	7.10	7.10	Ω	7.42
Zene 3/17 17.65 e chloride 1/17 5.88 0/17 0.00 0.00 roethene 0/17 0.00 3/17 17.65 0.00	0.00	40.43			0	3.76
le chloride 1/17 5.88 0/17 0.00 roethene 0/17 0.00 3/17 17.65 ethene 1/17 5.00	17.65	61.47	0.21	0.34	D	2.98
0/17 0.00 rroethene 0/17 0.00 3/17 17.65 ethene 1/17 5.00	5.88	34.17	2.10	2.10	Q	4.08
stocthene 0/17 0.00 3/17 17.65 ethene 1/17 5.00	0.00	40.43			0	3.76
3/17 17.65 ethene 1/17 5.00	0.00	40.43			0	3.76
1/17 2 200	17.65	49.16	0.26	0.35	Ω	1.94
1/1/ D.88	5.88	47.60	0.29	0.29	Q	3.50
0/1 0.00	0.00				0	10.00
e 0/17 0.00	0.00	78.54			0	2.48
Xylenes, total 3/17 17.65 1.55	17.65	53.94	0.42	0.71	D	3.10

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Table F-9. Statistical Analysis of Groundwater Background Data (continued)

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Analyte	Results >Det. Limit	ults %Results Limit >Det. Limit	Average Result	c	Min Detect	Min Detect Max Detect	Dist."	Reference Background Criteria ⁶
			Radionuclides (pCi/L)	s (pCi/L)				
Radium-226	1/1	100.00	0.58		0.58	0 58	×	116
Radium-228	1/1	100.00	1 71		1.7.1	1 71	< >	01.1
			- /		1./1	1.1.1	<	5.42
Kesults less than the detection limit were set	imit were set to one-f	alf the reported (detection limit. I	For radioniclic	to one-half the reported detection limit. For radiomiclides the remoted result was used to colorited the	sentt was need to	antantata tha	

Table F-9. Statistical Analysis of Groundwater Background Data (continued)

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Distribution codes:

D = Distribution not determined because fewer than 5 detects or less than 50 percent detects (t-distribution).

L = Distribution most similar to lognormal [land statistic used for upper confidence limit (UCL)]. N = Distribution most similar to normal (t-distribution used for UCL).

O = Analyte not detected in any sample.

 $\dot{X} = Distribution$ significantly different from normal and lognormal (t-distribution used for UCL). ^bIf a chemical was not detected, the reference background criterion was the mean of the detection limit. However, organic constituents were screened against zero because they are considered man-made. CV = Coefficient of variation.

Analyte	IInite	Results >	%Results >	Average	į				Site-specific
			Der. Limit	Kesult	5	Min Detect	Max Detect	Dist.	Background Criteria
Detter	7/31	1/0	0	0.47		•	•	0	0.94
	T/Bn	M	100	22.4	•	22.4	22.4	×	44.8
Caumum	µg/L	0/1	0	0.1	•	•		0	0.2
Chromium	цg/L	0/1	0	0.3		•		c	0.6
Lead	лgц	1/1	100	2.6		2.6	2.6	×	5.2
Mercury	μg/L	1/1	100	0.09	.	0.09	0.0	: ×	0.18
Selenium	ug/L	0/1	0	0.2		•		c	010
Silver	_1/gμ	1/1	100	0.15		0.15	0.15	×	0.2
2-Chloronaphthalene	μg/L	0/1	0	0.11					0.00
Acenaphthene	μg/L	1/0	0	0.11					77:0
Acenaphthylene	ug/L	0/1	0	0.11	.			c	77.0
Anthracene	μg/L	0/1	0	0.11	·				77:0
Benzo(a)anthracene	μg/L	0/1	0	0.11			•		0.07
Benzo(a)pyrene	μg/L	0/1	0	0.11					27:0
Benzo(b)fluoranthene	ug/L	0/1	0	0.11		•	•		77.0
<u>Benzo(g,h,i)perylene</u>	μg/L	0/1	0	0.11			•		77.0
Benzo(k)fluoranthene	μg/L	0/1	0	0.11	·		•		77.0
Chrysene	μg/L	0/1	0	0.11		•	•		0.00
Dibenzo(a, h)anthracene	μg/L	0/1	0	0.11		•	•		77.0
Fluoranthene	μg/L	0/1	0	0.11		•	•		77.0
Fluorene	μg/L	1/0	0	0.11		•			77:0
Indeno(1,2,3-cd)pyrene	μg/L	0/1	0	0.11		•	•		77.0
Naphthalene	μg/L	0/1	0	0.11		•	•		77.0
Phenanthrene	L ^{g/L}	0/1	c	011	·	•	•		77.0
Pyrene	ue/L	1/0	, c	011	·	•		5	0.22
1,1,1-Trichloroethane	J/gn	0/1	, 0	11.,	·	*	•	50	0.22
1,1,2,2-Tetrachloroethane		0/1	0			•	•		7
1,1,2-Trichloroethane	μg/L	0/1	0	- - -		•		blo	7

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Table F-10. Summary of Surface Water Background for Former 724th TPS, Fort Stewart

		Results >	%Results >	Average					Site-snecific
Analyte	Units	Det. Limit	Det. Limit	Result	C	Min Detect	Max Detect	Dist.	Background Criteria
1,1-Dichloroethane	μg/L	0/1	0	-	•	•		0	2
1,1-Dichloroethene	ug/L	0/1	0	1		•		0	2
1,2-Dichloroethane	J/Brl	0/1	0	I	•	•		0	- 6
1,2-Dichloropropane	μg/L	0/1	0	71				0	6
1,2-cis-Dichloroethene	μg/L	0/1	0		.			0	- -
1,2-trans-Dichloroethene	μg/L	0/1	0	1	•		•	0	2
1,3-cis-Dichloropropene	μg/L	0/1	0	1		•		0	
1,3-trans-Dichloropropene	μg/L	0/1	0	1		•		0	- 2
2-Butanone	μg/L	0/1	0	2.5	•	•		0	2
2-Hexanone	μg/L	1/0	Ģ	2.5		•			ž
4-Methyl-2-pentanone	μg/L	0/1	0	2.5		•		0	~
Benzene	μg/L	0/1	0					0	2
Bromodichloromethane	цg/L	0/1	0					0	2
Bromoform	μg/L	0/1	0					c	2 2
Bromomethane	μg/L	0/1	0	1	•		•	0	2
Carbon Disulfide	μg/L	0/1	0	2.5			•	0	2
Carbon Tetrachloride	μg/L	1/0	0	1			•	0	2
Chlorobenzene	μg/L	0/1	0	1				0	2
Chloroethane	μg/L	0/1	0	1				0	2
Chloroform	μg/L	0/1	0	1		*		0	2
Chloromethane	μg/L	0/1	0	1		•	•	0	2
Dibromochloromethane	цg/L	0/1	0	1				0	2
Ethylbenzene	μ <u>g/</u> [0/1	0	Ja Ja	•		•	0	2
Methylene Chloride	цg/L	0/1	0	1.05	•	•	•	0	2.1
Styrene	цg/L	0/1	0	1		-	•	0	2
I etrachloroethene	μg/L	0/1	0	1	•	•		0	2

Table F-10. Summary of Surface Water Background for Former 724th TPS, Fort Stewart (continued)

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Analyte	Units	Units Det. Limit	%Results > Det. Limit	Average Result	N C	CV Min Detect	May Datast	P:ct	Site-specific
Tolnene	1.2.1	0/1	c					DISI.	Dackground Unteria
ATTATTA -	L BUL	1/0	-	-				C	ç
Trichloroethene	1/~		<	,		·		>	7
	ц <u>у</u> г	1/0	→	_				C	c
Vinul Chlorida	<i></i>		¢					2	7
	1/8n	1/0	0						
Vulcano Tatal					-	•		2	7
AJICILES, I OLAI	hg/L	1/0	0	-				c	~
CV = Coefficient of variation					-	•	•	2	7

Table F-10. Summary of Surface Water Background for Former 724th TPS, Fort Stewart (continued)

Distribution codes: D = Distribution not determined because fewer than 5 detects or less than 50 percent detects (t-distribution). L = Distribution most similar to lognormal [land statistic used for upper confidence limit (UCL)]. N = Distribution most similar to normal (t-distribution used for UCL). O = Analyte not detected in any sample. X = Distribution significantly different from normal and lognormal (t-distribution used for UCL).

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Analyte	Units	Results > Det. Limit	%Results > Det. Limit	Average Result	C	Min Detect	Max Detect	Dist.	Site-specific Background Criteria
Arsenic	mg/kg	0/1	0	0.185		•		0	0.37
Barium	mg/kg	1/1	100	1.5	•	1.5	1.5	×	3
Cadmium	mg/kg	0/1	0	0.06				0	0.12
Chromium	mg/kg	0/1	0	0.185		•		0	0.37
Lead	mg/kg	1/1	100	0.69	•	0.69	0.69	×	1.38
Mercury	mg/kg	0/1	0	0.01	•			0	0.02
Selenium	mg/kg	0/1	0	0.12				0	0.24
Silver	mg/kg	0/1	0	0.085				0	0.17
2-Chloronaphthalene	µg/kg	0/1	0	210	-			0	420
Acenaphthene	µg/kg	0/1	0	210		•		0	420
Acenaphthylene	μg/kg	0/1	0	210	•			0	420
Anthracene	μg/kg	1/0	0	210				0	420
Benzo(a)anthracene	μg/kg	0/1	0	210	-	•	,	0	420
Benzo(a)pyrene	µg/kg	0/1	0	210		•	•	0	420
Benzo(b)fluoranthene	μg/kg	0/1	0	210		•		0	420
Benzo(g,h,i)perylene	μg/kg	0/1	0	210	-			0	420
Benzo(k)fluoranthene	μg/kg	0/1	0	210	•			0	420
Chrysene	μg/kg	0/1	0	210	•	•	,	0	420
Dibenzo(a, h) ant hracene	μg/kg	0/1	0	210	•		•	0	420
Fluoranthene	μg/kg	0/1	0	210				0	420
Fluorene	μg/kg	0/1	0	210		•		0	420
Indeno(1,2,3-cd)pyrene	μg/kg	0/1	0	210	•			0	420
Naphthalene	μg/kg	0/1	0	210				0	420
Phenanthrene	µg/kg	0/1	0	210		•		0	420
Pyrene	µg/kg	0/1	0	210				0	420
1,1,1-Trichloroethane	µg/kg	0/1	0	1.25	•			0	2.5

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Table F-11

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Analyte	Units	Results > Det. Limit	%Results > Det I imit	Average	ť	Min	Max	ŝ	Site-specific
1,1,2,2-Tetrachloroethane	µg/kg	0/1	0	1.25	5	Delect	Detect	Dist.	Background Criteria
1,1,2-Trichloroethane	µg/kg	0/1	0	1.25			•		C.7
1,1-Dichloroethane	μg/kg	1/0	0	1.25		•	-		C.7
1,1-Dichloroethene	µg/kg	0/1	0	1.25		•			2.7
1,2-Dichloroethane	µg/kg	0/1	0	1.25	•				C.2
1,2-Dichloropropane	μg/kg	0/1	0	1.25					2.7
1,2-cis-Dichloroethene	µg/kg	0/1	0	1.25			-		C.2 7 C
1,2-trans-Dichloroethene	μg/kg	0/1	0	1.25		-	•		5.2 3.0
1,3-cis-Dichloropropene	μg/kg	0/1	0	1.25					2.0
1,3-trans-Dichloropropene	μg/kg	0/1	0	1.25) C	2.2
2-Butanone	μg/kg	0/1	0	3.15			'		4.2 4.2
2-Hexanone	μg/kg	0/1	0	3.15			•		C-0
Acetone	μg/kg	0/1	0	3.15					C.0 C.7
Benzene	μg/kg	0/1	0	1.25		•	-		0.0
Bromodichloromethane	µg/kg	0/1	0	1.25	•				C.2
Bromoform	µg/kg	0/1	0	1.25			•		C.2
Bromomethane	це/ке	0/1	0	1.25		•	•		2.7
Carbon Disulfide	ug/kg	1/0	0	3 15	·	•	•		C.7
Carbon Tetrachloride	μg/kg	0/1	0	1.25	•		•		0.0
Chlorobenzene	μg/kg	0/1	0	1.25			·		C.2
Chloroethane	ug/kg	0/1	0	1.25					2.7
Chloroform	μg/kg	0/1	0	1.25			•		2.4
Chloromethane	μg/kg	0/1	0	1.25			-		2.2
Dibromochloromethane	μg/kg	1/0	0	1.25					2.4
Ethylbenzene	ug/kg	0/1	0	1.25	,		•		2.7
Methylene Chloride	ug/kg	1/0	c	3 15					C.2
Styrene	ue/ke	1/0	, c	2.17	•	•		5	6.3
Tetrachloroethene	ue/ko	1/0		1.75	•	•		D (2.5
Toluene	10/40	1/0		1.75	•	•	•	D	2.5
	1 r5 r5	TIN	>	1.42	•	•	•	0	2.5

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Table F-11. Summary of Sediment Background for Former 724th TPS, Fort Stewart (continued)

0 1.25 · · · 0 0 1.25 · · · 0 0 1.25 · · · 0	Analyte	Units	Results > Det. Limit	%Results > Det. Limit	Average Result	CV	Min Detect	Max Detect	Dist.	Site-specific Backøround Criteria
μg/kg 0/1 0 1.25 . . . 0 μg/kg 0/1 0 1.25 . . . 0	Trichloroethene	µg/kg	0/1	0	1.25					25
μg/kg 0/1 0 1.25 Ο	Vinyl Chloride	µg/kg	0/1	0	1.25					2.5
	Xylenes, Total	µg/kg	0/1	0	1.25					2 5
	CV = Coefficient of variation.						-	•		<u> </u>

Table F-11. Summary of Sediment Background for Former 724th TPS, Fort Stewart (continued)

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Distribution codes: D = Distribution not determined because fewer than 5 detects or less than 50 percent detects (t-distribution). L = Distribution most similar to lognormal [land statistic used for upper confidence limit (UCL)]. N = Distribution most similar to normal (t-distribution used for UCL). O = Analyte not detected in any sample. X = Distribution significantly different from normal and lognormal (t-distribution used for UCL).

APPENDIX G

PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANK PURGING STATION (SWMU 26) FORT STEWART, GEORGIA

ANALYTICAL LABORATORY DATA

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G. ANALYTICAL LABORATORY DATA

DEFINITIONS OF ACRONYMS AND ABBREVIATIONS

- **REG** Regular analysis
- **TCLP** Toxicity Characteristic Leachate Procedure (analytes listed in that procedure)
- **BG** Below ground surface (depth in feet)

QUALIFIERS FOR ORGANIC ANALYTICAL DATA

Laboratory Flags

- U— Indicates that the compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution. For a soil/sediment sample, the value must also be corrected for percent moisture.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is used only for TICs, where the identification is based on a mass spectral library search.
- **P** Used for pesticide/Aroclor target analytes when there is greater than 25% difference for detected concentrations between the two gas chromatography (GC) columns.
- C Applies to pesticide results where the identification has been confirmed by GC/MS (gas chromatography/mass spectrometry). If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag; instead use a laboratory-defined flag.
- B Used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for TICs as well as for positively identified target compounds.
- **E** Identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D Identifies all compounds identified in an analysis at a secondary dilution factor. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.
- A Indicates that a TIC is a suspected aldol-condensation product.

X — Other specific flags may be required to properly define the results. If used, they must be fully described and such description must be attached to the Sample Data Summary Package and the SDG narrative.

Validation Flags

- U Indicates that the compound was analyzed for, but was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- J Indicates that the compound was positively identified; the associated numerical value is the approximate concentration of the compound in the sample.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a "tentative identification."
- NJ Indicates that the analysis indicates the presence of a compound that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- **R** Indicates that the sample results for the compound are rejected or unusable due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the compound cannot be verified.
- = Indicates that the value has been validated and that the compound has been positively identified and the associated concentration value is accurate.

DATA QUALIFIER FLAGS FOR INORGANIC ANALYTICAL DATA

Laboratory Flags

- **B** Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit, but greater than or equal to the Instrument Detection Limit (IDL).
- U Indicates that the analyte was analyzed for but not detected.
- **E** Used when the reported value is estimated because of the presence of interference.
- M —Indicates that the duplicate injection precision was not met.
- N Indicates that the spiked sample recovery is not within control limits.
- S Indicates that the reported value was determined by the method of standard additions (MSA).
- W Used when the post-digestion spike for furnace atomic absorption analysis is not within control limits (85 115%), while sample absorbance is less than 50% of spike absorbance.

- * Indicates that the duplicate analysis is not within control limits.
- + Indicates that the correlation coefficient for the MSA is less than 0.995.

Validation Flags

- U Indicates that the analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- J Indicates that the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- **R** Indicates that the sample results for the analyte are rejected or unusable due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- = Indicates that the value has been validated and that the analyte has been positively identified and the associated concentration value is accurate.

DATA QUALIFIER FLAGS FOR RADIOCHEMICAL ANALYTICAL DATA

Laboratory Flags

- < The numerical value reported is less than the MDA.
- N The sample results are flagged to denote poor spike recovery.
- * The sample results are flagged to denote poor duplicate results.

Validation Flags

- U Indicates that the radionuclide was analyzed for, but was not detected above, the reported sample quantitation limit.
- J Indicates that the radionuclide was positively identified; the associated numerical value is the approximate concentration of the radionuclide in the sample.
- N The analysis indicates the presence of a radionuclide for which there is presumptive evidence to make a "tentative identification."
- DL The detection limit requirements were not met. The data quality objectives may not be met.
- UI Indicates that there is uncertain identification for gamma spectroscopy. The radionuclide peaks are detected but fail to meet the positive identification criteria.

R — Indicates that the sample results for the radionuclide are rejected or unusable due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the radionuclide cannot be verified.

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= — Indicates that the value has been validated and that the radionuclide has been positively identified and the associated concentration value is accurate.

ANALYTICAL DATA VALIDATION FLAGGING CODES

Holding Times

- A01 Extraction holding times were exceeded.
- A02 Extraction holding times were grossly exceeded.
- A03 Analysis holding times were exceeded.
- A04 Analysis holding times were grossly exceeded.
- A05 Samples were not preserved properly.
- A06 Professional judgment was used to qualify the data.

GC/MS Tuning

- B01 Mass calibration was in error, even after applying expanded criteria.
- B02 Mass calibration was not performed every 12 hours.
- B03 Mass calibration did not meet ion abundance criteria.
- B04 Professional judgment was used to qualify the data.

Initial/Continuing Calibration - Organics

- C01 Initial calibration RRF was <0.05.
- C02 Initial calibration RSD was >30%.
- C03 Initial calibration sequence was not followed as required.
- C04 Continuing calibration RRF was <0.05.
- C05 Continuing calibration %D was >25%.
- C06 Continuing calibration was not performed at the required frequency.
- C07 Resolution criteria were not met.
- C08 RPD criteria were not met.
- C09 RSD criteria were not met.
- C10 Retention time of compounds was outside windows.
- C11 Compounds were not adequately resolved.
- C12 Breakdown of endrin or DDT was >20%.
- C13 Combined breakdown of endrin/DDT was >30%.
- C14 Professional judgment was used to qualify the data.

Initial/Continuing Calibration - Inorganics

- D01 ICV or CCV were not performed for every analyte.
- D02 ICV recovery was above the upper control limit.
- D03 ICV recovery was below the lower control limit.
- D04 CCV recovery was above the upper control limit.
- D05 CCV recovery was below the lower control limit.

- D06 Standard curve was not established with the minimum number of standards.
- D07 Instrument was not calibrated daily or each time the instrument was set up.
- D08 Correlation coefficient was <0.995.
- D09 Mid range cyanide standard was not distilled.
- D10 Professional judgment was used to qualify the data.

ICP and Furnace Requirements

- E01 Interference check sample recovery was outside the control limit.
- E02 Duplicate injections were outside the control limit.
- E03 Post digestion spike recovery was outside the control limit.
- E04 MSA was required but not performed.
- E05 Correlation coefficient was <0.995.
- E06 MSA spikes were not at the correct concentration.
- E07 Serial dilution criteria were not met.
- E08 Professional judgment was used to qualify the data.

<u>Blanks</u>

- F01 Sample data were qualified as a result of the method blank.
- F02 Sample data were qualified as a result of the field blank.
- F03 Sample data were qualified as a result of the equipment rinsate.
- F04 Sample data were qualified as a result of the trip blank.
- F05 Gross contamination exists.
- F06 Concentration of the contaminant was detected at a level below the CRQL.
- F07 Concentration of the contaminant was detected at a level less than the action limit, but greater than the CRQL.
- F08 Concentration of the contaminant was detected at a level that exceeds the action level.
- F09 No laboratory blanks were analyzed.
- F10 Blank had a negative value >2 's the IDL.
- F11 Blanks were not analyzed at required frequency.
- F12 Professional judgment was used to qualify the data.

Surrogate/Radiological Chemical Recovery

- G01 Surrogate/radiological chemical recovery was above the upper control limit.
- G02 Surrogate/radiological chemical recovery was below the lower control limit.
- G03 Surrogate recovery was <10%.
- G04 Surrogate/radiological chemical recovery was zero.
- G05 Surrogate/radiological chemical recovery was not present.
- G06 Professional judgment was used to qualify the data.
- G07 Radiological chemical recovery was <20%.
- G08 Radiological chemical recovery was >150%.

Matrix Spike/Matrix Spike Duplicate

- H01 MS/MSD recovery was above the upper control limit.
- H02 MS/MSD recovery was below the lower control limit.
- H03 MS/MSD recovery was <10%.
- H04 MS/MSD pairs exceed the RPD limit.
- H05 No action was taken on MS/MSD results.
- H06 Professional judgment was used to qualify the data.
- H07 Radiological MS/MSD recovery was <20%.
- H08 Radiological MS/MSD recovery was >160%.
- H09 Radiological MS/MSD samples were not analyzed at the required frequency.

Matrix Spike

- I01 MS recovery was above the upper control limit.
- I02 MS recovery was below the lower control limit.
- I03 MS recovery was <30%.
- I04 No action was taken on MS data.
- I05 Professional judgment was used to qualify the data.

Laboratory Duplicate

- J01 Duplicate RPD/radiological duplicate error ration (DER) was outside the control limit.
- J02 Duplicate sample results were $>5 \times$ the CRDL.
- J03 Duplicate sample results were $<5 \times$ the CRDL.
- J04 Professional judgment was used to qualify the data.
- J05 Duplicate was not analyzed at the required frequency.

Internal Area Summary

- K01 Area counts were outside the control limits.
- K02 Extremely low area counts or performance was exhibited by a major drop off.
- K03 IS retention time varied by more than 30 seconds.
- K04 Professional judgment was used to qualify the data.

Pesticide Cleanup Checks

- L01 10% recovery was obtained during either check.
- L02 Recoveries during either check were >120%.
- L03 GPC Cleanup recoveries were outside the control limits.
- L04 Florisil cartridge cleanup recoveries were outside the control limits.
- L05 Professional judgment was used to qualify the data.

Target Compound Identification

- M01 Incorrect identifications were made.
- M02 Qualitative criteria were not met.
- M03 Cross contamination occurred,
- M04 Confirmatory analysis was not performed.
- M05 No results were provided.
- M06 Analysis occurred outside 12 hr GC/MS window.
- M07 Professional judgment was used to qualify the data.
- M08 The %D between the two pesticide/PCB column checks was >25%.

Compound Quantitation and Reported CRQLs

- N01 Quantitation limits were affected by large off-scale peaks.
- N02 MDLs reported by the laboratory exceeded corresponding CRQLs.
- N03 Professional judgment was used to qualify the data.

Tentatively Identified Compounds (TICs)

- O01 Compound was suspected laboratory contaminant and was not detected in the blank.
- O02 TIC result was not above $10 \times$ the level found in the blank.
- O03 Professional judgment was used to qualify analytical data.

Laboratory Control Samples (LCSs)

- P01 LCS recovery was above upper control limit.
- P02 LCS recovery was below lower control limit.
- P03 LCS recovery was <50%.
- P04 No action was taken on the LCS data.
- P05 LCS was not analyzed at required frequency.
- P06 Radiological LCS recovery was <50% for aqueous samples; <40% for solid samples.
- P07 Radiological LCS recovery was >150% for aqueous samples; >160% for solid samples.
- P08 Professional judgment was used to qualify the data.

Field Duplicate

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- Q01 No action was taken on the basis of field duplicate RPDs.
- Q02 Radiological field duplicate error ratio (DER) was outside the control limit.
- Q03 Duplicate sample results were $>5 \times$ the CRDL.
- Q04 Duplicate sample results were $<5 \times$ the CRDL.

Radiological Calibration

- R01 Efficiency calibration criteria were not met.
- R02 Energy calibration criteria were not met.
- R03 Resolution calibration criteria were not met
- R04 Background determination criteria were not met.
- R05 Quench curve criteria were not met.
- R06 Absorption curve criteria were not met.
- R07 Plateau curve criteria were not met.
- R08 Professional judgment was used to qualify the data.

Radiological Calibration Verification

- S01 Efficiency verification criteria were not met.
- S02 Energy verification criteria were not met.
- S03 Resolution verification criteria were not met
- S04 Background verification criteria were not met.
- S05 Cross-talk verification criteria were not met.
- S06 Professional judgment was used to qualify the data.

Radionuclide Quantitation

- T01 Detection limits were not met.
- T02 Analytical uncertainties were not met and/or not reported.
- T03 Inappropriate aliquot sizes were used.
- T04 Professional judgment was used to qualify the data.

System Performance

- V01 High background levels or a shift in the energy calibration were observed.
- V02 Extraneous peaks were observed.
- V03 Loss of resolution was observed.
- V04 Peak-tailing or peak splitting that may result in inaccurate quantitation were observed.
- V05 Professional judgment was used to qualify the data.

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: 724TH TANKER PURGE Station: TRIP BLANK

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TBT001			Field Sample Type: Trip Bi	INK	Matrix: (Collected: 07/10/9
	Sample Type	Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	
	REG	1,1,1-Trichloroethane	2	UG/L	- U	U	-	_
	REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U		
	REG	1,1,2-Trichloroethane	2	UG/L	U	U		
	REG	1,1-Dichloroethane	2	UG/L	U	U		
	REG	1,1-Dichloroethene	2	UG/L	U	υ		
	REG	1.2-Dichloroethane	2	UG/L	Ū	Ū		
	REG	1.2-Dichloropropane		UG/L	Ū	Ū		
	REG	1.2-cis-Dichloroethene		UG/L	Ŭ	Ũ	1 () () () () () () () () () (
	REG	1.2-trans-Dichloroethene		UG/L	Ŭ	Ū		
	REG	1,3-cis-Dichloropropene		UG/L	ũ	ū		
	REG	1,3-trans-Dichloropropene	-	UG/L	ŭ	Ū		
	REG	2-Butanone	_	UG/L	Ū	Ū		
	REG	2-Hexanone	-	UG/L	Ū	Ū		
	REG	4-Methyl-2-pentanone	-	UG/L	Ū	Ū		
		Acetone		UG/L	Ū	Ū		
	REG	Benzene		UG/L	Ŭ	Ŭ		
	REG	Bromodichloromethane		UG/L	Ŭ	Ŭ		
		Bromoform		UG/L	Ŭ	ŭ		
	REG	Bromomethane		UG/L	ŭ	ŭ		
		Carbon Disulfide		UG/L	ŭ	Ŭ		
		Carbon Tetrachioride	-	UG/L	ŭ	Ŭ		
		Chlorobenzene	=	UG/L	ŭ	ŭ		
	==	Chloroethane	=	UG/L	ŭ	Ŭ		
		Chloroform		UG/L	ŭ	ŭ		
		Chloromethane	_	UG/L	Ŭ	ŬJ	C05	
		Dibromochloromethane		UG/L	Ŭ	U	000	
		Ethylbenzene	_	UG/L	Ŭ	Ŭ		
		Methylene Chloride		UGAL	в	Ŭ	F01,F07	
		Styrene	-	UG/L	Ŭ	Ŭ	1 1 1,1 11	
		Tetrachloroethene		UG/L	Ŭ	Ŭ		
		Toluene		UG/L	0	=		
		Trichloroethene		UG/L	U	υ		
		Vinyl Chloride		UG/L	U	U		
		Xylenes, Total		UG/L	U	UJ U	C02	
	neu	Ayiciica, IUtai	2	00/L	U	03	UNZ	

TBT002

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		Field Sample Type: Trip Bl	ink	Matrix: C	Quality Co	ontrol	Collected:	07/11/97
Sample Type	Volatile Organics	Result	Units	Qual Lab	ifiers Data	Validation Code		
REG	1,1,1-Trichloroethane	2	UG/L	U	U			
REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U			
REG	1,1,2-Trichloroethane	2	UG/L	U	U			
REG	1,1-Dichloroethane	2	UG/L	U	U			
REG	1,1-Dichloroethene	2	UG/L	U	U			
REG	1,2-Dichloroethane	2	UG/L	U	U			
REG	1,2-Dichloropropane	2	UG/L	U	U			
REG	1,2-cis-Dichloroethene	2	UG/L	U	U			
REG	1,2-trans-Dichloroethene	2	UG/L	U	U			
REG	1,3-cis-Dichloropropene	2	UG/L	U	U			
REG	1,3-trans-Dichloropropene	2	UG/L	. U	U			
REG	2-Butanone	5	UG/L	U	U			
REG	2-Hexanone	5	UG/L	U	U			
REG	4-Methyl-2-pentanone	5	UG/L	U	U			
REG	Acetone	5	UG/L	U	U			
REG	Benzene	2	UG/L	U	U			
REG	Bromodichloromethane	2	UG/L	U	U			
REG	Bromoform	2	UG/L	U	U			
REG	Bromomethane	2	UG/L	U	U			
REG	Carbon Disulfide	5	UG/L	U	U			
REG	Carbon Tetrachloride	2	UG/L	U	U			
REG	Chlorobenzene	2	UG/L	U	U			
REG	Chloroethane	2	UG/L	U	U			
REG	Chloroform	2	UG/L	U	U			
REG	Chloromethane	2	UG/L	U	U			
REG	Dibromochloromethane	2	UG/L	U	U			

Phase II RFI

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Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: 724TH TANKER PURGE Station: TRIP BLANK

TBT002			Field Sample Type: Trip B	lank	Matrix:	Quality	Control	Collected	07/11/9
	Sample Type) Volatile Organics	Result	Unit		lifiers Data	Validation Code		
	REG	Ethylbenzene		2 UG/L	<u> </u>	U			
	REG	Methylene Chloride		UG/L	-	Ŭ	F01,F07		
	REG	Styrene		2 UG/L		Ŭ	101,001		
	REG	Tetrachloroethene		2 UG/L	-	Ŭ			
	REG	Toluene		UG/L		=			
	REG	Trichloroethene		UG/L		U			
	REG	Vinyl Chloride		UGIL	-	Ū			
	REG	Xylenes, Total		UG/L	-	ŨJ	C02		
BT003			Field Sample Type: Trip Bl	ank	Matrix: C	Quality C	ontrol	Collected:	07/17/9
	Sample				Qual	ifiers	Validation		
	Туре	Volatile Organics	Result	Units	Lab	Data	Code		
	REG	1,1,1-Trichloroethane		UG/L	<u> </u>	U			
	REG	1,1,2,2-Tetrachloroethane		UG/L	U	U			
	REG	1,1,2-Trichloroethane	2	UG/L	U	U			
	REG	1,1-Dichloroethane	2	UG/L	U	U			
	REG	1,1-Dichloroethene	2	UG/L	U	U			
	REG	1,2-Dichloroethane		UG/L	U	U			
	REG	1,2-Dichloropropane		UG/L	U	U			
	REG	1,2-cis-Dichloroethene		UG/L	U	U			
	REG	1,2-trans-Dichloroethene	2	UG/L	U	U			
	REG	1,3-cls-Dichloropropene	2	UG/L	U	U			
		1,3-trans-Dichloropropene	2	UG/L	U	U			
		2-Butanone		UG/L	U	U			
		2-Hexanone	5	UG/L	U	U			
		4-Methyl-2-pentanone		UG/L	U	U			
		Acetone		UG/L	U	U			
		Benzene		UG/L	U	U			
		Bromodichloromethane		UG/L		U			
		Bromoform		UG/L		U			
		Bromomethane	—	UG/L		U			
		Carbon Disulfide		UG/L		U			
		Carbon Tetrachloride		UG/L	-	U			
		Chlorobenzene		UG/L		U			
		Chloroethane		UGIL		U			
		Chloroform		UG/L	-	U			
		Chloromethane		UG/L		U			
		Dibromochloromethane		UG/L		U			
		Ethylbenzene		UG/L		U			
		Methylene Chloride		UG/L		U			
		Styrene Fotosoblarzathana		UG/L		U			
		l'etrachloroethene		UG/L		U			
		foluene Goblersethere	2.4			2 .			
		frichloroethene		UG/L		U			
		/inyl Chloride		UG/L		J			
	ACG)	(ylenes, Total	2 (JG/L	UI	J			
T004			Field Sample Type: Trip Blan	ak I	Matrix: Qu	ality Co.	ntrol	Collected: c	710407

TBT004

		Field Sample Type: Trip Bl	ink	Matrix:	Quality	Control	Collected: 07/24/97
Sample Type	Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	
REG	1,1,1-Trichloroethane	2	UG/L	- u	U		-
REG	1,1,2,2-Tetrachloroethane		UG/L	ū	Ū		
REG	1,1,2-Trichloroethane		UG/L	Ŭ	Ŭ		
REG	1,1-Dichloroethane		UG/L	ŭ	ŭ		
REG	1,1-Dichloroethene		UG/L	Ū	Ū		
REG	1,2-Dichloroethane	2	UG/L	Ŭ	ŭ		
REG	1,2-Dichloropropane	2	UG/L	Ū	Ũ		
REG	1,2-cis-Dichloroethene	2	UG/L	Ū	Ũ		
REG	1,2-trans-Dichloroethene		UG/L	Ŭ	Ŭ		
REG	1,3-cis-Dichloropropene	2	UG/L	Ū	Ū		
REG	1,3-trans-Dichloropropene	2	UG/L	ŭ	Ũ		
REG	2-Butanone	5	UG/L	Ū	ŬJ	C05	
REG	2-Hexanone		UG/L	ย	Ū		

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

ocation: 724TH TANKER PURGE

TBT004			Field Sample Type: Trip	Bia	nk	Matrix:	x: Quality Control		Collected	: 07/24/9
	Sample Type	Volatile Organics	Result		Units	Qua Lab	lifiers Data	Validation Code		
	REG	4-Methyl-2-pentanone			UG/L		<u> </u>		_	
	REG	Acetone			UG/L	Ŭ	U			
	REG	Benzene			UG/L	Ŭ	ŭ			
	REG	Bromodichloromethane			UG/L	Ŭ	Ŭ			
	REG	Bromoform			UG/L	บั	Ŭ			
	REG	Bromomethane			UG/L	Ŭ	Ŭ			
	REG	Carbon Disulfide			UG/L	Ŭ	Ŭ			
	REG	Carbon Tetrachloride			UG/L	Ŭ	Ŭ			
	REG	Chlorobenzene			UG/L	ŭ	Ŭ			
	REG	Chloroethane			UG/L	Ŭ	Ŭ			
	REG	Chloroform			UG/L	Ŭ	Ŭ			
	REG	Chioromethane			UG/L	Ŭ	Ŭ			
	REG	Dibromochloromethane			UG/L	Ŭ	Ŭ			
	REG	Ethylbenzene			UG/L	Ŭ	Ŭ			
	REG	Methylene Chloride			UG/L	в	Ŭ	F01,F07		
	REG	Styrene			UG/L	Ŭ	U	ru1,ru/		
	REG	Tetrachloroethene				U	U			
	REG	Toluene			UG/L	U	-			
	REG	Trichloroethene	•		UG/L	U	= U			
					UG/L	-	-			
	REG	Vinyl Chloride			UGA	U	U			
	REG	Xylenes, Total		2	UG/L	U	UJ	C02		
BT005			Fleid Sample Type: Trip I	Bla	nk	Matrix: C	tuality C	Control	Collected:	07/25/9
	Sample					Qual	fiers	Validation		
	Туре	Volatile Organics	Result		Units	Lab	Data	Code		
	REG	1,1,1-Trichloroethane		2	UG/L	U	U		-	
	REG	1,1,2,2-Tetrachloroethane		2	UG/L	U	U			
	REG	1,1,2-Trichloroethane			UG/L	U	U			
	REG REG			2	UG/L UG/L	U U	U U			
		1,1,2-Trichloroethane		2 2		-	-			
	REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene		2 2 2	UG/L	Ū	Ū			
	REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane		2 2 2 2	UG/L UG/L	U U	U U			
	REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene		2 2 2 2 2	UG/L UG/L UG/L	U U U	U U U U			
	REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethane		2 2 2 2 2 2	UG/L UG/L UG/L UG/L UG/L	ม ม ม ม ม	U U U U U U			
	REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethane 1,2-trans-Dichloroethane		2 2 2 2 2 2 2 2	UG/L UG/L UG/L UG/L UG/L UG/L	ม ม ม ม ม ม	ม ม ม ม ม			
	REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethane 1,2-trans-Dichloroethane 1,3-cis-Dichloropropane		2 2 2 2 2 2 2 2 2	UG/L UG/L UG/L UG/L UG/L UG/L UG/L		บ บ บ บ บ บ บ			
	REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	UG/L UG/L UG/L UG/L UG/L UG/L UG/L			C05		
	REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone		2 2 2 2 2 2 2 2 2 2 2 5	UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C05 C05		
	REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethane 1,2-trans-Dichloroethane 1,3-crans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone		2 2 2 2 2 2 2 2 2 2 5 5	UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C05 C05		
	REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone		2 2 2 2 2 2 2 2 2 2 5 5 5	UG/L UG/L UG/L UG/L UG/L UG/L UG/L JG/L JG/L					
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone		2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5 5	UG/L UG/L UG/L UG/L UG/L UG/L UG/L JG/L JG/L		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene		2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5 5 5 5 5	UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L					
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane		2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5 2 1 1 1 1	UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L				·	
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Butanone 2-Butanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	UG/L UG/L UG/L UG/L UG/L UG/L UG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L				×	
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,3-cis-Dichloroethene 1,3-cis-Dichloroptopene 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L				×	
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichlorormethane Bromornethane Carbon Disulfide		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	UG/L UG/L UG/L UG/L UG/L UG/L UG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L				×	
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethene 1,2-trans-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride		222222225555222252	UG/L UG/L UG/L UG/L UG/L UG/L UG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L J					
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethene 1,2-cis-Dichloroptopene 1,3-cis-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Garbon Disulfide Carbon Tetrachloride Chlorobenzene			UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L				×	
	REG REG REG REG REG REG REG REG REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethene 1,2-trans-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride			UG/L UG/L UG/L UG/L UG/L UG/L UG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L J				·	

T006

Sample

REG

Chloromethane

Ethylbenzene

Styrene

Toluene

Dibromochloromethane

Methylene Chloride

Tetrachloroethene

Trichloroethene

Vinyl Chloride

Xylenes, Total

Chloroform

Qualifiers Type Volatile Organica Result Units Lab Data

Field Sample Type: Trip Blank

2 UG/L

2.2 UG/L

2.4 UG/L

U

U

U

U

B

U

U

U

U

U

U

U

U

U

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U

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Matrix: Quality Control

F01,F07

C02

Validation

Code

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Collected: 07/26/97

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: 724TH TANKER PURGE Station : TRIP BLANK

 		Field Sample Type: Trip Bi	AIIA	Mauix	: Quality	CONDOL	Collected: 07/26/S
Sample				Qu	allfiers	Validation	
Туре	Volatile Organics	Result	Units	La	b Data	Code	
REG	1,1,1-Trichloroethane	2	UG/L	- 	U		
REG	1,1,2,2-Tetrachloroethane	2	UG/L	Ū	Ū		
REG	1,1,2-Trichloroethane	2	UG/L	Ū	. Ū		
REG	1,1-Dichloroethane	2	UG/L	Ū	Ŭ		
REG	1,1-Dichloroethene		UG/L	Ū	Ū		
REG	1,2-Dichloroethane	2	UG/L	Ū	Ŭ		
REG	1,2-Dichloropropane	2	UG/L	Ū	Ŭ		
REG	1,2-cis-Dichloroethene	2	UG/L	Ũ	Ū		
REG	1,2-trans-Dichloroethene	_	UG/L	Ŭ	Ŭ		
REG	1,3-cis-Dichloropropene	2	UG/L	Ŭ	Ū		
REG	1,3-trans-Dichloropropene	_	UGA	Ũ	Ū		
REG	2-Butanone		UG/L	Ū	Ŭ		
REG	2-Hexanone		UG/L	Ŭ	Ū		
REG	4-Methyl-2-pentanone		UG/L	Ũ	Ū		
REG	Acetone		UG/L	Ŭ	Ŭ		
REG	Benzene	-	UG/L	ŭ	Ŭ		
REG	Bromodichloromethane		UG/L	ŭ	Ŭ		
REG	Bromoform	_	UG/L	ŭ	ŭ		
REG	Bromomethane	_	UG/L	Ŭ	Ŭ		
REG	Carbon Disulfide		UG/L	Ŭ	ŨJ	C05	
REG	Carbon Tetrachloride		UG/L	ŭ	Ű	000	
REG	Chlorobenzene		UG/L	Ŭ	Ŭ		
REG	Chloroethane		UG/L	ŭ	ŭ		
REG	Chloroform		UG/L	ŭ	Ŭ		
REG	Chloromethane		UG/L	Ŭ	Ŭ		
REG	Dipromochloromethane		UG/L	ŭ	Ŭ		
REG	Ethylbenzene		UG/L	ŭ	Ŭ		
REG	Methylene Chloride		UG/L	B	Ŭ	F01,F07	
REG	Styrene		UG/L	Ŭ	Ŭ	101,107	
REG	Tetrachloroethene		UG/L	Ŭ	Ŭ		
REG	Toluene		UGAL	~	=		
-	Trichloroethene		UG/L	U	- U		
	Vinyl Chloride		UG/L	Ŭ	Ŭ		
	Xylenes, Total		UG/L	Ŭ	UJ U	C02	

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TBT007

		Field Sample Type: Trip Bl	ink	Matrix:	Quality	Control	Collected: 07/27/97
Sample Type	e Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	
REG	1,1,1-Trichloroethane	2	UG/L	- U	U		-
REG	1,1,2,2-Tetrachloroethane		UG/L	Ū	Ŭ		
REG	1,1,2-Trichloroethane	2	UG/L	Ū	Ū		
REG	1,1-Dichloroethane	2	UG/L	Ū	Ū		
REG	1,1-Dichloroethene	2	UG/L	Ū	Ū		
REG	1,2-Dichloroethane	2	UG/L	Ū	Ū		
REG	1,2-Dichloropropane	2	UG/L	Ū	Ŭ		
REG	1,2-cis-Dichloroethene	2	UG/L	Ū	Ū		
REG	1,2-trans-Dichloroethene	2	UG/L	Ū	Ū		
REG	1,3-cis-Dichloropropene	2	UG/L	Ū	Ū		
REG	1,3-trans-Dichloropropene	2	UGA	U	Ū		
REG	2-Butanone	5	UG/L	Ū	Ū		
REG	2-Hexanone	5	UG/L	Ū	Ū		
REG	4-Methyl-2-pentanone	5	UG/L	U	Ū		
REG	Acetone	5	UG/L	Ū	Ū		
REG	Benzene	2	UG/L	Ū	Ū		
REG	Bromodichloromethane	2	UG/L	U	U		
REG	Bromoform	2	UG/L	U	Ú		
REG	Bromomethane	2	UG/L	U	Ū		
REG	Carbon Disulfide	5	UG/L	U	ŪJ	C05	
REG	Carbon Tetrachloride	2	UG/L	Ū	U		
REG	Chlorobenzene	2	UG/L	U	U	•	
REG	Chloroethane	2	UG/L	U	Ú		
REG	Chloroform	2	UG/L	Û	Ū		
REG	Chloromethane	2	UG/L	Ū	Ū		
REG	Dibromochloromethane	2	UG/L	Ū	Ū		

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: 724TH TANKER PURGE Station : TRIP BLANK

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	Sample Type REG REG REG	Volatile Organics	Result		Q	ralifiers	Validation		
	REG	Thulberree		Units	La		Code		
	REG	Ethylbenzene	2	UG/L	- U	U		_	
		Methylene Chloride		UG/L	B	Ū	F01,F07		
		Styrene		UG/L	Ū	Ŭ			
	REG	Tetrachloroethene		UG/L	ŭ	Ŭ			
	REG	Toluene		UG/L	v	=			
		Trichloroethene		UG/L	U	U			
		Vinyl Chloride		UG/L	Ŭ	Ŭ			
		Xylenes, Total		UG/L	Ŭ	ŬJ	C02		
TBT008			Field Sample Type: Trip Bla	nk	Matrix	: Quality C	ontrol	Collected:	08/11/9
	Sample	······			Ou	alifiers	Validation		
		Volatile Organics	Result	Units	La		Code		
	REG	1,1,1-Trichloroethane	2	UG/L	U	U	<u></u>		
	REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U			
		1,1,2-Trichloroethane	2	UG/L	U	U			
	REG	1,1-Dichloroethane	2	UG/L	υ	U			
	REG	1.1-Dichloroethene	2	UG/L	U	Ū			
	REG	1.2-Dichloroethane	2	UG/L	U	U			
	REG	1,2-Dichloropropane	2	UG/L	U	U			
		1,2-cis-Dichloroethene	2	UG/L	Ŭ	U			
		1,2-trans-Dichloroethene		UG/L	Ũ	Ū			
		1,3-cis-Dichloropropene	2	UG/L	Ū	Ū			
		1,3-trans-Dichloropropene		UG/L	Ŭ	Ŭ			
		2-Butanone		UG/L	Ŭ	ŬJ	C05		
		2-Hexanone		UG/L	Ŭ	Ŭ			
		4-Methyl-2-pentanone		UG/L	Ŭ	Ū			
		Acetone		UG/L	Ũ	Ř	C04,C05		
		Benzene		UG/L	Ŭ	Ü			
		Bromodichloromethane		UG/L	ŭ	Ū			
		Bromoform		UG/L	Ŭ	Ũ			
		Bromomethane		UG/L	ŭ	Ŭ			
		Carbon Disulfide		UG/L	ŭ	Ŭ			
		Carbon Tetrachloride		UG/L	Ŭ	Ŭ			
		Chlorobenzene		UG/L	มั	Ŭ			
		Chioroethane		UGA	Ŭ	ŭ			
		Chloroform		UGL	ŭ	Ŭ			
		Chloromethane		UG/L	ŭ	Ŭ			
		Dibromochloromethane		UG/L	Ŭ	U			
		Ethylbenzene		UGA	ŭ	Ŭ			
		Methylene Chioride		UG/L	-	=			
		Styrene		UG/L	U	U			
		Tetrachloroethene		UG/L	Ŭ	Ŭ			
		Toluene		UGL	v	=			
		Trichloroethene		UG/L	U	Ū			
		Vinyl Chloride		UG/L	U	U			
		Kylenes, Total		UG/L	U	UJ U	C02		
BT010		·······	- Field Sample Type: Trip Blar			Quality Co		Collected:	

Sample				Qual	lfiers	Validation	
Туре	Volatile Organics	Result U	nits	Lab	Data	Code	
REG	1,1,1-Trichloroethane	2 U	G/L	U	υ		
REG	1,1,2,2-Tetrachloroethane	2 U	G/L	U	U		
REG	1,1,2-Trichloroethane	2 U(G/L	U	U		
REG	1,1-Dichloroethane	2 0	G/L	U	U		
REG	1,1-Dichloroethene	2 U(G/L	U	U		
REG	1,2-Dichloroethane	2 U	GЛ	U	U		
REG	1,2-Dichloropropane	2 U	g/i.	U	U		
REG	1,2-cis-Dichloroethene	2 U(G/L	U	U		
REG	1,2-trans-Dichloroethene	2 U(G/L	U	U		
REG	1,3-cis-Dichloropropene	2 U(G/L	U	U		
REG	1,3-trans-Dichioropropene	2 U(G/L	U	U		
REG	2-Butanone	5 U(G/L	U	UJ	C05	
REG	2-Hexanone	5 10	G/L	U	U		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: 724TH TANKER PURGE Station : TRIP BLANK

TBT013

TBT010		Field Sample Type: Trip Bi	enk	Matrix	: Quality	Control	Collected: 08/12/9
Sample Type	Volatile Organics	Result	Units		ualifiers b Data	Validation Code	<u></u>
REG	4-Methyl-2-pentanone	6	UG/L	- .	U		_
REG	Acetone	5	UG/L	Ū	R	C04,C05	
REG	Benzene		UG/L	Ŭ	Ü	00,1000	
REG	Bromodichloromethane	2	UG/L	Ŭ	Ū		
REG	Bromoform		UG/L	Ũ	Ū		
REG	Bromomethane		UGIL	ŭ	Ŭ		
REG	Carbon Disulfide		UG/L	Ŭ	Ŭ		
REG	Carbon Tetrachloride		UG/L	Ŭ	Ŭ		
REG	Chlorobenzene		UG/L	Ŭ	Ŭ		
REG	Chloroethane		UG/L	Ŭ	Ŭ		
REG	Chloroform		UG/L	Ū	Ū		
REG	Chloromethane		UG/L	Ū	Ū		
REG	Dibromochloromethane		UG/L	Ū	Ŭ		
REG	Ethylbenzene		UG/L	ŭ	Ŭ		
REG	Methylene Chloride		UG/L	•	=		
	Styrene		UGIL	U	U		
REG	Tetrachloroethene		UG/L	Ŭ	ŭ		
REG	Toluene		UG/L	v	Ē		
REG	Trichloroethene		UG/L	IJ	U		
REG	Vinyl Chloride	—	UGIL	Ŭ	Ŭ		
	Xylenes, Total	—	UG/L	Ŭ	ŬJ	C02	
3T012		Field Sample Type: Trip Bla	nk	Matrix:	Quality (Control	Collected: 08/13/97

Samp! •Type		Result	Unit		ualifiers b Data	Validation Code		
REG	1,1,1-Trichloroethane		2 UG/L					
REG	1,1,2,2-Tetrachloroethane		2 UG/L 2 UG/L		U			
REG	1,1,2-Trichloroethane		2 UG/L	-	Ŭ			
REG	1,1-Dichloroethane		2 UG/L	_	U			
REG	1,1-Dichloroethene		2 UG/L	_	Ŭ			
REG	1.2-Dichloroethane		2 UG/L	_	Ŭ			
REG	1,2-Dichloropropane		2 UG/L	-	Ŭ			
REG	1,2-cis-Dichloroethene		2 UG/L	-	Ŭ			
REG	1,2-trans-Dichloroethene		2 UG/L	Ŭ	ŭ			
REG	1,3-cis-Dichloropropene		2 UG/L	Ŭ	Ŭ			
REG	1,3-trans-Dichloropropene	-	2 UG/L	ŭ	Ŭ			
REG	2-Butanone		UG/L	Ŭ	ÛJ	C05		
REG	2-Hexanone		UG/L	ŭ	U	000		
REG	4-Methyl-2-pentanone		UG/L	ŭ	ŭ			
REG	Acetone		UG/L	Ŭ	R	C04,C05		
REG	Benzene		UG/L	Ū	Ü	001,000		
REG	Bromodichloromethane		UG/L	Ū	Ŭ			
REG	Bromoform		UG/L	Ũ	Ū			
REG	Bromomethane	2	UG/L	Ũ	Ŭ			
REG	Carbon Disulfide	5	UG/L	Ū	ŬJ	C05		
REG	Carbon Tetrachloride	2	UG/L	U	Ū			
REG	Chlorobenzene	2	UG/L	U	Ū			
REG	Chloroethane	2	UG/L	Ú	Ū			
REG	Chloroform	2	UG/L	U	U			
REG	Chloromethane	2	UG/L	U	U			
REG	Dibromochloromethane	2	UG/L	U	U			
REG	Ethylbenzene	2	UG/L	U	U			
REG	Methylene Chloride	2.5	UG/L	в	U	F01,F07		
REG	Styrene	2	UG/L	U	U	•		
REG	Tetrachloroethene	2	UG/L	U	U			
REG	Toluene	3	UG/L		=			
REG	Trichloroethene	2	UG/L	U	U			
REG	Vinyl Chloride	2	UG/L	U	U			
REG	Xylenes, Total	2	UG/L	U	UJ	C02		
		Field Sample Type: Trip Bia	nk	Matrix: (Quality Co	ontrol	Collected:	08/14/9
Sample Type	Volatile Organics	Danjuli	Linke		lifiers	Validation		
1140	A change Al Rauce	Result	Units	Lab	Data	Code		

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

ocation: 724TH TANKER PURGE Station : TRIP BLANK

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TBT013			Field Sample Type: Trip Bla			Quality (Collected: 08/14/9
	Sample Type		Result	Units	Qual Lab	ifiers Data	Validation Code	
	REG	1,1,1-Trichloroethane	2	UG/L	<u> </u>	U	·	
	REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U		
	REG	1,1,2-Trichloroethane	2	UG/L	U	U		
	REG	1,1-Dichloroethane	2	UG/L	U	U		
	REG	1,1-Dichloroethene	2	UG/L	U	U		
	REG	1,2-Dichloroethane	2	UG/L	U	U		
	REG	1,2-Dichloropropane	2	UG/L	U	U		
	REG	1,2-cis-Dichloroethene	2	UG/L	U	U		
	REG	1,2-trans-Dichloroethene	2	UG/L	U	U		
	REG	1,3-cis-Dichloropropene	2	UG/L	U	U		
	REG	1,3-trans-Dichloropropene	2	UG/L	U	U		
	REG	2-Butanone	5	UG/L	U	UJ	C05	
	REG	2-Hexanone	5	UG/L	U	U		
	REG	4-Methyl-2-pentanone	5	UG/L	Ū	Ū		
	REG	Acetone	5	UG/L	U	R	C04,C05	
	REG	Benzene		UG/L	Ū	U		
		Bromodichloromethane	2	UG/L	Ũ	Ũ		
		Bromoform	2	UG/L	Ū	Ū		
	REG	Bromomethane	2	UG/L	Ũ	Ŭ		
		Carbon Disulfide		UG/L	Ŭ	Ŭ		
		Carbon Tetrachloride		UG/L	Ŭ	Ŭ		
		Chlorobenzene		UG/L	Ŭ	Ŭ		
	REG	Chloroethane	2	UG/L	Ũ	Ũ		
		Chloroform		UG/L	Ŭ	Ŭ		
		Chloromethane		JG/L	Ū	Ŭ		
	REG	Dibromochloromethane	2	JG/L	Ū	Ũ		
	REG	Ethylbenzene		JG/L	Ũ	Ŭ		
		Methylene Chioride	2.8		-	=		
		Styrene		JG/L	υ	U		
		Tetrachloroethene	_	JG/L	Ū	Ŭ		
		Toluene	4.3		-	-		
		Trichloroethene		JG/L	U	U		
		Vinyl Chloride		JG/L	Ŭ	ŭ		
		Xylenes, Total		JG/L	-	ŬJ	C02	

Phase II RFI

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Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : GP1

		5.0 -10.0 FT	Field Sample Type: Gra	b #	Natrix:	Groundwat	er	Collected:	07/11/9
	Sam Tyj		Resuit	Units		ualifiers b Data	Validation Code	- 10	•
	REC		100	UG/L	- 1	U .		_	
	REC			UG/L	Ŭ	Ŭ			
	REC		100	UG/L	U	U			
	REC			UG/L		=			
	REC			UG/L	U	U			
	REC			UG/L	U	U			
	REG			UG/L UG/L	UU	U			
	REG			UG/L	U	U U			
	REG	1,3-cis-Dichloropropene		UG/L	Ŭ	U			
	REG			UG/L	Ū	Ŭ			
	REG		- 250	UG/L	U	Ú			
	REG REG	· · · · · · · · · · · · · · · · · · ·		UG/L	U	U			
	REG			UG/L	U	U			
	REG		250		U	U			
	REG		8090 100 -		D U	=			
	REG		100		U	U U			
	REG	Bromomethane	100		Ŭ	U			
	REG		250		Ŭ	Ŭ			
	REG	Carbon Tetrachloride	100		Ū	Ŭ			
	REG	Chlorobenzene	100 (JG/L	U	Ū			
	REG REG	Chloroethane	100 (IG/L	U	U			
	REG	Chloroform Chloromethane	100 L		U	U			
	REG	Dibromochloromethane	100 L		U	U			
	REG	Ethylbenzene	100 L		U	U			
	REG	Methylene Chloride	2870 L 100 L		U	= U			
	REG	Styrene	100 L		Ŭ	U			
	REG	Tetrachloroethene	100 L		Ŭ	Ŭ			
	REG	Toluene	3050 L		-		8		
	REG	Trichloroethene	100 U	G/L	U	U			
	REG REG	Vinyl Chloride Xylenes, Total	100 U		U	U			
	11.0		12100 U	G/L		J C)2		
CT40						• •			
6T12		19.0 - 20.0 FT	Fleid Sample Type: Grab		trix: G	roundwater		Collected: 0;	7/11/97
6T12	Sample	19.0 - 20.0 FT	Field Sample Type: Grab	Mai	Qua	roundwater liflers	Validation	Collected: 0	7/11/97
6T12	Sample Type	9.0 - 20.0 FT 9 Volatile Organics	Field Sample Type: Grab Result U	Mai nits	Qua Lab	roundwater lifiers Data	Vaildation Code	Collected: 0	7/11/97
6712	Sample Type REG	9.0 - 20.0 FT Volatile Organics	Field Sample Type: Grab Result U 20 U	Mat nits G/L	Qua Lab U	roundwater lifiers Data		Collected: 0	7/11/97
36712	Sample Type REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	Field Sample Type: Grab Result U 20 U 20 U	Mai nits 3/L 3/L	Qua Lab U U	roundwater Ilflers Data U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	Field Sample Type: Grab Result U 20 U 20 U 20 U 20 U	Mat nits G/L G/L G/L	Qua Lab U U U	Iffiers Data U U U		Collected: 0	7/11/97
6712	Sample Type REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	Field Sample Type: Grab Result U 20 U 20 U 20 U 20 U 20 U 20 U	Mat nits G/L G/L G/L G/L	Qua Lab U U U U	roundwater Data U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1.1.1-Trichloroethane 1.1.2.2-Tetrachloroethane 1.1.2.Trichloroethane 1.1-Dichloroethane 1.1-Dichloroethane 1.2-Dichloroethane	Field Sample Type: Grab Result U 20 U 20 U 20 U 20 U	Mat nits G/L G/L G/L G/L G/L G/L	Qua Lab U U U U U	roundwater Data U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	Field Sample Type: Grab Result U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U	Mat nits 3/L 3/L 3/L 3/L 3/L 3/L	Qua Lab U U U U U U U U U U U	roundwater lifiers Data U U U U U U U U		Collected: 0;	7/11/97
6712	Sample Type REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane	Field Sample Type: Grab Result U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U 20 U	Mat nits 3/L 3/L 3/L 3/L 3/L 3/L 3/L	Qua Lab U U U U U	roundwater lifiers Data U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene	Field Sample Type: Grab	Mat nits G/L G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab U U U U U U U U U U U	roundwater lifiers Data U U U U U U U U		Collected: 0;	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-tians-Dichloroethane 1,3-cis-Dichloroethane	Field Sample Type: Grab Result U 20 U	Mat nits 3/L 3/L 3/L 3/L 3/L 3/L 5/L 5/L 5/L 5/L 5/L	Qua Lab U U U U U U U J J	roundwater liflers Data U U U U U U U U U U U U U U		Collected: 0;	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-trans-Dichloroethane 1,3-cis-Dichloroethane 1,3-trans-Dichloropropene	Field Sample Type: Grab Result U 20 U	Mat nits 3/L 3/L 3/L 3/L 3/L 3/L 5/L 5/L 5/L 5/L 5/L 5/L 5/L 5/L 5/L	Qua Lab U U U U U U U U U U U U U U U U U U U	roundwater lifters Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-cis-Dichloroethane 1,2-trans-Dichloroethane 1,3-cis-Dichloroethane 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone	Field Sample Type: Grab Result U 20 U 2	Mat nits G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab U U U U U U U J J J J J J J	roundwater lifiers Data U U U U U U U U U U U U U		Collected: 0	7/11/97
66712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-trans-Dichloroethane 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone	Result U 20 U	Mat nits G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab U U U U U U J J J J J J	roundwater lifiers Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-cis-Dichloroethane 1,2-trans-Dichloroethane 1,3-cis-Dichloroethane 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone	Result U 20 U	Mat nits G/L G/L G/L G/L G/L G/L U G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab	roundwater Data Data U U U U U U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2.Tetrachloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-Cis-Dichloroethane 1,2-cis-Dichloroethane 1,3-cis-Dichloropthane 1,3-trans-Dichloropthane 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	Result U 20 U	Mat nits G/L G/L G/L G/L G/L G/L G/L U G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab	roundwater lifiers Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1.1.1-Trichloroethane 1.1.2.2-Tetrachloroethane 1.1.2.2-Tetrachloroethane 1.1-Dichloroethane 1.2-Dichloroethane 1.2-Dichloroethane 1.2-Dichloropropane 1.2-Cis-Dichloroethane 1.3-cis-Dichloropthane 1.3-trans-Dichloropthane 2-Butanone 2-Butanone 2-Haxanone 4-Methyl-2-pentanone Acetone	Result U 20 U 50 U 50 U 206 U	Mat nits G/L G/L G/L G/L G/L G/L G/L U G/L U G/L U C C L U C L U C L U C L U C C L U C L U C C L U C C C L U C C C L U C C C L U C C C L U C C C L U C C C C L U C C C C C C C C C C C C C	Qua Lab	roundwater lifiers Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1.1,1-Trichloroethane 1.1,2,2-Tetrachloroethane 1.1,2,2-Tetrachloroethane 1.1-Dichloroethane 1.2-Dichloroethane 1.2-Dichloropropane 1.2-Dichloropropane 1.2-Cis-Dichloroethene 1.3-cis-Dichloropropene 1.3-cis-Dichloropropene 2-Butanone 2-Butanone 2-Haxanone 4-Methyl-2-pentanone Acetone Benzene	Result U 20 U 50 U 50 U 206 U 20 U	Mat nits G/L G/L G/L G/L G/L G/L G/L U G/L U G/L U C/L C/L U C/L C/L C/L C/L C/L C/L C/L C/L		roundwater lifiers Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-Cis-Dichloroethane 1,2-cis-Dichloropropene 1,3-cis-Dichloropropene 2-Butanone 2-Haxanone 2-Haxanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromodichloromethane	Result U 20 U 50 U 50 U 206 U	Mat nits G/L G/L G/L G/L G/L G/L G/L U G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab U U U U U U U U U J J J J J J J J J J	roundwater lifiers Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-cis-Dichloroethane 1,2-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide	Result U 20 U 50 U 50 U 206 U 20 U 20 U 20 U	Mat nits G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab U U U U U U U U J J J J J J J J J J J	roundwater lifiers Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloropropane 1,2-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride	Result U 20 U	Mat nits G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab U U U U U U U J J J J J J J J J J J J	roundwater lifiers Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-Cis-Dichloroethane 1,2-Cis-Dichloropropane 1,2-cis-Dichloropropane 1,3-trans-Dichloropropane 1,3-trans-Dichloropropane 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene	Result U 20 U	Ма nits G/L G/L G/L G/L G/L G/L G/L U G/L U G/L U G/L U C/L C/L C/L C/L C/L C/L C/L C/L	Qua Lab U U U U U U U U U U U U U U U U U U U	roundwater lifters Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Ghloroethane	Result U 20 U	Ма nits G/L G/L G/L G/L G/L G/L G/L G/L	Qua Lab U U U U U U U U U U U U U U U U U U U	roundwater Data Data U U U U U U U U U U U U U		Collected: 0	7/11/97
6712	Sample Type REG REG REG REG REG REG REG REG REG REG	9.0 - 20.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-Cis-Dichloroethane 1,2-Cis-Dichloropropane 1,2-cis-Dichloropropane 1,3-trans-Dichloropropane 1,3-trans-Dichloropropane 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene	Result U 20 U	Ма nits G/L G/L G/L G/L G/L G/L G/L U G/L U G/L U C/L U //L	Qua Lab U U U U U U U U U U U U U U U U U U U	roundwater Data Data U U U U U U U U U U U U U		Collected: 0	7/11/97

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : GP1

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266T12	1	9.0 - 20.0 FT	Field Sample Type: Gra	Ъ	Matrix	Groundwa	iter	Collected: 07/1		
<u> </u>	Sample Type	Volatile Organics	Result	Unite		Qualifiers ab Data	Validation Code			
	REG	Ethylbenzene		UG/L		=		_		
	REG	Methylene Chloride		UG/L		U				
	REG	Styrene		UG/L		Ŭ				
	REG	Tetrachloroethene		UG/L		Ŭ				
	REG	Toluene		UG/L	_	=	F08			
	REG	Trichloroethene		UG/L		Ū	100			
	REG	Vinyl Chloride		UG/L		Ŭ				
	REG	Xylenes, Total		UG/L	_	J	C02			
266T13	2	9.0 - 30.0 FT	Field Sample Type: Gra	b	Matrix:	Groundwa	ter	Collected:	07/11/97	
· · · · ·	Sample				Q	ualifiers	Validation			
	Туре	Volatile Organics	Result	Unita	i L	ab Data	Code			
	REG	1,1,1-Trichloroethane		UG/L		U		_		
	REG	1,1,2,2-Tetrachloroethane		UG/L	-	Ų				
	REG	1,1,2-Trichloroethane	-	UG/L	-	U				
	REG	1,1-Dichloroethane	=	UG/L	U	U				
	REG	1,1-Dichloroethene	2	UG/L	U	U				
	REG	1,2-Dichloroethane	2	UG/L	U	U				
	REG	1,2-Dichloropropane	2	UG/L	U	U				
	REG	1,2-cis-Dichloroethene	2	UG/L	U	U				
	REG	1,2-trans-Dichloroethene	2	UG/L	U	U				
	REG	1,3-cis-Dichloropropene	2	UG/L	U	U				
	REG	1,3-trans-Dichloropropene	2	UG/L	U	U				
	REG	2-Butanone	5	UG/L	U	U				
	REG	2-Hexanone	5	UG/L	U	U				
	REG	4-Methyl-2-pentanone	5	UG/L	U	U				
	REG	Acetone	5	UG/L	U	U				
	REG	Benzene	2.1	UG/L		=				
	REG	Bromodichloromethane	2	UG/L	U	U				
	REG	Bromoform	2	UG/L	U	U				
	REG	Bromomethane	2	UG/L	U	U				
	REG	Carbon Disulfide	5	UG/L	U	U				
	REG	Carbon Tetrachloride		UG/L	Ū	Ū				
	REG	Chlorobenzene		UG/L	Ū	Ū				
	REG	Chloroethane		UG/L	Ū	Ū				
	REG	Chloroform		UG/L	Ŭ	Ŭ				
	REG	Chloromethane		UG/L	Ŭ	Ŭ				
	REG	Dibromochloromethane		UG/L	Ŭ	Ŭ				
	REG	Ethylbenzene		UG/L	-	=				
		Methylene Chloride		UG/L	в	U	F01,F07			
	REG	Styrene		UG/L	Ŭ	Ŭ				
		Tetrachloroethene		UG/L	Ŭ	Ŭ				
		Toluene		UG/L	0	Ű	F04,F07			
		Trichloroethene		UG/L	U	U				
		Vinyl Chloride		UG/L	Ŭ	U				
		Vinyi Chionde Xylenes, Total		UG/L	U	J	C02		•	
66T14		• •	Field Sample Type: Grat		I a failes	Groundwat		Collected:		

Sample				Qual	ifiers	Validation
Type	Volatile Organics	Result	Units	Lab	Data	Code
REG	1,1,1-Trichloroethane	10	UG/L	U	U	
REG	1,1,2,2-Tetrachloroethane	10	UG/L	U	U	
REG	1,1,2-Trichloroethane	10	UG/L	U	U	
REG	1,1-Dichloroethane	10	UG/L	U	U	
REG	1,1-Dichloroethene	10	UG/L	U	U	
REG	1,2-Dichloroethane	10	UG/L	U	U	
REG	1,2-Dichloropropane	10	UG/L	U	U	
REG	1,2-cis-Dichloroethene	10	UG/L	U	U	
REG	1,2-trans-Dichloroethene	10	UG/L	U	U	
REG	1,3-cis-Dichloropropene	10	UG/L	U	U	
REG	1,3-trans-Dichloropropene	10	UG/L	U	U	
REG	2-Butanone	25	UG/L	U	U	
REG	2-Hexanone	25	UG/L	U	U	

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : GP1

2	6	6	T	1	4	
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Sample Type Volatile Organics REG 4-Methyl-2-pentanone REG Acetone REG Benzene REG Bromodichloromethane REG Bromoform	25 413 10 10	Units UG/L UG/L UG/L UG/L		ualifiers ab Da U U =		
REG Acetone REG Benzene REG Bromodichloromethane	25 413 10 10	UG/L UG/L UG/L	Ū	Ū		
REG Benzene REG Bromodichloromethane	413 10 10	UG/L UG/L	-	+		
REG Bromodichloromethane	10 10	UG/L		=		
	10		1.4			
REG Bromoform			U U	U		
	40	UG/L	U	U		
REG Bromomethane	10	UG/L	U	U		
REG Carbon Disulfide	25	UG/L	U	U		
REG Carbon Tetrachloride	10	UG/L	U	U		
REG Chlorobenzene	10	UG/L	U	U		
REG Chioroethane	10	UG/L	U	U		
REG Chloroform	10	UG/L	U	U		
REG Chloromethane	. 27.7	UG/L		=		
REG Dibromochloromethane	10	UG/L	U	U		
REG Ethylbenzene	550	UG/L	Ď	=		
REG Methylene Chloride	10	UG/L	° Ū	U		
REG Styrene	10	UG/L	Ū	Ū		
REG Tetrachloroethene		UG/L	Ū	Ũ		
REG Toluene		UG/L	Ď	=	F08	
REG Trichloroethene		UG/L	Ū	U		
REG Vinyl Chloride		UG/L	Ū	Ũ		
REG Xylenes, Total	1940		Ď	Ĵ	C02,C05	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : GP2

45.0 .80.0 ET

265U14	4	15.0 - 50.0 FT	Fleid Sample Type	: Grab	Matri	x: Soli		Collected:)7/24/97
	Sample Type		Result	Units	Qua Lab	lifiers Data	Validation Code		
	REG	· · · · · · · · · · · · · · · · · · ·					Coue		
	REG	1,1,1-Trichloroethane		UG/KG		U			
	REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichloroethane		UG/KG	-	U			
	REG	1,1-Dichloroethane		UG/KG	-	U			
	REG	• • • • • • • • • • • • • • • • • • • •		UG/KG	-	U			
	REG	1,1-Dichloroethene 1,2-Dichloroethane		UG/KG	-	U			
	REG	1,2-Dichloropropane		UG/KG	-	U			
	REG	1.2-cis-Dichloroethene		UG/KG		U			
	REG	1.2-trans-Dichloroethene		UG/KG	-	U			
	REG	1,3-cis-Dichloropropene		UG/KG	-	U			
	REG	1,3-trans-Dichloropropene		UG/KG	-	U			
	REG	2-Butanone		UG/KG UG/KG		U	0.05		
	REG	2-Hexanone		UG/KG	-	UJ	C05		
	REG	4-Methyl-2-pentanone		UG/KG		U U			
	REG	Acetone		UG/KG	U	1	C05		
	REG	Benzene		UG/KG		J	C05		
	REG	Bromodichloromethane		UG/KG	-	Ŭ			
	REG	Bromoform		UG/KG	-	Ü			
	REG	Bromomethane		UG/KG		Ŭ			
	REG	Carbon Disulfide		UG/KG		Ŭ			
	REG	Carbon Tetrachloride		UG/KG	-	Ŭ			
	REG	Chlorobenzene		UG/KG		Ŭ			
	REG	Chloroethane		UG/KG	-	Ŭ			
	REG	Chloroform		UG/KG		Ŭ			
	REG	Chloromethane		UG/KG	-	Ŭ			
	REG	Dibromochloromethane		UG/KG	-	Ŭ			
	REG	Ethylbenzene		UG/KG	-	ŭ			
	REG	Methylene Chloride		UG/KG	-	ŭ	F01.F07		
	REG	Styrene		UG/KG		ŭ			
	REG	Tetrachloroethene		UG/KG	-	ŭ			
	REG	Toluene		UG/KG	-	J			
	REG	Trichioroethene		UG/KG		Ű			
	REG	Vinyl Chloride		UG/KG	-	ŭ			
		Xylenes, Total		UG/KG	-	ŬJ	C02		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia Field Sample Type: Grab Matrix: Groundwater

		-	· · · · · · · · · · · · · · · · · · ·				ater	
	Sample Type	e Volatile Organics	Result	Units		ualifiers ab Data	Validation Code	
	REG	1,1,1-Trichloroethane		UG/L	- U	U		_
	REG	1,1,2,2-Tetrachloroethane		UG/L	Ŭ	Ŭ		
	REG	1,1,2-Trichloroethane	2	UG/L	U	U		
	REG	1,1-Dichloroethane		UG/L		=		
	REG	1,1-Dichloroethene		UG/L	U	U		
	REG	1,2-Dichloroethane		UG/L	U	U		
	REG	1,2-Dichloropropane		UG/L	U	U		
	REG REG	1,2-cis-Dichloroethene 1,2-trans-Dichloroethene		UG/L UG/L	U U	U U		
	REG	1,3-cis-Dichloropropene		UG/L	Ŭ	U		
	REG	1,3-trans-Dichloropropene		UG/L	Ŭ	Ŭ		
	REG	2-Butanone		UG/L	Ū	ŪJ	C05	
	REG	2-Hexanone	5	UG/L	U	U		
	REG	4-Methyl-2-pentanone	5	UG/L	U	U		
	REG	Acetone		UG/L	U	U		
	REG	Benzene		UG/L	U	U		
	REG	Bromodichloromethane		UG/L	U	U		
	REG REG	Bromoform		UG/L	U	U		
	REG	Bromomethane Carbon Disulfide		UG/L UG/L	U U	U U		
	REG	Carbon Tetrachloride		UG/L	U	U		
	REG	Chlorobenzene		UG/L	Ŭ	Ŭ		
	REG	Chloroethane		UG/L	Ŭ	Ŭ		
	REG	Chloroform		UG/L	Ŭ	Ŭ		
	REG	Chloromethane		UG/L	Ū	Ū		
	REG	Dibromochloromethane	2	UG/L	U	U		
	REG	Ethylbenzene	2	UG/L	U	U		
	REG	Methylene Chloride		UG/L	В	U	F01,F07	
	REG	Styrene		UG/L	U	U		
	REG	Tetrachloroethene		UG/L	U	U		
	REG REG	Toluene		UG/L	U	U		
	REG	Trichloroethene Vinyl Chloride		UG/L UG/L	U U	U U		
	REG	Xylenes, Total		UG/L	Ŭ	UJ U	C02	
					-	05		
66U12		-		o Ma			ler	Collected: 07/24/
66U12	20).0 -24.0 FT	Field Sample Type: Grai) Ma	trix: C	Groundwa		Collected: 07/24/
66U12	20 Sample	-		D Ma	trix: C	Groundwa allfiers	ter Validation Code	Collected: 07/24/
66U12	20 Sample).0 -24.0 FT	Field Sample Type: Grai		trix: (Qu	Groundwa allfiers	Validation	Collected: 07/24/
66U12	20 Sample Type	0.0 - 24.0 FT Volatile Organics	Field Sample Type: Grai	Units	itrix: (Qu Lai	Groundwa allfiers b Data	Validation	Collected: 07/24/
66U12	20 Sample Type REG	0.0 - 24.0 FT Volatile Organics 1,1,1-Trichloroethane	Field Sample Type: Grai Result 2 2	Units UG/L	utrix: C Qu Lai	Groundwa allfiers b Data U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG	Volatile Organics 1,1,1-Trichioroethane 1,1,2,2-Tetrachioroethane	Field Sample Type: Grai Result 2 2 2 2	Units UG/L UG/L	utrix: (Qu Lai U U U U	Groundwar Ialifiers b Data U U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG	Volatile Organics Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U	Groundwa salifiers b Data U U U U U U U U U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2.Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U	Groundwar allfiers b Data U U U U U U U U U U U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2.Tichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U U U U U U U	Groundwar Ialifiers b Data U U U U U U U U U U U U U U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U U U U U U U	Groundwar Ialifiers b Data U U U U U U U U U U U U U U U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-tans-Dichloroethene 1,3-cis-Dichloroethene 1,3-cis-Dichloroptopene 1,3-trans-Dichloropropene	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Loichloroethane 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,3-cis-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloropthene 1,3-cis-Dichloropthene 1,3-cis-Dichloropthene 1,3-trans-Dichloropthene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,3-cis-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethane 1,3-cis-Dichloroethane 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	2011 2011 2011 2011 2011 2011 2011 2011	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
<u>56U12</u>	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-trans-Dichloroethane 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	atrix: C Qu Lai U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane 1,2-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	สมาระ C Qu Lat U U U U U U U U U U U U U U U U U U U	Groundwar allfiers b Data U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-tras-Dichloroethene 1,2-tras-Dichloroethene 1,3-cis-Dichloropropene 1,3-tras-Dichloropropene 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	atrix: C Qu Lat U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromorethane Carbon Disulfide Carbon Tetrachloride	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Unks UGA UGA UGA UGA UGA UGA UGA UGA UGA UGA	atrix: C Qu Lat U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroptopene 1,3-cis-Dichloroptopene 1,3-cis-Dichloroptopene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromoform Bromorethane Garbon Disulfide Carbon Disulfide Carbon Tetrachloride Chlorobenzene	Field Sample Type: Grain Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Unks UGAL UGAL UGAL UGAL UGAL UGAL UGAL UGAL	atrix: C Qu Lat U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cls-Dichloropropene 1,3-cls-Dichloropropene 1,3-cls-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane	Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UGAL UGAL UGAL UGAL UGAL UGAL UGAL UGAL	trix: C Qu Lat U	Groundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
56U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	NO - 24.0 FT Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-cis-Dichloropropane 1,3-cis-Dichloropropene 2-Sutanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichlorormethane Garbon Disulfide Carbon Tetrachloride Chloroethane Chlorobenzene Chloroprome	Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L	สนา่มะ c Qu Lat U U U U U U U U U U U U U U U U U U U	Sroundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthene 1,2-Chloropthene 1,2-Chloropthene 1,2-Chloropthene 1,3-Cis-Dichloropthene 2-Butanone 2	Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UGAL UGAL UGAL UGAL UGAL UGAL UGAL UGAL	สนามา C Qu Lat U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cls-Dichloroethene 1,2-trans-Dichloroothene 1,3-cls-Dichloroptopene 2,3-trans-Dichloroptopene 2,3-trans-Dichloroptopene 2,3-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 3,5-trans-Dichloroptopene 2,4-trans-Dichloroptopene 3,5-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 3,5-trans-Dichloroptopene 3,5-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 3,5-trans	Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Units UGAL UGAL UGAL UGAL UGAL UGAL UGAL UGAL	สมาระ C Quanta C Left U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,2-Trichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Loichloroethene 1,2-trans-Dichloroptopene 1,3-cis-Dichloroptopene 2-Butanone 2-Hexanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroform Chloromethane Dibromochloromethane Ethylbenzene	Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 2 2 <td>Units UGA UGA UGA UGA UGA UGA UGA UGA UGA UGA</td> <td>สมาม C Quanta C Quan</td> <td>Sroundwar alifiers b Data U U U U U U U U U U U U U U U U U U</td> <td>Validation Code</td> <td>Collected: 07/24/</td>	Units UGA UGA UGA UGA UGA UGA UGA UGA UGA UGA	สมาม C Quanta C Quan	Sroundwar alifiers b Data U U U U U U U U U U U U U U U U U U	Validation Code	Collected: 07/24/
66U12	20 Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cls-Dichloroethene 1,2-trans-Dichloroothene 1,3-cls-Dichloroptopene 2,3-trans-Dichloroptopene 2,3-trans-Dichloroptopene 2,3-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 3,5-trans-Dichloroptopene 2,4-trans-Dichloroptopene 3,5-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 3,5-trans-Dichloroptopene 3,5-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 2,4-trans-Dichloroptopene 3,5-trans	Result 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5 5 5 2 2 <td>Unks UGAL UGAL UGAL UGAL UGAL UGAL UGAL UGAL</td> <td>สมาระ C Quanta C Left U U U U U U U U U U U U U U U U U U U</td> <td>Groundwar alifiers b Data U U U U U U U U U U U U U</td> <td>Validation Code</td> <td>Collected: 07/24/</td>	Unks UGAL UGAL UGAL UGAL UGAL UGAL UGAL UGAL	สมาระ C Quanta C Left U U U U U U U U U U U U U U U U U U U	Groundwar alifiers b Data U U U U U U U U U U U U U	Validation Code	Collected: 07/24/

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : GP2

266U12	2	20.0 -24.0 FT	Field Sample Type: Gra	b I	latrix: (Groundw	ater	Collected: 07/24/
	Sample Type	e Volatile Organics	Result	Units	Qı La	alifiers b Data	Validation Code	
	REG	Toluene	2	UG/L	υ	U		
	REG	Trichloroethene	2	UG/L	U	Ú		
	REG	Vinyl Chloride	2	UG/L	U	U		
	REG	Xylenes, Total	2	UG/L	U	UJ	C02	
266U13	3	0.0 - 34.0 FT	Field Sample Type: Gra	b N	latrix: C	Groundwa	ater	Collected: 07/24/9
	Sample Type	Volatile Organics	Result	Units	Qu	allfiers b Data	Validation Code	
	REG	1,1,1-Trichloroethane	20	UG/L	U	U		
	REG	1,1,2,2-Tetrachioroethane	20	UG/L	U	U		
	REG	1,1,2-Trichloroethane	20	UG/L	U	U		
	REG	1,1-Dichloroethane	20	UG/L	U	U		
	REG	1,1-Dichloroethene	20	UG/L	U	U		
	REG	1,2-Dichloroethane	20	UG/L	U	U		
	REG	1,2-Dichloropropane	20	UG/L	U	U		
	REG	1,2-cis-Dichloroethene	20	UG/L	U	U		
	REG	1,2-trans-Dichloroethene	20	UG/L	U	U		
	REG	1,3-cis-Dichloropropene	20	UG/L	U	U		
	REG	1,3-trans-Dichloropropene	20	UG/L	U	U		
	REG	2-Butanone	50	UG/L	U	UJ	C05	
	REG	2-Hexanone	50	UG/L	U	U		
	REG	4-Methyl-2-pentanone	50	UG/L	U	U		
	REG	Acetone	1450	UG/L		J	C05	
	REG	Benzene	20	UG/L	U	U		
	REG	Bromodichloromethane	20	UG/L	U	U		
	REG	Bromoform	20	UG/L	U	U		
	REG	Bromomethane	20	UG/L	U	U		
	REG	Carbon Disulfide	50	UG/L	U	U		
	REG	Carbon Tetrachloride	20	UG/L	U	Ú		
	REG	Chlorobenzene	20	UGIL	U	Ū		
	REG	Chloroethane	20	UG/L	U	Ū		
	REG	Chloroform	20	UG/L	U	Ū		
	REG	Chloromethane		UGIL	Ū	Ū		
	REG	Dibromochloromethane		UG/L	Ū	Ū		
	REG	Ethylbenzene	20	UG/L	Ŭ	Ũ		
	REG	Methylene Chloride	37.5		В	Ŭ	F01,F07	
	REG	Styrene		UG/L	Ū	Ū		
	REG	Tetrachloroethene	=-	UG/L	Ū	Ū		
	REG	Toluene	20	UG/L	Ũ	Ū		
	REG	Trichloroethene		JG/L	Ŭ	Ū		
	REG	Vinyl Chloride		JG/L	Ū	Ū		
		Xylenes, Total		JG/L	ū	ŬJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LE1

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266711	(3.0 -11.0 FT	Field Sample Type: G	rab	M	latrix: Gr	oundwate	r	Collected: 07/10/9
	Sample Type	Volatile Organics	Result	ł	Units	Qual	flers Data	Validation Code	
	REG	1,1,1-Trichloroethane		2	UG/L	Ū	U		
	REG	1,1,2,2-Tetrachioroethane		2	UG/L	U	U		
	REG	1,1,2-Trichloroethane		2	UG/L	U	U		
	REG	1,1-Dichloroethane		2	UG/L	Ŭ	Ū		
	REG	1,1-Dichloroethene		2	UG/L	Ū	Ū		
	REG	1,2-Dichloroethane		2	UG/L	Ū	Ū		
	REG	1,2-Dichloropropane		2	UG/L	ū	Ū		
	REG	1,2-cis-Dichloroethene		2	JG/L	Ŭ	Ū		
	REG	1,2-trans-Dichloroethene			JG/L	Ū	Ū		
	REG	1,3-cis-Dichloropropene			JG/L	ū	Ū		
	REG	1,3-trans-Dichloropropene			JG/L	ū	Ū		
	REG	2-Butanone			JG/L	Ū	Ŭ		
	REG	2-Hexanone			JG/L	Ŭ	Ŭ		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LE1

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266711		6.0 -11.0 FT	Field Sample Type: Gra		1114	atrix: Gr			Collected:	
	Sample		De contr				ifiers	Validation		
	Туре	Volatile Organics	Result	Uni	ts -	Lab	Data	Code		•
	REG	4-Methyl-2-pentanone	5	UG/	L	υ	U	·		
	REG	Acetone	5	UG/	L	U	U			
	REG	Benzene	2	UG/	L	U	U			
	REG	Bromodichloromethane	2	UG/	L	U	U			
	REG	Bromoform	2	UG/	L	U	U			
	REG	Bromomethane	2	UG/	L	U	U			
	REG	Carbon Disulfide	5	UG/	L	U	U			
	REG	Carbon Tetrachloride	2	UG/	L	U	U			
	REG	Chlorobenzene	2	UG/	Ł	U	U			
	REG	Chloroethane	2	UG/	L	U	U			
	REG	Chioroform	2	UGЛ	L	U	U			
	REG	Chloromethane	2	UG/I	L	U	UJ	C05		
	REG	Dibromochloromethane	2	UGA	Ļ	υ	U			
	REG	Ethylbenzene	2	UG/I	L	U	U			
	REG	Methylene Chloride	2	UG/	L	U	U			
	REG	Styrene	2	UG/I	L	U	U			
	REG	Tetrachloroethene	2	UG/		U	U			
	REG	Toluene	2	UG/I		J	U	F04,F06		
	REG	Trichloroethene	2	UG/I	L	U	U			
	REG	Vinyl Chloride	2	UG/L		U	U			
	REG	Xylenes, Total	2	UG/L	_	U	UJ	C02		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LE2

266813	3	0.0 -34.0 FT	Field Sample Type: Gra	b	Matrix:	Gro	undwat	er	Collected: 07/26/9
	Sample Type	Volatile Organica	Result	Unite)ualii ab	fiers Data	Validation Code	
	REG	1,1,1-Trichloroethane	2	UG/L	U		U		
	REG	1,1,2,2-Tetrachioroethane	2	UG/L	U		U		
	REG	1,1,2-Trichloroethane	2	UG/L	U		U		
-	REG	1,1-Dichloroethane	2	UG/L	U		U		
	REG	1,1-Dichloroethene	2	UG/L	U		U		
	REG	1,2-Dichloroethane	2	UG/L	U		U		
	REG	1,2-Dichloropropane	2	UG/L	U		U		
	REG	1,2-cis-Dichloroethene	2	UG/L	U		U		
	REG	1,2-trans-Dichloroethene	2	UG/L	υ		U		
	REG	1,3-cis-Dichloropropene	2	UG/L	U		U		
	REG	1,3-trans-Dichloropropene	2	UG/L	U		υ		
	REG	2-Butanone	5	UG/L	U		U		
	REG	2-Hexanone	5	UG/L	U		U		
	REG	4-Methyl-2-pentanone	5	UG/L	U		U		
	REG	Acetone	25.5	UG/L			=		
	REG	Benzene	2.4	UG/L			=		
	REG	Bromodichloromethane	- 2	UGA	U		U		
	REG	Bromoform	2	UG/L	υ	1	U		
	REG	Bromomethane	2	UG/L	U	l.	U		
	REG	Carbon Disulfide	5	UG/L	U	ļ	UJ	C05	
	REG	Carbon Tetrachloride	2	UG/L	U		U		
	REG	Chlorobenzene	2	UG/L	υ	I	U		
	REG	Chloroethane	2	UG/L	υ	(U		
	REG	Chloroform	2	UG/L	U	,	U		
	REG	Chloromethane	2	UG/L	U	,	U		
	REG	Dibromochloromethane	2	UG/L	U	ļ	U		
	REG	Ethylbenzene	1.4	UG/L	J		J		
	REG	Methylene Chloride	2.1	UG/L	B		U	F01,F07	
	REG	Styrene	2	UG/L	U	- 1	U		
	REG	Tetrachloroethene	2	UG/L	Ŭ	L I	Ŭ		
	REG	Toluene	2	UG/L	Ĵ	i i	Ū	F04,F06	
	REG	Trichloroethene		UGIL	Ū		J		
	REG	Vinyl Chloride		UG/L	Ū	1	Ū		
	REG	Xylenes, Total		UG/L	J			C02	

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

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266814		40.0 - 42.0 FT	Field Sample Type: Gra	10 I	latri	x: Groundw	ater	Collected: 07/26/97
	Sampi Type		Result	Units		Qualifiers Lab Data	Validation Code	
	REG	1,1,1-Trichloroethane	10	UG/L	ີ ບົ	U		
	REG	1,1,2,2-Tetrachloroethane		UG/L	U			
	REG	1,1,2-Trichloroethane		UG/L	U			
	REG REG	1,1-Dichloroethane 1,1-Dichloroethene		UG/L	U	U		
	REG	1,2-Dichloroethane		UG/L	U	+		
	REG	1,2-Dichloropropane		UG/L	U	+		
	REG	1,2-cis-Dichloroethene		UG/L	U	· U		
	REG	1,2-trans-Dichloroethene		UG/L UG/L	U	U		
	REG	1,3-cis-Dichloropropene		UG/L	UU	UU		
	REG	1,3-trans-Dichloropropene		UG/L	Ŭ	U		
	REG	2-Butanone		UG/L	Ŭ	Ŭ	•	
	REG	2-Hexanone		UG/L	Ŭ	Ŭ		
	REG	4-Methyl-2-pentanone		UG/L	Ŭ	Ŭ		
	REG	Acetone		UG/L	-	=		
	REG	Benzene		UG/L		=		
	REG	Bromodichloromethane		UG/L	U	U		
	REG	Bromoform		UG/L	Ū	Ũ		
	REG	Bromomethane		UG/L	Ū	Ŭ		
	REG	Carbon Disulfide	25	UG/L	U	ŬJ	C05	
	REG	Carbon Tetrachloride	10	UG/L	U	U		
	REG	Chlorobenzene		UG/L	U	U		
	REG	Chioroethane		UG/L	U	U		
	REG	Chloroform		UGAL	U	U		
	REG	Chloromethane		UG/L	U	U		
	REG	Dibromochloromethane		UGIL	U	U		
	REG REG	Ethylbenzene Methylana Oblasida	21.1		-	=		
	REG	Methylene Chloride	13.5		B	U	F01,F07	
	REG	Styrene Tetrachloroethene		UG/L	U	U		
	REG	Toluene		UG/L	U	U		
	REG	Trichloroethene	26.6			U	F04,F07	
	REG	Vinyl Chloride		UG/L UG/L	U U	U		
	REG	Xylenes, Total	77.1 U		0	U J	C02	
815	45	.0 -50.0 FT	Field Sample Type: (M	atrix: Soli		Collected: 07/26/97
a	Sample					ualifiers	Validation	
	Туре	Volatile Organics		Units	L	ab Data	Code	_
		1,1,1-Trichloroethane		JG/KG		U		
		1,1,2,2-Tetrachloroethane		JG/KG		U		
		1,1,2-Trichloroethane		JG/KG		U		
		1,1-Dichloroethane		JG/KG		U		
		1,1-Dichloroethene 1,2-Dichloroethane		JG/KG		U		
		1,2-Dichloropropane		IG/KG		U		
		1,2-cis-Dichloroethene		ig/kg ig/kg		U		
		1,2-trans-Dichloroethene				U		
		1,3-cis-Dichloropropene		IG/KG		U		
		1,3-trans-Dichloropropene		ig/kg ig/kg		U		
		2-Butanone		G/KG		UU		
		2-Hexanone		G/KG		U		
		4-Methyl-2-pentanone		G/KG		U		
		Acetone	13.4 U		-	=		
		Benzene	6.6 U			=	•	
		Bromodichloromethane		G/KG	11	Ū		
		Bromoform		G/KG		U		
		Bromomethane		G/KG		υ		
		Carbon Disulfide		G/KG		Ŭ		
		Carbon Tetrachloride		G/KG		Ŭ		
		Chlorobenzene		G/KG		Ŭ		
		chloroethane		G/KG		Ŭ		
	REG (Chloroform		G/KG		Ŭ		
	REG (Chloromethane		G/KG I		Ŭ		
	REG D	bioromochloromethane		G/KG I		Ū		
	REG E	thylbenzene	4.7 U	G/KG		=		
	REG E REG M	lethylene Chloride		g/Kg g/Kg e	3		F01,F07	
	REG E REG M REG S	-	4.6 U				F01,F07	

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station: LE2

266815	4	5.0 - 50.0 FT	Field Sample Type	: Grab	Matri	k: Soll		Collected: 07/26/97
	Sample Type	Volatile Organics	Result	Units	Quai Lab	ifiers Data	Validation Code	
	REG	Toluene	1.5	UG/KG	J	J	••••••	
	REG	Trichloroethene	2.6	UG/KG	U	U		
	REG	Vinyl Chloride	2.6	UG/KG	U	U		
	REG	Xylenes, Total	10.7	UG/KG		J	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LN1

266111	e e	5.0 -10.0 FT	Field Sample Type: Gra	Ъ	Matrix: (Groundw	ater	Collected: 07/10/9
	Sample Type	• Volatile Organica	Result	Unite		alifiers b Data	Validation Code	
	REG	1,1,1-Trichloroethane	2	UG/L	υ	U		_
	REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U		
	REG	1,1,2-Trichloroethane	2	UG/L	U	U		
	REG	1,1-Dichloroethane	2	UG/L	U	U		
	REG	1,1-Dichloroethene	2	UG/L	U	U		
	REG	1,2-Dichloroethane	2	UG/L	U	U		
	REG	1,2-Dichloropropane	2	UG/L	U	U		
5	REG	1,2-cis-Dichloroethene	2	UG/L	U	U		
	REG	1,2-trans-Dichloroethene	2	UG/L	U	U		
	REG	1,3-cis-Dichloropropene	. 2	UG/L	U	U		
	REG	1,3-trans-Dichioropropene	2	UG/L	U	U		
	REG	2-Butanone	5	UG/L	U	U		
	REG	2-Hexanone	5	UG/L	U	U		
	REG	4-Methyl-2-pentanone	5	UGIL	U	U		
	REG	Acetone	62.4	UG/L		=		
	REG	Benzene	2	UG/L	U	U		
	REG	Bromodichloromethane	2	UG/L	U	U		
	REG	Bromoform	2	UG/L	U	U		
	REG	Bromomethane	2	UG/L	U	U		
	REG	Carbon Disulfide	5	UG/L	Ū	Ū		
	REG	Carbon Tetrachloride	2	UG/L	Ū	Ū		•
	REG	Chiorobenzene	2	UG/L	Ū	Ű		
	REG	Chloroethane	2	UG/L	Ū	Ū		
	REG	Chloroform	2	UG/L	Ū	Ū		
	REG	Chloromethane	2	UG/L	Ū	UJ	C05	
	REG	Dibromochloromethane	2	UG/L	Ū	U		
	REG	Ethylbenzene		UG/L	Ũ	Ū		
	REG	Methylene Chloride		UG/L	Ŭ	Ũ		
	REG	Styrene	—	UG/L	Ŭ	Ŭ		
	REG	Tetrachioroethene	—	UG/L	Ŭ	Ŭ		
	REG	Toluene		UG/L	J	Ŭ	F04,F01	
	REG	Trichloroethene	—	UGA	Ū	Ŭ	,	
	REG	Vinyl Chloride		UG/L	Ŭ	ŭ		
	REG	Xylenes, Total		UG/L	ŭ	ŨJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LN2

266211	1	0.0 - 14.0 FT	Fleid Sample Type: 0	Brab I	Watrix: G	iroundwat	er	Collected: 07/27/97
ца	Sample Type	Volatile Organics	Result	Units		allfiers Data	Validation Code	
		Totable Organice						
	REG	1,1,1-Trichloroethane		2 UG/L	U	U		
	REG	1,1,2,2-Tetrachioroethane		2 UG/L	U	U		
	REG	1,1,2-Trichloroethane		2 UG/L	U	U		
	REG	1,1-Dichloroethane		2 UG/L	U	U		
	REG	1,1-Dichloroethene		2 UG/L	U	U		
	REG	1,2-Dichloroethane		2 UG/L	U	U		
	REG	1,2-Dichloropropane		2 UG/L	U	U		
	REG	1,2-cis-Dichloroethene		2 UG/L	U	U		
	REG	1.2-trans-Dichloroethene		2 UG/L	U	U		
	REG	1.3-cis-Dichloropropene		2 UG/L	U	U		

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LN2

	^		Field Sample Type: Gn	1 U		: Groundy		Collected: 07/2	27/9
	Sampi Type		Result	Units		Qualifiers .ab Date	Validation Code		
	REG	1,3-trans-Dichloropropene		UG/L	- _	U			
	REG	2-Butanone		UG/L	Ű	Ŭ			
	REG	2-Hexanone	5	UG/L	Ū	Ū			
	REG	4-Methyl-2-pentanone	5	UG/L	U	U			
	REG	Acetone	5	UG/L	U	U			
	REG	Benzene		UG/L	J	J			
	REG REG	Bromodichloromethane		UG/L	U	U			
	REG	Bromoform Bromomethane		UG/L	U	U			
	REG	Carbon Disulfide		UG/L	U	U			
	REG	Carbon Tetrachloride		UG/L UG/L	U U	UJ	C05		
	REG	Chlorobenzene		UG/L	U	U U			
	REG	Chloroethane		UG/L	Ű	U			
	REG	Chloroform		UG/L	U	U			
	REG	Chloromethane		UG/L	Ŭ	Ŭ			
	REG	Dibromochloromethane		UG/L	Ŭ	Ŭ			
	REG	Ethylbenzene		UG/L	Ŭ	Ŭ			
	REG	Methylene Chloride		UG/L	в	Ŭ	F01,F07		
	REG	Styrene		UG/L	Ū	Ŭ			
	REG	Tetrachloroethene		UG/L	Ū	Ŭ			
	REG	Toluene		UG/L	U	Ű			
	REG	Trichloroethene	2	UG/L	U	U			
	REG	Vinyl Chloride		UG/L	U	U			
	REG	Xylenes, Total	2	UG/L	U	IJ	C02		
6212		0.0 - 24.0 FT	Field Sample Type: Grat	M	atrix:	Groundwa	iter	Collected: 07/27	7/97
	Sample				Qı	alifiers	Validation		
	Type	Volatile Organica	Result	Units	La	ib Data	Code		
	REG	1,1,1-Trichloroethane	2	JG/L	Ū	IJ		_	
	REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane		JG/L JG/L	U U	U		-	
	REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane	2	JG/L JG/L JG/L	U U U	U U U	<u> </u>	_	
	REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane	2	JG/L	U	U		-	
	REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane	2 2 2	JG/L JG/L	U U	U U		-	
	REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane	2 2 2 2 2	jg/l jg/l jg/l jg/l jg/l	U U U U U	U U U U		_	
	REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane	2 2 2 2 2 2 2 2	jg/l jg/l jg/l jg/l jg/l	U U U U U	U U U U U		_	
	REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene	2 2 2 2 2 2 2 2 2 2 2 2	jg/l jg/l jg/l jg/l jg/l jg/l	U U U U U U U	U U U U U U		_	
	REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-cis-Dichioroethene 1,2-trans-Dichioroethene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	jg/l jg/l jg/l jg/l jg/l jg/l jg/l	U U U U U U U U U	U U U U U U		_	
	REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-Cis-Dichioroethene 1,2-trans-Dichioroethene 1,3-cis-Dichioroptopene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	jg/l jg/l jg/l jg/l jg/l jg/l ig/l ig/l	U U U U U U U U U	U U U U U U U		_	
	REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-cis-Dichioroethene 1,2-trans-Dichioroethene 1,3-cis-Dichioropropene 1,3-trans-Dichioropropene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	jg/l jg/l jg/l jg/l jg/l jg/l ig/l ig/l ig/l	U U U U U U U U U	U U U U U U U U		_	
	REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-ctrans-Dichioroethene 1,3-cts-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L				_	
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-ctrans-Dichioroethene 1,3-cts-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone 2-Hexanone	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2 1	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L				_	
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-ctrans-Dichioroethene 1,3-cts-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2 1 2 1	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L			-	_	
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-cis-Dichioroethene 1,3-cis-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 1 2 5 1 5 1	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		U U U U U U U U U U U U U U U U U U U		_	
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioroethane 1,2-cis-Dichioroethene 1,3-cis-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	00000000000000000000000000000000000000	U U U U U U U U U U U U U U U U U U U		_	
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioroethane 1,2-cis-Dichioroethene 1,2-cis-Dichioroethene 1,3-cis-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	00000000000000000000000000000000000000	U U U U U U U U U U U U U U U U U U U			
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-cis-Dichioroethene 1,3-cis-Dichioroethene 1,3-cis-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichioromethane	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	00000000000000000000000000000000000000	U U U U U U U U U U U U U U U U U U U			
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-cis-Dichioroethene 1,3-cis-Dichioropropene 1,3-cis-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichioromethane Bromoform	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 2 2 1 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		U U U U U U U U U U U U U U U U U U U	C05		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioropropane 1,2-ctrans-Dichioroethene 1,3-cis-Dichioropropene 1,3-cis-Dichioropropene 2-Butanone 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichioromethane Bromodichioromethane	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	00000000000000000000000000000000000000	U U U U U U U U U U U U U U U U U U U	C05		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-ctans-Dichloroethene 1,3-cts-Dichloropthene 1,3-cts-Dichloropthene 1,3-cts-Dichloropthene 1,3-cts-Dichloropthene 1,3-cts-Dichloropthene 1,3-cts-Dichloropthene 1,3-cts-Dichloropthene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		U U U U U U U U U U U U U U U U U U U	C05		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-ctrans-Dichloroethene 1,3-cts-Dichloropthene 1,3-cts-Dichloropthene 1,3-cts-Dichloropthene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromoethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	C05		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-Cis-Dichloroethene 1,2-Cis-Dichloropropene 1,3-Cis-Dichloropropene 1,3-Cis-Dichloropropene 1,3-Cis-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobentane	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		U U U U U U U U U U U U U U U U U U U	C05		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Chloroethane	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	uuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuu	C05		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,2-cis-Dichloroptopene 1,3-cis-Dichloroptopene 1,3-cis-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroform Chloroform	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	000000000000000000000000000000000000000	uuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuu	C05		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-ctrans-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 2-Butanone 2-Butanone 2-Butanone 2-Butanone 2-Butanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroform Chloroform Chloroform Chloroformethane Dibromochloromethane Ethylbenzene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	000000000000000000000000000000000000000	000000000000000000000000000000000000000	C05		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-Crans-Dichloroethene 1,2-trans-Dichloropropene 1,3-cls-Dichloropropene 2-Butanone 2-Butanone 2-Butanone 2-Butanone 2-Butanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromodichloromethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Dibromochloromethane Ethylbenzene Methylene Chloride	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	000000000000000000000000000000000000000	uuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuu	C05 F01,F06		
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-Cis-Dichloroethene 1,3-cis-Dichloroptopene 1,3-cis-Dichloroptopene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Chloromethane Dibromochloromethane Ethylbenzene Wethylene Chloride Styrene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	uuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuu			
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichioroethane 1,1-Dichioroethane 1,1-Dichioroethane 1,2-Dichioroethane 1,2-Dichioroethane 1,2-Dichioroethane 1,2-Cas-Dichioroethene 1,2-trans-Dichioroethene 1,3-cis-Dichioropropene 1,3-trans-Dichioropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichioromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachioride Chioroethane Dibromochioromethane Eibylbenzene Wethylene Chioride Styrene Fetrachioroethene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU				
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-choroethene 1,2-choroethene 1,3-cls-Dichloropthene 1,3-cls-Dichloropthene 1,3-cls-Dichloropthene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Chloromethane Ethylbenzene Methylene Chloride Styrene Fetrachloroethene Foluene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU				
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-Cis-Dichloroethene 1,2-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 1,3-Cis-Dichloropthene 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromomethane Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloromethane Dibtornochloromethane Ethylbenzene Methylene Chloride Styrene Fetrachloroethene Toluene Trichloroethene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	00000000000000000000000000000000000000				
	REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-choroethene 1,2-choroethene 1,3-cls-Dichloropthene 1,3-cls-Dichloropthene 1,3-cls-Dichloropthene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Chloromethane Ethylbenzene Methylene Chloride Styrene Fetrachloroethene Foluene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L	00000000000000000000000000000000000000				

266213

30.0 - 34.0 FT

Fleid Sample Type: Grab Matrix: Groundwater

Collected: 07/27/97

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266215

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Sampi Type		Result	Units		Qualifiers Lab Data	Validation Code	
REG	1,1,1-Trichloroethane	2	UG/L	U	U		
REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U		
REG	1,1,2-Trichloroethane		UG/L	U	U		
REG	1,1-Dichloroethane		UG/L	U	U		
REG	1,1-Dichloroethene		UG/L	U	U		
REG REG	1,2-Dichloroethane		UG/L	U	U		
REG	1,2-Dichloropropane 1,2-cis-Dichloroethene		UG/L	U U	U		
REG	1,2-crans-Dichloroethene		UG/L UG/L	U	UU		
REG	1,3-cis-Dichloropropene		UG/L	Ŭ	U		
REG	1,3-trans-Dichloropropene		UG/L	Ŭ	Ŭ		
REG	2-Butanone		UG/L	Ū	Ū		
REG	2-Hexanone		UG/L	U	U		
REG	4-Methyl-2-pentanone	5	UG/L	U	U		
REG	Acetone	29.9	UG/L		=		
REG	Benzene		UG/L		=		
REG	Bromodichloromethane		UG/L	U	U		
REG	Bromoform		UG/L	U	U		
REG	Bromomethane Carbon Disulfide		UGA	U	U	0.05	
REG REG	Carbon Disunde Carbon Tetrachloride		UG/L	U	UJ	Č05	
REG	Chlorobenzene		UG/L	U U	U U		
REG	Chloroethane		UG/L UG/L	U	U		
REG	Chloroform		UG/L	Ŭ	Ű		
REG	Chloromethane		UG/L	ŭ	Ŭ		
REG	Dibromochloromethane		UG/L	Ŭ	Ŭ		
REG	Ethylbenzene		UG/L	Ū	Ū		
REG	Methylene Chloride	2	UG/L	JB	U	F01,F06	
REG	Styrene	2	UG/L	U	U		
REG	Tetrachloroethene	2	UG/L	U	U		
REG	Toluene		UG/L	U	U		
REG	Trichloroethene		UG/L	U	U		
REG REG	Vinyi Chloride Xylenes, Total		UG/L UG/L	U U	U UJ	C02	
	Aylonda, Total	4	00/L	U	0.5	602	
45	i.0 - 50.0 FT	Field Sample Type:	Grah	м	trix: Soll		Collected: 07/27/97
45 Sample	5.0 - 50.0 FT	Field Sample Type:	Grab		ualifiers	Validation	Collected: 07/27/97
Sample Type	Volatile Organics	Result	Units	Q	ualifiers ab Data	Validation Code	Collected: 07/27/97
Sample Type REG	Volatile Organics 1,1,1-Trichloroethane	Result 2.7	Units UG/KG		ualifiers ab Data U		Collected: 07/27/97
Sample Type REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	Result 2.7 2.7	Units UG/KG UG/KG		ualifiers ab Data U U		Collected: 07/27/97
Sample Type REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	Result 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG		ualifiers ab Data U U U		Collected: 07/27/97
Sample Type REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	Result 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U		Collected: 07/27/97
Sample Type REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	Result 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloroptopene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,12-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,12-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,3-cis-Dichloroptopene 1,3-trans-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethene 1,2-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethane 1,2-cis-Dichloropropane 1,2-cis-Dichloropropane 1,3-trans-Dichloropropane 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1-2.Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1-2.Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1-2.Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloropropane 1,2-cis-Dichloropropene 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-Cis-Dichloropropene 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromoethane Carbon Disulfde Carbon Tetrachloride Chlorobenzene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Disulfide Carbon Tetrachloride Chloroethane	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-Cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodimm Bromomethane Carbon Tetrachloride Chloroethane Chloroethane Chloroform	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-Cis-Dichloroethene 1,2-Cis-Dichloroethene 1,2-trans-Dichloropropene 2-Butanone 2-Butanone 2-Hexanone 2-Hexanone 2-Hexanone 8enzene Bromodichloromethane Bromodethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroform Chloroform	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Hexanone 2-Hexanone 8-nee 8enzene Bromodichloromethane Bromodethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Chloroethane Chloromethane 1,1-Directione 1,2-Cise 1,	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,2-Cis-Dichloroethene 1,2-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Butanone 2-Hexanone 8-Methyl-2-pentanone Acetone 8enzene Bromodichloromethane Bromomethane Carbon Tetrachloride Chlorobenzene Chloroform Chloroform Chloroform Chloroformethane Ethylbenzene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U	Code	Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Butanone 2-Butanone 2-Butanone 2-Butanone 3-trans-Dichloropropene 2-Butanone 2-Butanone 3-trans-Dichloropropene 2-Butanone 3-trans-Dichloropropene 2-Butanone 3-trans-Dichloropropene 2-Butanone 3-trans-Dichloropropene 2-Butanone 3-trans-Dichloropropene 2-Butanone 3-trans-Dichloropropene 2-Butanone 3-trans-Dichloropropene 3-trans-Dic	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U		Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,2-Cis-Dichloroethene 1,2-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Butanone 2-Hexanone 8-Methyl-2-pentanone Acetone 8enzene Bromodichloromethane Bromomethane Carbon Tetrachloride Chlorobenzene Chloroform Chloroform Chloroform Chloroformethane Ethylbenzene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.8 6.8 6.8 6.8 0.37 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 <td>Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG</td> <td></td> <td>ualifiers ab Data U U U U U U U U U U U U U</td> <td>Code</td> <td>Collected: 07/27/97</td>	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U	Code	Collected: 07/27/97
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1-2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloropropene 1,2-Cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroothane Dibromochloromethane Eithylbenzene Methylene Chloride Styrene	Result 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.8 6.8 6.8 6.8 0.37 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 <td>Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG</td> <td></td> <td>ualifiers ab Data U U U U U U U U U U U U U U U U U U</td> <td>Code</td> <td>Collected: 07/27/97</td>	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		ualifiers ab Data U U U U U U U U U U U U U U U U U U	Code	Collected: 07/27/97

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LN2

266245

45.0 . 50.0

266215	4	IS.0 -50.0 FT	Field Sample Typ	e:	Grab	N	latrix: S	oll		Collected:	07/27/9
	Sample Type	• Volatile Organics	Result		Units		Qualifier Lab D	ata	Validation Code		
	REG	Trichloroethene		77	UG/KG	Π	U		· · · · · ·	_	
	REG	Vinyl Chloride			UG/KG		Ŭ				
	REG	Xylenes, Total			UG/KG	U	J		C02		
266222			Field Sample Type: Field D	upl	licate	N	latrix: G	roun		Collected:	07/27/97
	Sample	·····					Qualifier	<u>-</u>	Validadia	0000000000	
	Туре	Volatile Organics	Result	l	Units			a ata	Validation Code		
	REG	1,1,1-Trichloroethane		2 ī	JG/L	Ū	U				
	REG	1,1,2,2-Tetrachioroethane			JG/L	Ū	Ū				
	REG	1,1,2-Trichloroethane			JG/L	Ŭ	Ŭ				
	REG	1,1-Dichloroethane			JG/L	ŭ	Ŭ				
	REG	1,1-Dichloroethene				Ŭ	Ŭ				
	REG	1,2-Dichloroethane		-		Ū	ŭ				
	REG	1,2-Dichloropropane				Ŭ	Ŭ				
	REG	1.2-cis-Dichloroethene				Ŭ	ŭ				
	REG	1,2-trans-Dichloroethene				Ŭ	Ŭ				
	REG	1.3-cis-Dichloropropene		-		Ŭ	Ŭ				
	REG	1,3-trans-Dichloropropene				Ŭ	Ŭ				
	REG	2-Butanone				ŭ	U				
	REG	2-Hexanone				Ŭ	Ŭ				
	REG	4-Methyl-2-pentanone		-		Ŭ	Ŭ				
	REG	Acetone			G/L	U					
	REG	Benzene				U	Ū				
	REG	Bromodichloromethane				U	Ű				
	REG	Bromoform				U	-				
	REG	Bromomethane				U	U				
		Carbon Disulfide		-		-	U				
		Carbon Tetrachloride		-		U	UJ	(C05		
		Chlorobenzene		-		U	U				
		Chioroethane		: U		U.	U				
		Chloroform		U		U	U				
		Chloromethane		U		J.	U				
		Dibromochloromethane		U		J	U				
		Ethylbenzene		UC		J	U				
				UC		J	U				
		Methylene Chloride		UC		-	U				
		Styrene		UC	-	-	U				
		Tetrachloroethene		UC		-	U				
		Folgene		UC		-	U				
		Trichloroethene		UG	-	-	U				
		Vinyl Chloride		UC		J	U				
	REG)	(ylenes, Total	2	UG	3/L U	J.	UJ	C	02		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LS1

266411	1	0.0 -15.0 FT	Field Sample Type: (Grab	м	latrix: Gr	oundwat	97	Collected: 07/10/9
	Sample Type	Volatile Organics	Result	Un	Hts:	Qua!	lfiers Data	Validation Code	
	REG	1,1,1-Trichloroethane	·····	2 UG	٨.	U	U		-
	REG	1,1,2,2-Tetrachloroethane		2 UG	. –	Ŭ	Ŭ		
	REG	1,1,2-Trichloroethane		2 UG		ŭ	Ŭ		
	REG	1,1-Dichloroethane		2 UG		Ŭ	Ŭ		
	REG	1,1-Dichloroethene		2 UG		ŭ	ŭ		
	REG	1,2-Dichloroethane		2 UG		Ŭ	ŭ		
	REG	1,2-Dichloropropane		2 UG/	-	Ŭ	Ŭ		
	REG	1,2-cis-Dichloroethene		2 UG/	-	ŭ	Ŭ		
	REG	1,2-trans-Dichloroethene		2 UG/	-	Ŭ	Ŭ		
	REG	1,3-cis-Dichloropropene		2 UG/		ŭ	Ŭ		
	REG	1,3-trans-Dichloropropene		2 UG/	-	ŭ	ŭ		
	REG	2-Butanone		5 UG/	-	Ŭ	U U		
	REG	2-Hexanone		5 UG/		0	Ŭ		
	REG	4-Methyl-2-pentanone		5 UG/		Ŭ	U		

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LS1

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266411	1	0.0 -15.0 FT	Field Sample Type: Gra	b I	Matrix: Gi	oundwa	iter	Collected: 07/10/9
	Sample Type	Volatile Organica	Result	Units		lifiers Data	Validation Code	
	REG	Acetone	23.8	UG/L		=	·	_
	REG	Benzene		UG/L	U	U		
	REG	Bromodichloromethane	2	UG/L	Ū	Ū		
	REG	Bromoform	2	UG/L	Ú	Ū		
	REG	Bromomethane	2	UG/L	U	Ü		
	REG	Carbon Disulfide	5	UG/L	U	Ú		
	REG	Carbon Tetrachloride	2	UG/L	U	Ŭ		
	REG	Chlorobenzene	2	UG/L	U	U		
	REG	Chloroethane	2	UG/L	U	U		
	REG	Chloroform	2	UG/L	U	U		
	REG	Chloromethane	2	UG/L	U	UJ	C05	
	REG	Dibromochloromethane	2	UG/L	U	U		
	REG	Ethylbenzene	2	UG/L	U	U		
	REG	Methylene Chloride	2.2	UG/L	В	U	F01,F07	
	REG	Styrene	2	UG/L	U	U	•	
	REG	Tetrachloroethene	2	UG/L	Ū	Ū		
	REG	Toluene	2	UG/L	U	U		
	REG	Trichloroethene	2	UG/L	U	U		
	REG	Vinyl Chloride	2	UG/L	Ŭ	Ū		
	REG	Xylenes, Total	2	UG/L	Ű	ŪJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LS2

266511	1	0.0 -14.0 FT	Field Sample Type: Gra	b	Matrix	c: Gra	oundwa	iter	Collected: 07/25/9
	Sample Type	• Volatile Organics	Result	Unite		Quali Lab	ifiers Data	Validation Code	ru - r - ana - ranni Maladaa
	REG	1,1,1-Trichloroethane	2	UG/L	- U		U		
	REG	1,1,2,2-Tetrachloroethane	2	UG/L	Ū		Ŭ		
	REG	1,1,2-Trichloroethane	2	UG/L	U		Ŭ		
	REG	1,1-Dichloroethane		UG/L			Ũ		
	REG	1,1-Dichloroethene		UG/L			Ũ		
	REG	1,2-Dichloroethane		UG/L	-		Ŭ		
	REG	1,2-Dichloropropane		UG/L	-		Ũ		
	REG	1,2-cis-Dichloroethene		UG/L			ŭ		
	REG	1,2-trans-Dichloroethene		UG/L			Ŭ		
	REG	1,3-cis-Dichloropropene		UG/L	Ŭ		Ŭ		
	REG	1,3-trans-Dichloropropene		UG/L	-		Ŭ		
	REG	2-Butanone		UG/L	Ĵ		J	C05	
	REG	2-Hexanone		UG/L	Ĵ		J	C05	
	REG	4-Methyl-2-pentanone		UG/L	Ŭ		ŬJ	C05	
	REG	Acetone		UG/L	·		=		
	REG	Benzene		UG/L	U		U		
	REG	Bromodichloromethane		UG/L	Ŭ		Ŭ		
	REG	Bromoform		UG/L	Ŭ		ŭ		
	REG	Bromomethane		UGIL	Ŭ		Ŭ		
	REG	Carbon Disulfide		UG/L	Ŭ		ŪJ	C05	
	REG	Carbon Tetrachloride		UG/L	Ū		Ŭ		
	REG	Chlorobenzene		UG/L	Ŭ		Ŭ		
	REG	Chloroethane		UG/L	ŭ		Ŭ		
	REG	Chloroform		UG/L	ŭ		Ŭ		
	REG	Chloromethane		UGIL	ŭ		Ŭ		
	REG	Dibromochloromethane		UG/L	Ŭ		Ŭ		
	REG	Ethylbenzene		UG/L	ŭ		Ŭ		
	REG	Methylene Chloride		UG/L	В		Ŭ	F01,F06	
	REG	Styrene		UG/L	มี		Ŭ	101,000	
	REG	Tetrachloroethene		UG/L	Ŭ		Ŭ		
	REG	Toluene		UG/L	Ŭ		Ŭ		
	REG	Trichioroethene		UG/L	Ŭ		Ŭ		
	REG	Vinyl Chloride		UG/L	Ŭ		Ŭ		
	REG	Xylenes, Total		UG/L	Ŭ		UJ	C02	
6512	20	.0 -22.5 FT	Field Sample Type: Grat) N	latrix:	Gro	undwat	er	Collected: 07/25/97

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

REG1,1.1-Trichloroethane2UG/LUUREG1,1.2-Trichloroethane2UG/LUUREG1,1.2-Trichloroethane2UG/LUUREG1,1-Dichloroethane2UG/LUUREG1,1-Dichloroethane2UG/LUUREG1,2-Dichloroethane2UG/LUUREG1,2-Dichloroethane2UG/LUUREG1,2-Dichloroethane2UG/LUUREG1,2-cis-Dichloroethane2UG/LUUREG1,2-trans-Dichloroethene2UG/LUUREG1,3-cis-Dichloroppopene2UG/LUUREG1,3-trans-Dichloroppopene2UG/LUUREG2-Hbranone5UG/LUUUREG2-Hbranone5UG/LUUC05REG2-Hbranone5UG/LUUUC05REG4-Methyl-2-pentanone5UG/LUUUREGBormodichloromethane2UG/LUUUREGBormoform2UG/LUUUREGBormoform2UG/LUUUREGBormoform2UG/LUUUREGCarbon Disulfide5UG/LUUUREGCarbon Tetrachloride<	
REG1,1,2,2-Tetrachloroethane2UG/LUUREG1,1,2-Trichloroethane2UG/LUUREG1,1-Dichloroethane2UG/LUUREG1,1-Dichloroethane2UG/LUUREG1,2-Dichloroethane2UG/LUUREG1,2-Dichloroethane2UG/LUUREG1,2-Dichloroethane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,3-cis-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUJC05REG2-Hexanone18.4UG/LJC05REG2-Hexanone5UG/LUUUREGBenzene2UG/LUUREGBenzene2UG/LUUUREGBromodichloromethane2UG/LUUUREGBromodichloromethane2UG/LUUREGCarbon Disulfide5UG/LUUUREGCarbon Tetrachloride2UG/LUUUREGCarbon Tetrachloride2UG/LUUU	
REG1,1,2-Trichloroethane2 UG/LUUREG1,1-Dichloroethane2 UG/LUUREG1,1-Dichloroethane2 UG/LUUREG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloroethane2 UG/LUUREG1,2-cis-Dichloroethane2 UG/LUUREG1,2-trans-Dichloroethane2 UG/LUUREG1,3-cis-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUJC05REG2-Hexanone18.4 UG/LJC05REG2-Hexanone5 UG/LUUUREGBenzene2 UG/LUUUREGBormodichloromethane2 UG/LUUUREGBromodichloromethane2 UG/LUUUREGBromomethane2 UG/LUUUREGCarbon Tetrachloride5 UG/LUUUREGCarbon Tetrachloride2 UG/LUUU	
REG1.1-Dichloroethene2UG/LUUREG1,2-Dichloroethane2UG/LUUREG1,2-Dichloropropane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-trans-Dichloroethene2UG/LUUREG1,3-trans-Dichloroptopene2UG/LUUREG1,3-trans-Dichloroptopene2UG/LUUREG2-Butanone5UG/LUUJC05REG2-Hexanone18.4UG/LJC05REG2-Hexanone5UG/LUUUREG8enzene5UG/LUUREGBormodichloromethane2UG/LUUREGBromodichloromethane2UG/LUUREGCarbon Disulfide5UG/LUUREGCarbon Tetrachloride2UG/LUUREGCarbon Tetrachloride2UG/LUU	
REG1,2-Dichloroethane2UG/LUREG1,2-Dichloropropane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-trans-Dichloroethene2UG/LUUREG1,3-cis-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUREG2-Hexanone18.4UG/LJC05REG2-Hexanone5UG/LUUREG2-Methyl-2-pentanone5UG/LUUREGBenzene2UG/LUUREGBenzene2UG/LUUREGBromodichloromethane2UG/LUUREGBromomethane2UG/LUUREGCarbon Disulfide5UG/LUUREGCarbon Tetrachloride2UG/LUUREGCarbon Tetrachloride2UG/LUU	
REG1,2-Dichloropropane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-trans-Dichloroethene2UG/LUUREG1,3-cis-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUREG2-Hexanone18.4UG/LJC05REG2-Hexanone5UG/LUUJC05REG2-Hexanone5UG/LUUUREGBenzene5UG/LUUUREGBenzene2UG/LUUUREGBromodichloromethane2UG/LUUUREGBromomethane2UG/LUUUREGCarbon Disulfide5UG/LUUUREGCarbon Tetrachloride2UG/LUUU	
REG1,2-cis-Dichloroethene2UG/LUREG1,2-trans-Dichloroethene2UG/LUUREG1,3-cis-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUREG2-Hexanone18.4UG/LJC05REG2-Hexanone18.4UG/LUUJC05REG2-Hexanone5UG/LUUUREGAcetone5UG/LUUC05REGAcetone2UG/LUUUC05REGBenzene2UG/LUUUC05REGBormodichloromethane2UG/LUUUREGREGBromomethane2UG/LUUUREGREGCarbon Disulfide5UG/LUUUC05REGCarbon Tetrachloride2UG/LUUUC05REGCarbon Tetrachloride2UG/LUUUC05REGCarbon Tetrachloride2UG/LUUUUREGCarbon Tetrachloride2UG/LUUUUREGCarbon Tetrachloride2UG/LUUUUUREGCarbon Tetrachloride2UG/LUU <td< td=""><td></td></td<>	
REG1,2-trans-Dichloroethene2UG/LUUREG1,3-cis-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUREG2-Hexanone18.4UG/LJC05REG2-Hexanone18.4UG/LUUJC05REG2-Hexanone5UG/LUUJC05REGAcetone5UG/LUUUREGBenzene2UG/LUUREGBormodichloromethane2UG/LUUREGBromoform2UG/LUUREGBromomethane2UG/LUUREGCarbon Disulfide5UG/LUUJREGCarbon Tetrachloride2UG/LUU	
REG1,3-cis-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUJC05REG2-Hexanone18.4UG/LJC05REG2-Hexanone5UG/LUUJC05REG4-Methyl-2-pentanone5UG/LUUJC05REGAcetone5UG/LUUUREGBenzene2UG/LUUREGBormodichloromethane2UG/LUUREGBromonethane2UG/LUUREGBromonethane2UG/LUUREGCarbon Disulfide5UG/LUUJREGCarbon Tetrachloride2UG/LUUREGCarbon Tetrachloride2UG/LUU	
REG1.3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUJC05REG2-Hexanone18.4UG/LJC05REG2-Hexanone5UG/LUUJC05REG4-Methyl-2-pentanone5UG/LUUJC05REGAcetone5UG/LUUUREGBenzene2UG/LUUREGBromodichloromethane2UG/LUUREGBromomethane2UG/LUUREGBromomethane2UG/LUUREGCarbon Disulfide5UG/LUUJREGCarbon Tetrachloride2UG/LUU	
REG2-Butanone5UG/LUUJC05REG2-Hexanone18.4UG/LJC05REG4-Methyl-2-pentanone5UG/LUUJC05REGAcetone5UG/LUUUREGBenzene2UG/LUUREGBromodichloromethane2UG/LUUREGBromodethane2UG/LUUREGBromomethane2UG/LUUREGCarbon Disulfide5UG/LUUJREGCarbon Tetrachloride2UG/LUU	
REG2-Hexanone18.4 UG/LJC05REG4-Methyl-2-pentanone5 UG/LUUJC05REGAcetone5 UG/LUUUREGBenzene2 UG/LUUREGBromodichloromethane2 UG/LUUREGBromoderm2 UG/LUUREGBromomethane2 UG/LUUREGBromomethane2 UG/LUUREGCarbon Disulfide5 UG/LUUREGCarbon Tetrachloride2 UG/LUU	
REG4-Methyl-2-pentanone5UG/LUUJC05REGAcetone5UG/LUUREGBenzene2UG/LUUREGBromodichloromethane2UG/LUUREGBromoform2UG/LUUREGBromomethane2UG/LUUREGBromomethane2UG/LUUREGCarbon Disulfide5UG/LUUJREGCarbon Tetrachloride2UG/LUU	
REG Benzene 2 UG/L U U REG Bromodichloromethane 2 UG/L U U REG Bromoform 2 UG/L U U REG Bromomethane 2 UG/L U U REG Bromomethane 2 UG/L U U REG Carbon Disulfide 5 UG/L U UJ C05 REG Carbon Tetrachloride 2 UG/L U U	
REG Bromodichloromethane 2 UG/L U U REG Bromoform 2 UG/L U U REG Bromomethane 2 UG/L U U REG Bromomethane 2 UG/L U U REG Carbon Disulfide 5 UG/L U UJ C05 REG Carbon Tetrachloride 2 UG/L U U	
REG Bromoform 2 UG/L U U REG Bromomethane 2 UG/L U U REG Carbon Disulfide 5 UG/L U U REG Carbon Tetrachloride 2 UG/L U U	
REG Bromomethane 2 UG/L U U REG Carbon Disulfide 5 UG/L U UJ C05 REG Carbon Tetrachloride 2 UG/L U UJ C05	
REG Carbon Disulfide 5 UG/L U UJ C05 REG Carbon Tetrachloride 2 UG/L U U	
REG Carbon Tetrachloride 2 UG/L U U	
REG Chloroethane 2 UG/L U U	
REG Chloroform 2 UG/L U U	
REG Chloromethane 2 UG/L U U	
REG Dibromochloromethane 2 UG/L U U	
REG Ethylbenzene 2 UG/L U U	
REG Methylene Chloride 2 UG/L U U	
REG Styrene 2 UG/L U U REG Tetrachloroethene 2 UG/L U U	
REG Inchloroethene 2 UG/L U U REG Vinyl Chloride 2 UG/L U U	
REG Xylenes, Total 2 UG/L U UJ C02	
	llected: 07/25/97
Sample Qualifiers Validation	
Type Volatile Organics Result Units Lab Data Code	
REG 1,1,1-Trichloroethane 2 UG/L U U	
REG 1,1,2,2-Tetrachloroethane 2 UG/L U U	
REG 1,1,2-Trichloroethane 2 UG/L U U	
REG 1,1-Dichloroethane 2 UG/L U U	
REG 1,1-Dichloroethene 2 UG/L U U	
REG 1,2-Dichloroethane 2 UG/L U U	
REG 1,2-Dichloroethane 2 UG/L U U REG 1,2-Dichloropropane 2 UG/L U U REG 1,2-Dichloropropane 2 UG/L U U	
REG 1,2-Dichloroethane 2 UG/L U U REG 1,2-Dichloropropane 2 UG/L U U REG 1,2-Cis-Dichloroethene 2 UG/L U U REG 1,2-Cis-Dichloroethene 2 UG/L U	
REG 1,2-Dichloroethane 2 UG/L U U REG 1,2-Dichloropropane 2 UG/L U U REG 1,2-cis-Dichloroethene 2 UG/L U U REG 1,2-trans-Dichloroethene 2 UG/L U U	
REG 1,2-Dichloroethane 2 UG/L U U REG 1,2-Dichloropropane 2 UG/L U U REG 1,2-cis-Dichloroethene 2 UG/L U U REG 1,2-trans-Dichloroethene 2 UG/L U U REG 1,2-trans-Dichloropropene 2 UG/L U U REG 1,2-trans-Dichloropropene 2 UG/L U U	
REG 1,2-Dichloroethane 2 UG/L U U REG 1,2-Dichloropropane 2 UG/L U U REG 1,2-Dichloropropane 2 UG/L U U REG 1,2-Dichloropthene 2 UG/L U U REG 1,2-trans-Dichloropthene 2 UG/L U U REG 1,3-trans-Dichloroptopene 2 UG/L U U REG 1,3-trans-Dichloroptopene 2 UG/L U U REG 2-Butanone 5 UG/L U U	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropropane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloroethene2 UG/LUUREG1,3-cis-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUREG2-Butanone5 UG/LUU	
REG1,2-Dichloroethane2UG/LUUREG1,2-Dichloropropane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,3-cis-Dichloropropene2UG/LUUREG1,3-cis-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUREG2-Butanone5UG/LUUJC05REG4-Methyl-2-pentanone5UG/LUUJC05UUUUU	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropropane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloroethene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUREG2-Butanone5 UG/LUUJC05C05C05C05REG4-Methyl-2-pentanone5 UG/LUUJREGAcetone5 UG/LUU	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropropane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloroethene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUREG2-Hexanone5 UG/LUUJC05REG4-Methyl-2-pentanone5 UG/LUUJREGAcetone5 UG/LUUREGBenzene2 UG/LUU	
REG1,2-Dichloroethane2UG/LUUREG1,2-Dichloropropane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-trans-Dichloroethene2UG/LUUREG1,2-trans-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUREG2-Butanone5UG/LUUJC05REG2-Hexanone5UG/LUUJC05REG4-Methyl-2-pentanone5UG/LUUUREGBenzene2UG/LUUUREGBenzene2UG/LUUUREGBormodichloromethane2UG/LUU	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropropane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloroethene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUREG2-Hexanone5 UG/LUUJC05REG2-Hexanone5 UG/LUUJREG4-Methyl-2-pentanone5 UG/LUUREGBenzene2 UG/LUUREGBoromodichloromethane2 UG/LUUREGBromodichloromethane2 UG/LUUREGBromoform2 UG/LUU	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropopane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloropopane2 UG/LUUREG1,2-trans-Dichloropopane2 UG/LUUREG1,3-trans-Dichloropopane2 UG/LUUREG1,3-trans-Dichloropopane2 UG/LUUREG2-Butanone5 UG/LUUREG2-Hexanone5 UG/LUUJC05REG4-Methyl-2-pentanone5 UG/LUUJREGBenzene5 UG/LUUREGBenzene2 UG/LUUREGBromodichloromethane2 UG/LUUREGBromomethane2 UG/LUUREGBromomethane2 UG/LUU	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropopane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloroethene2 UG/LUUREG1,3-cis-Dichloropopene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUREG2-Hexanone5 UG/LUUJC05REG4-Methyl-2-pentanone5 UG/LUUREGBenzene2 UG/LUUREGBenzene2 UG/LUUREGBromodichloromethane2 UG/LUUREGBromomethane2 UG/LUUREGCarbon Disulfide5 UG/LUUREGCarbon Disulfide5 UG/LUU	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropopane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloroethene2 UG/LUUREG1,2-trans-Dichloropopene2 UG/LUUREG1,3-trans-Dichloropopene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUREG2-Butanone5 UG/LUUJC05REG2-Hexanone5 UG/LUUJREG2-Benzene5 UG/LUUUREGBenzene2 UG/LUUUREGBromodichloromethane2 UG/LUUUREGCarbon Disulfide5 UG/LUUUREGCarbon Disulfide5 UG/LUUUREGCarbon Tetrachloride2 UG/LUUUREGCarbon Disulfide5 UG/LUUUREGCarbon Disulfide5 UG/LUUUREGCarbon Tetrachloride2 UG/LUUU	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropropane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloroethene2 UG/LUUREG1,3-cis-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUREG2-Hexanone5 UG/LUUJC05REG2-Hexanone5 UG/LUUJREG2-Hexanone5 UG/LUUREG8enzene5 UG/LUUREGBenzene2 UG/LUUREGBromodichloromethane2 UG/LUUREGBromomethane2 UG/LUUREGCarbon Disulfide5 UG/LUUREGCarbon Tetrachloride2 UG/LUUREGChloroberzene2 UG/LUUREGChloroberzene2 UG/LUU	
REG1,2-Dichloroethane2UG/LUUREG1,2-Dichloropropane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-trans-Dichloroethene2UG/LUUREG1,3-cis-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUREG2-Hexanone5UG/LUUJC05C05C05C05C05REG2-Hexanone5UG/LUUJREG8enzene5UG/LUUREGBenzene2UG/LUUREGBromodichloromethane2UG/LUUREGBromomethane2UG/LUUREGCarbon Disulfide5UG/LUUREGChlorobenzene2UG/LUUREGChlorobenzene2UG/LUUREGChlorobenzene2UG/LUUREGChlorobenzene2UG/LUUREGChloroethane2UG/LUUREGChloroethane2UG/LUUREGChlorobenzene2UG/LUU	
REG1,2-Dichloroethane2UG/LUUREG1,2-Dichloropopane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-trans-Dichloropopane2UG/LUUREG1,2-trans-Dichloropopane2UG/LUUREG1,3-trans-Dichloropopane2UG/LUUREG1,3-trans-Dichloropropane2UG/LUUREG2-Butanone5UG/LUUREG2-Hexanone5UG/LUUJREG2-Hexanone5UG/LUUJREG4-Methyl-2-pentanone5UG/LUUREGBenzene2UG/LUUREGBenzene2UG/LUUREGBromodichloromethane2UG/LUUREGBromomethane2UG/LUUREGCarbon Disulfide5UG/LUUREGChlorobenzene2UG/LUUREGChloroethane2UG/LUUREGChloroethane2UG/LUUREGChloroform2UG/LUUREGChlorobenzene2UG/LUUREGChloroform2UG/LUUREGChloroform2UG/LUURE	
REG1,2-Dichloroethane2UG/LUUREG1,2-Dichloropropane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-trans-Dichloroethene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUREG2-Hexanone5UG/LUUJREG2-Hexanone5UG/LUUJREG4-Methyl-2-pentanone5UG/LUUREGBenzene2UG/LUUREGBenzene2UG/LUUREGBromodichloromethane2UG/LUUREGBromodichloromethane2UG/LUUREGCarbon Disulfide2UG/LUUREGChlorobenzene2UG/LUUREGChloroform2UG/LUUREGChloroform2UG/LUUREGChloroform2UG/LUUREGChloroform2UG/LUUREGChloroform2UG/LUUREGChloroform2UG/LUUREGChloroform2UG/LUUREGC	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropopane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-trans-Dichloroethene2 UG/LUUREG1,2-trans-Dichloropopene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUREG2-Hexanone5 UG/LUUJC05REG2-Hexanone5 UG/LUUREG4-Methyl-2-pentanone5 UG/LUUREGBenzene2 UG/LUUUREGBenzene2 UG/LUUUREGBromodichloromethane2 UG/LUUREGBromodichloromethane2 UG/LUUREGBromodichloromethane2 UG/LUUREGCarbon Tetrachloride2 UG/LUUREGChlorobenzene2 UG/LUUREGChlorobenzene2 UG/LUUREGChloroform2 UG/LUUREGChloromethane2 UG/LUUREGChloroform2 UG/LUUREGChloromethane2 UG/LUUREGChloromethane2 UG/LUUREGChloromethane2 UG/LU </td <td></td>	
REG1,2-Dichloroethane2UG/LUUREG1,2-Dichloropropane2UG/LUUREG1,2-cis-Dichloroethene2UG/LUUREG1,2-trans-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG1,3-trans-Dichloropropene2UG/LUUREG2-Butanone5UG/LUUJC05REG2-Butanone5UG/LUUJC05REG2-Hexanone5UG/LUUJC05REG2-Hexanone5UG/LUUJC05REG2-Hexanone5UG/LUUUREGBenzene2UG/LUUUREGBormodichloromethane2UG/LUUUREGBromodethane2UG/LUUUREGCarbon Disulfide5UG/LUUUREGChloroethane2UG/LUUUREGChloroform2UG/LUUUREGChloroethane2UG/LUUUREGChloroethane2UG/LUUUREGChloroethane2UG/LUUUREGChloroethane2UG/LUUUREGChloroethane </td <td></td>	
REG 1,2-Dichloroethane 2 UG/L U U REG 1,2-Dichloroethene 2 UG/L U U REG 1,2-Dichloroethene 2 UG/L U U REG 1,2-dis-Dichloroethene 2 UG/L U U REG 1,3-cis-Dichloroethene 2 UG/L U U REG 1,3-trans-Dichloropropene 2 UG/L U U REG 1,3-trans-Dichloropropene 2 UG/L U U REG 2-Butanone 5 UG/L U UJ C05 REG 2-Hexanone 5 UG/L U UJ C05 REG 8-Acetone 5 UG/L U UJ C05 REG Benzene 2 UG/L U U U REG REG Bromodichloromethane 2 UG/L U U U U U REG REG Bromodichloromethane 2 UG/L U U U U<	
REG1,2-Dichloroethane2 UG/LUUREG1,2-Dichloropropane2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,2-cis-Dichloroethene2 UG/LUUREG1,3-cis-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG1,3-trans-Dichloropropene2 UG/LUUREG2-Butanone5 UG/LUUJC05REG2-Hexanone5 UG/LUUJREG2-Butanone5 UG/LUUJC05REG2-Hexanone5 UG/LUUUREGBenzene2 UG/LUUUREGBormodichloromethane2 UG/LUUUREGBromoform2 UG/LUUUREGBromoform2 UG/LUUUREGCarbon Disulfide5 UG/LUUUREGChlorobenzene2 UG/LUUUREGChloroform2 UG/LUUUREGChloromethane2 UG/LUUUREGChloromethane2 UG/LUUUREGChloromethane2 UG/LUUUREGChloromethane2 UG/LUUUREGChloromethane2 UG/LUUUREGChloromethane2	

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : LS2

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266513	3	0.0 - 34.0 FT	Field Sample Type: Gra	b P	Natrix:	Groundwa	ster	Collected: 0)	7/25/9
	Sample Type		Result	Units	Qu	alifiers b Data	Validation Code		
	REG	Trichloroethene	2	UG/L	υ	U	· · ·	_	
	REG	Vinyl Chloride		UG/L	Ū	Ū			
	REG	Xylenes, Total	2	UG/L	U	UJ	C02		
266515	5	0.0 -51.0 FT	Field Sample Type: Gra	6 N	latrix: (Groundwa	iter	Collected: 07	7/25/9
	Sample Type	Volatile Organics	Result	Units	Qu La	alifiers b Data	Validation Code		
	REG	1.1.1-Trichloroethane		UG/L	U	U			
	REG	1,1,2,2-Tetrachloroethane		UG/L	Ŭ	Ŭ			
	REG	1.1.2-Trichloroethane		UG/L	ŭ	Ŭ			
	REG	1.1-Dichloroethane		UG/L	ŭ	Ŭ			
	REG	1,1-Dichloroethene		UG/L	Ŭ	Ŭ			
	REG	1,2-Dichloroethane		UG/L	Ū	Ŭ			
	REG	1,2-Dichloropropane		UG/L	Ŭ	Ū			
	REG	1,2-cis-Dichloroethene		UG/L	Ŭ	Ŭ			
	REG	1,2-trans-Dichloroethene		UG/L	Ŭ	Ŭ			
	REG	1,3-cis-Dichloropropene		UG/L	ŭ	Ū			
	REG	1,3-trans-Dichloropropene		UG/L	Ŭ	Ŭ			
	REG	2-Butanone		UG/L	ũ	ŬJ	C05		
	REG	2-Hexanone		UG/L	Ŭ	IJ	C05		
	REG	4-Methyl-2-pentanone		UG/L	ŭ	ŪĴ	C05		
	REG	Acetone	-	UG/L	•	=			
	REG	Benzene		UG/L	U	U			
	REG	Bromodichloromethane		UG/L	Ŭ	Ū			
	REG	Bromoform		UG/L	Ŭ	Ŭ			
	REG	Bromomethane		UG/L	ŭ	Ŭ			
	REG	Carbon Disulfide		UG/L	Ŭ	ŬJ	C05		
	REG	Carbon Tetrachloride		UG/L	ŭ	Ű	000		
	REG	Chlorobenzene	_	UGA	Ŭ	Ŭ			
	REG	Chloroethane		UG/L	Ŭ	Ŭ			
	REG	Chloroform	_	UG/L	Ŭ	Ŭ			
	REG	Chloromethane		UG/L	Ŭ	Ŭ			
	REG	Dibromochloromethane	=	UG/L	Ŭ	Ŭ			
	REG	Ethylbenzene		UG/L	Ŭ	Ŭ			
	REG	Methylene Chloride		UGIL	Ŭ	ŭ			
	REG	Styrene		UG/L	Ŭ	Ŭ			
	REG	Tetrachioroethene		UG/L	Ŭ	Ŭ			
	REG	Toluene		UG/L	ŭ	Ŭ			
		Trichloroethene		UG/L	ŭ	ŭ			
		Vinyl Chloride		UG/L	Ŭ	Ŭ			
		Xylenes, Total		UG/L	Ŭ	ŬJ	C02		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LW1

266W11	e	5.0 -10.0 FT	Field Sample Type: Gra	b A	Aatrix: Gr	oundwat	Pr	Collected: 07/10/97
	Sample Type	Volatile Organics	Result	Units	Qual Lab	lflers Data	Validation Code	
	REG	1,1,1-Trichloroethane	20	UG/L	U	U	· · · ·	
	REG	1,1,2,2-Tetrachioroethane	20	UG/L	U	U		
	REG	1,1,2-Trichloroethane	20	UG/L	U	U		
	REG	1,1-Dichloroethane	94.7	UG/L		=		
	REG	1,1-Dichloroethene	20	UG/L	U	U		
	REG	1,2-Dichloroethane	20	UG/L	U	U		
	REG	1,2-Dichloropropane	20	UG/L	U	U		
	REG	1.2-cis-Dichloroethene	20	UG/L	U	U		
	REG	1,2-trans-Dichloroethene	20	UG/L	U	U		
	REG	1,3-cis-Dichloropropene	20	UG/L	U	U		
	REG	1,3-trans-Dichloropropene	20	UG/L	U	U		
	REG	2-Butanone	50	UG/L	U	Ú		
	REG	2-Hexanone	50	UG/L	U	Ŭ		
	REG	4-Methyl-2-pentanone	50	UG/L	Ū	U		

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LW1

266W11		5.0 -10.0 FT	Field Sample Type: Gra	b N	latrix:	Groundwa	ater	Collected: 07/10/97
	Sample Type) Volatlie Organics	Result	Units	Qu La	allfiers b Data	Validation Code	
	REG	Acelone	50	UG/L	.	U		<u> </u>
	REG	Benzene	6070	UG/L	D	=		
	REG	Bromodichloromethane	20	UG/L	U	U		
	REG	Bromoform	20	UG/L	U	Ú		
	REG	Bromomethane	20	UG/L	U	Ū		
	REG	Carbon Disulfide	50	UG/L	Ū	Ũ		
	REG	Carbon Tetrachloride	20	UG/L	Ū	Ŭ		
	REG	Chlorobenzene	20	UG/L	Ū	Ū		
	REG	Chloroethane	20	UG/L	Ú	Ū		
	REG	Chloroform	20	UG/L	Ū	Ū		
	REG	Chloromethane	20	UG/L	Ú	ŪJ	C05	
	REG	Dibromochloromethane	20	UG/L	Ŭ	Ū		
	REG	Ethylbenzene	2160	UG/L	D	=		
	REG	Methylene Chloride	20	UG/L	Ū	U		
	REG	Styrene	20	UG/L	ŭ	Ŭ		
	REG	Tetrachloroethene	20	UG/L	Ŭ	Ū		
	REG	Toluene	4200	UG/L	D	=	F08	
	REG	Trichloroethene	20	UG/L	Ú	U		
	REG	Vinyl Chloride	20	UG/L	Ũ	Ū		
	REG	Xylenes, Total	9000	UG/L	D	Ĵ	C02	
266W21			Field Sample Type: Field Dup	licate	Mat	fix: Grour	dwater	Collected: 07/10/97

		Field Sample Type: Field Du	plicate	Mati	1x: Grou	indwater	Collected: 07/	10
Sample Type	• Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code		
REG	1,1,1-Trichloroethane	100	UG/L	. 	U	a		
REG	1,1,2,2-Tetrachioroethane	100	UG/L	Ŭ	ŭ			
REG	1,1,2-Trichloroethane	100	UG/L	Ů	Ū			
REG	1,1-Dichloroethane	88.5	UG/L	Ĵ	J			
REG	1,1-Dichloroethene	100	UG/L	Ū	Ŭ			
REG	1,2-Dichloroethane	100	UG/L	Ū	Ū			
REG	1,2-Dichloropropane	100	UG/L	ŭ	Ū			
REG	1,2-cis-Dichloroethene	100	UG/L	Ū	Ū			
REG	1,2-trans-Dichloroethene	100	UG/L	Ū	Ū			
REG	1,3-cis-Dichloropropene		UG/L	Ū	Ŭ			
REG	1,3-trans-Dichloropropene		UG/L	Ū	Ū			
REG	2-Butanone		UG/L	ū	Ū			
REG	2-Hexanone	250	UG/L	Ū	ū			
REG	4-Methyl-2-pentanone		UG/L	Ŭ	ŭ			
REG	Acetone	250	UG/L	Ū	Ū			
REG	Benzene	5660		-	=			
REG	Bromodichloromethane		UG/L	U	U			
REG	Bromoform		UG/L	Ū	Ŭ			
REG	Bromomethane		UG/L	Ŭ	Ŭ			
REG	Carbon Disulfide		UG/L	Ū	Ŭ			
REG	Carbon Tetrachloride		UG/L	Ū	Ŭ			
REG	Chlorobenzene		UG/L	ŭ	Ŭ			
REG	Chloroethane	100	UG/L	Ū	Ŭ			
REG	Chloroform		UG/L	Ŭ	Ŭ			
REG	Chloromethane		UG/L	Ŭ	Ū			
REG	Dibromochloromethane		UG/L	Ŭ	Ŭ			
REG	Ethylbenzene	1720		•	=			
REG	Methylene Chloride	100		U	U			
	Styrene	100		ŭ	Ŭ			
REG	Tetrachioroethene	100		ŭ	ŭ			
REG	Toluene	3550		•	=	F08		
	Trichloroethene	100		U	Ū	1.00		
	Vinyl Chloride	100		ŭ	Ŭ			
	Xylenes, Total	7230		~	J O	C02		
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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : LW2

Sample					lifiers	Validation		
Туре	Volatile Organics	Result	Units	Lat	Data	Code		
REG	1,1,1-Trichloroethane	100	UG/L	<u> </u>	U		_	
REG	1,1,2,2-Tetrachloroethane	100	UG/L	U	U			
REG	1,1,2-Trichloroethane	100	UG/L	υ	U			
REG	1,1-Dichloroethane	100	UG/L	U	U			
REG	1,1-Dichloroethene	100	UG/L	U	U			
REG	1,2-Dichloroethane	100	UG/L	U	U			
REG	1,2-Dichloropropane	100	UG/L	U	U			
REG	1,2-cis-Dichloroethene	100	UG/L	U	U			
REG	1,2-trans-Dichloroethene	100	UG/L	U	U			
REG	1,3-cls-Dichloropropene	100	UG/L	U	U			
REG	1,3-trans-Dichloropropene	100	UG/L	U	U			
REG	2-Butanone	250	UG/L	U	UJ	C05		
REG	2-Hexanone	250	UG/L	U	U			
REG	4-Methyl-2-pentanone	250	UG/L	Ŭ	Ŭ			
REG	Acetone	250	UG/L	U	U			
REG	Benzene	1660	UG/L		=			
REG	Bromodichloromethane	100	UG/L	U	U			
REG	Bromoform	100	UG/L	Ŭ	Ū			
REG	Bromomethane	100	UG/L	Ū	Ū			
REG	Carbon Disulfide	250	UG/L	Ū	Ū			
REG	Carbon Tetrachloride		UG/L	Ū	Ū			
REG	Chlorobenzene	100	UG/L	Ū	Ū			
REG	Chloroethane		UG/L	Ū	Ū			
REG	Chloroform		UG/L	Ū	Ū			
REG	Chloromethane		UG/L	Ū	Ū			
REG	Dibromochloromethane	100		ŭ	Ū			
REG	Ethylbenzene	588		-	=			
REG	Methylene Chloride	180		в	U	F01,F07		
REG	Styrene	100		Ũ	Ũ			
REG	Tetrachioroethene	100		Ŭ	Ŭ			
REG	Toluene	986		-	ŭ	F04,F07		
REG	Trichloroethene	100		U	Ŭ			
REG	Vinyl Chloride	100		ŭ	Ŭ			
REG	Xylenes, Total	2460		~	Ĵ	C02,C05		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LWC2

266E11

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	7.5 - 9.0 FT	Field Sample Type: Gra	b M	latrix: Gr	oundwate	r	Collected: 07/	07/17/97
Samı Typ		Result	Units	Qual Lab	lifiers Data	Validation Code		
REG	1,1,1-Trichloroethane	2	UG/L	U	<u> </u>			
REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U			
REG	1,1,2-Trichloroethane	2	UG/L	U	U			
REG	1,1-Dichloroethane	2	UG/L	Ú	U			
REG	1,1-Dichloroethene	2	UG/L	U	U			
REG	1,2-Dichloroethane	2	UG/L	U	U			
REG	1,2-Dichloropropane	2	UG/L	U	U			
REG	1,2-cis-Dichloroethene	2	UG/L	U	U			
REG	1,2-trans-Dichloroethene	2	UG/L	U	U			
REG	1,3-cis-Dichloropropene	2	UG/L	U	U			
REG	1,3-trans-Dichloropropene	2	UG/L	U	U			
REG	2-Butanone	5	UG/L	U	U			
REG	2-Hexanone	5	UG/L	U	U			
REG	4-Methyl-2-pentanone	5	UG/L	U	U			
REG		5	UG/L	U	U			
REG	Benzene	2	UG/L	U	U			
REG	Bromodichloromethane	2	UG/L	U	U			
REG	Bromoform	2	UG/L	U	U			
REG	Bromomethane	2	UG/L	U	U			
REG	Carbon Disulfide		UG/L	Ŭ	Ū			
REG	Carbon Tetrachioride		UG/L	Ŭ	Ŭ			
REG	Chlorobenzene		UG/L	Ū	Ū			

Phase II RFI

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Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LWC2

266E11	:	7.5 - 9.0 FT	Field Sample Type: (Gra	b M	Matrix: G	roundwat	ər	Collected: 07/17/97
	Sample Type	Volatile Organics	Result		Units	Qua Lab	lif iers Data	Validation Code	
	REG	Chloroethane	·······	2	UG/L	<u> </u>	U		
	REG	Chloroform		2	UG/L	U	U		
	REG	Chloromethane		2	UG/L	U	Ü		
	REG	Dibromochloromethane		2	UG/L	U	Ú		
	REG	Ethylbenzene		2	UG/L	U	Ŭ		
	REG	Methylene Chloride		2	UG/L	Ú	Ū		
	REG	Styrene		2	UG/L	Ú	Ū		
	REG	Tetrachloroethene		2	UG/L	Ŭ	Ū	•	
	REG	Toluene		2	UG/L	Ū	Ū		
	REG	Trichloroethene			UG/L	Ŭ	Ū		
	REG	Vinyi Chloride			UG/L	Ū	Ū		
	REG	Xylenes, Total			UG/L	Ŭ	Ŭ		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : LWC3

Sampk Type	Volatile Organics	Result	Units		ualifiers sb Data	Validation Code	
REG				_			
REG	1,1,1-Trichloroethane		UG/L		U		
REG	1,1,2,2-Tetrachioroethane 1,1,2-Trichloroethane		UG/L		U		
REG	1,1-Dichloroethane		UG/L	-	U		
REG	1,1-Dichloroethene		UG/L	U	U		
REG	1,2-Dichloroethane		UG/L	U	U		
REG	•		UG/L	U	U		
REG	1,2-Dichloropropane 1,2-cis-Dichloroethene		UG/L	U	U		
REG	1,2-trans-Dichloroethene	_	UG/L	U	U		
REG			UG/L	U	U		
REG	1,3-cis-Dichloropropene		UG/L	U	U		
REG	1,3-trans-Dichloropropene 2-Butanone		UG/L	U	U		
REG	2-Hexanone		UG/L	U	U		
REG			UG/L	U	U		
REG	4-Methyl-2-pentanone Acelone		UG/L	U	U		
REG	Benzene		UG/L	U	U		
REG	Bromodichloromethane		UG/L	U	U		
REG	Bromoform		UG/L	U	U		
REG	Bromomethane		UG/L	U	U		
REG		_	UG/L	U	U		
REG	Carbon Disulfide Carbon Tetrachioride		UG/L	U	U		
REG	Chlorobenzene		UG/L	U	U		
REG	Chloroethane		UG/L	U	U		
REG	Chloroform	-	UG/L	U	U		
REG	Chloromethane	—	UG/L	U	U		
REG			UG/L	U	U		
REG	Dibromochloromethane		UG/L	U	U		
	Ethylbenzene Molkulana Oblasida	—	UG/L	U	U		
REG	Methylene Chloride		UG/L	U	U		
	Styrene Tetrachloroethene		UG/L	U	U		
			UG/L	Ū.	U		
	Toluene		UG/L	U	U		
	Trichloroethene		UG/L	U	U		
	Vinyl Chloride Xylenes, Total	2	UG/L	U	U		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MC1

266K11	1	1.0 - 11.0 FT Field Sample Type: Grab Matrix: Groundwater					er	Collected: 07/10/97		
	Sample Type	Volatile Organics	Result	Units	Qua Lab	lfiers Data	Validation Code			
	REG	1,1,1-Trichloroethane	······································	2 UG/L	U	U		_		
	REG	1,1,2,2-Tetrachloroethane		2 UG/L	Ŭ	Ū				

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MC1

Sample)			Qua	liflers	Validation	
Туре		Result	Units		Data	Code	
REG	1,1,2-Trichloroethane	2	UG/L	- .	U		_
REG	1.1-Dichloroethane	2	UG/L	U	U		
REG	1,1-Dichloroethene	2	UG/L	U	U		
REG	1,2-Dichloroethane	2	UG/L	U	U		
REG	1,2-Dichloropropane	2	UGIL	U	U		
REG	1,2-cis-Dichloroethene	2	UG/L	U	U		
REG	1,2-trans-Dichloroethene	2	UG/L	U	U		
REG	1 3-cis-Dichloropropene	2	UGL	U	U		
REG	1,3-trans-Dichloropropene	2	UG/L	U	U		
REG	2-Butanone	5	UG/L	U	U		
REG	2-Hexanone	5	UG/L	U	U		
REG	4-Methyl-2-pentanone		UG/L	Ū	Ū		
REG	Acetone	59	UG/L	-	=		
REG	Benzene	2	UG/L	U	U		
REG	Bromodichloromethane	2	UG/L	Ŭ	Ū		
REG	Bromoform		UG/L	Ū	Ū		
REG	Bromomethane		UG/L	Ū	Ū		
REG	Carbon Disulfide		UG/L	Ū	Ū		
REG	Carbon Tetrachloride		UG/L	Ŭ	Ŭ		
REG	Chlorobenzene	-	UG/L	ū	ŭ		
REG	Chloroethane	-	UG/L	Ŭ	Ŭ		
REG	Chloroform	-	JGA	ŭ	Ŭ		
REG	Chloromethane	_	UG/L	Ŭ	ŬJ	C05	
REG	Dibromochloromethane	_	UG/L	ŭ	Ű		
REG	Ethylbenzene		JG/L	ŭ	ŭ		
REG	Methylene Chloride	_	JG/L	ŭ	Ŭ		
REG	Styrene	_	JG/L	Ŭ	Ŭ		
REG	Tetrachloroethene	_	JG/L	Ŭ	Ŭ		
REG	Toluene	4.3		v	Ŭ	F04,F07	
REG	Trichlorgethene		JG/L	U	Ŭ	i varu	
REG	Vinyl Chloride		JG/L	U	U	÷	
REG	Xylenes, Total		JG/L	U	UJ U	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MC2

266M11		5.0 - 15.0 FT	Field Sample Type: Gra	> N	Aatrix: Gr	oundwate	9 r '	Collected:	07/10/97
	Sample Type	Volatile Organics	Result	Units		lfiers Data	Validation Code		
	REG	1,1,1-Trichloroethane	2	UG/L	U	U		_	
	REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U			
	REG	1,1,2-Trichloroethane	2	UG/L	U	U			
	REG	1,1-Dichloroethane	2	UG/L	U	U			
	REG	1,1-Dichloroethene	2	UG/L	U	U			
	REG	1,2-Dichloroethane	2	UG/L	U	U			
	REG	1,2-Dichloropropane	2	UG/L	U	Ú			
	REG	1,2-cis-Dichloroethene	2	UG/L	Ű	Ű			
	REG	1,2-trans-Dichloroethene	2	UG/L	Ú	Ū			
	REG	1,3-cls-Dichloropropene	2	UG/L	Ū	Ū			
	REG	1,3-trans-Dichloropropene	2	UG/L	U	Ú			
	REG	2-Butanone	5	UG/L	U	Ŭ			
	REG	2-Hexanone	5	UG/L	Ū	Ŭ			
	REG	4-Methyl-2-pentanone	5	UG/L	Ū	Ū			
	REG	Acetone	7.3	UG/L		=			
	REG	Benzene	2	UG/L	U	U			
	REG	Bromodichloromethane	2	JG/L	Ŭ	Ū			
	REG	Bromoform	2	JG/L	Ū	Ū			
	REG	Bromomethane	2	JG/L	Ū	Ū			
	REG	Carbon Disulfide	5	JG/L	Ŭ	Ũ			
	REG	Carbon Tetrachioride	2	JG/L	Ū	Ŭ			
	REG	Chlorobenzene		JG/L	Ū	Ū			
	REG	Chloroethane	2	JG/L	Ū	Ŭ			
	REG	Chloroform		JG/L	Ŭ	Ŭ			

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MC2

266M11	l.	5.0 -15.0 FT	Field Sample Type:	Grab	Matrix	c: Gro	oundwa	iter	Collected: 07/10/97
	Sample Type	Volatile Organics	Result	Unit		Quali Lab	lfiers Data	Validation Code	
	REG	Chloromethane		2 UG/L	<u> </u>		UJ	C05	
	REG	Dibromochloromethane		2 UG/L	Ū		Ű		
	REG	Ethylbenzene		2 UG/L			Ū		
	REG	Methylene Chloride		2 UG/L			Ū		
	REG	Styrene		2 UG/L			ม		
	REG	Tetrachloroethene		2 UG/L	-		Ū		
	REG	Toluene		8 UG/L			บั	F04.F07	
	REG	Trichloroethene		2 UG/L			Ŭ	1041107	
	REG	Vinyl Chloride		2 UG/L			Ŭ		
	REG	Xylenes, Total		2 UG/L			ŬJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MC3

266N11

266N21

REG

1,2-Dichloropropane

5.0	- 15.0	FT

	5.0 -15.0 FT	Field Sample Type: G			: Groundw		Collected: 07/10/9
Sample Type	Volatile Organics	Result	Units		Qualifiers .ab Data	Validation Code	
REG	1,1,1-Trichloroethane		2 UG/L	Ū	U	-	
REG	1,1,2,2-Tetrachloroethane		2 UG/L	U	U		
REG	1,1,2-Trichloroethane		2 UG/L	U	U		
REG	1,1-Dichloroethane		2 UG/L	U	U		
REG	1,1-Dichloroethene		2 UG/L	U	U		
REG	1,2-Dichloroethane		2 UG/L	U	U		
REG	1,2-Dichloropropane		2 UG/L	U	U		
REG	1,2-cis-Dichloroethene		2 UG/L	U	Ú		
REG	1,2-trans-Dichloroethene		2 UG/L	U	Ŭ		
REG	1,3-cis-Dichloropropene		2 UG/L	U	Ŭ		
REG	1,3-trans-Dichloropropene		2 UG/L	U	U		
REG	2-Butanone	:	5 UG/L	U	U		
REG	2-Hexanone		5 UG/L	Ū	Ū		
REG	4-Methyl-2-pentanone		5 UG/L	Ū	Ū		
REG	Acetone		5 UG/L	Ū	Ũ		
REG	Benzene	:	2 UG/L	U	Ū		
REG	Bromodichloromethane		2 UG/L	Ū	Ŭ		
REG	Bromoform		2 UG/L	Ū	Ŭ		
REG	Bromomethane		2 UG/L	Ū	Ũ		
REG	Carbon Disuifide		5 UG/L	Ũ	ū		
REG	Carbon Tetrachloride		2 UG/L	Ū	Ū		
REG	Chlorobenzene		2 UG/L	Ū	Ũ		
REG	Chloroethane		2 UG/L	Ū	Ŭ		
REG	Chloroform		UG/L	Ū	Ŭ		
REG	Chloromethane		UGA	Ũ	Ū		
REG	Dibromochloromethane	2	UG/L	Ū	Ũ		
REG	Ethylbenzene		UGA	Ū	ŭ		
REG	Methylene Chloride		UG/L	B	Ŭ	F01,F07	
REG	Styrene		UG/L	Ū	Ŭ		
REG	Tetrachloroethene		UG/L	Ū	Ŭ		
REG	Toluene		UG/L	Ŭ	ŭ		
REG	Trichloroethene		UG/L	Ŭ	Ŭ		
REG	Vinyl Chloride		UG/L	Ŭ	ŭ		
REG	Xylenes, Total		UG/L	Ŭ	ŪJ	C02	
5.0) •10.0 FT F	leid Sample Type: Field Du	plicate	Ma	trix: Grou	ndwater	Collected: 07/10/97
ample Type	Volatile Organica	Result	Units	Qu	alifiers b Data	Validation Code	
REG	1,1,1-Trichloroethane		UG/L	U			_
	1,1,2,2-Tetrachloroethane		UG/L	Ŭ	Ŭ		
	1,1,2-Trichloroethane		UG/L	Ŭ	U		
	1,1-Dichloroethane		UG/L	U	Ŭ		
	1,1-Dichloroethene		UG/L	U	U		
	1,2-Dichloroethane		UG/L	U	U U		
		2	UGIL		U		

2 UG/L U

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : MC3

266N21	ť	5.0 -10.0 FT	Field Sample Type: Field D	upłł	cate	Matri	x: Grou	ndwater	Collected: 07/10/9
	Sample Type		Result	U	Inits	Qual Lab	ifiers Data	Validation Code	
	REG	1,2-cis-Dichloroethene		2 Ū	IG/L	U	U		
	REG	1,2-trans-Dichloroethene		2 U	IG/L	U	U		
	REG	1,3-cis-Dichloropropene		2 U	IG/L	U	U		
	REG	1,3-trans-Dichloropropene		2 U	G/L	U	U		
	REG	2-Butanone		5 U	G/L	U	U		
	REG	2-Hexanone		5 U	G/L	U	U		
	REG	4-Methyl-2-pentanone		5 U	G/L	U	U		
	REG	Acetone		5 U	G/L	U	U		
	REG	Benzene		2 U	G/L	U	U		
	REG	Bromodichloromethane		2 U	G/L	U	υ		
	REG	Bromoform		2 U	GL	U	Ú		
	REG	Bromomethane		2 U	G/L	U	U		
	REG	Carbon Disulfide		5 U	G/L	U	Ú		
	REG	Carbon Tetrachloride		2 14	G/L	Ū	Ŭ		
	REG	Chlorobenzene		2 0	G/L	Ŭ	Ŭ		
	REG	Chloroethane		2 00		ŭ	Ū		
	REG	Chloroform		2 00		Ũ	Ŭ		
	REG	Chloromethane		2 0		Ŭ	ŬJ	C05	
	REG	Dibromochloromethane		2 00		ŭ	Ű		•
	REG	Ethylbenzene		1.00		Ĵ	.i		
	REG	Methylene Chloride		2 00		Ŭ	ŭ		
	REG	Styrene		2 00		Ŭ	Ŭ		
	REG	Tetrachloroethene		2 00		Ŭ	Ŭ		
	REG	Toluene		2 00		ŭ	ŭ		
	REG	Trichloroethene		2 00		Ŭ	Ŭ		
	REG	Vinyl Chloride		2 00		ŭ	ŭ		
		Xylenes, Total		2 U(U	UJ U	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MC4

266P11

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Sample					allfiers	Validation	
Туре	Volatile Organica	Result	Units	Lal) Data	Code	
REG	1,1,1-Trichloroethane	2	UG/L	Ū	U		_
REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U		
REG	1,1,2-Trichloroethane	2	UG/L	U	U		
REG	1,1-Dichloroethane	2	UG/L	U	U		
REG	1,1-Dichloroethene	2	UG/L	U	U		
REG	1,2-Dichloroethane	2	UG/L	U	U		
REG	1,2-Dichloropropane	2	UG/L	U	U		
REG	1,2-cis-Dichloroethene	2	UG/L	Ū	Ū		
REG	1,2-trans-Dichloroethene	2	UG/L	U	U		
REG	1,3-cls-Dichloropropene	2	UG/L	U	U		
REG	1,3-trans-Dichloropropene	2	UG/L	Ū	Ű		
REG	2-Butanone	5	UG/L	Ũ	Ŭ		
REG	2-Hexanone	5	UG/L	Ŭ	Ű		
REG	4-Methyl-2-pentanone	5	UG/L	Ŭ	Ű		
REG	Acetone	6.7	UG/L	-	=		
REG	Benzene	2	UG/L	U	U		
REG	Bromodichloromethane	. 2	UGIL	U	Ŭ		
REG	Bromoform	2	UG/L	Ū	Ŭ		
REG	Bromomethane	2	UG/L	Ŭ	Ŭ		
REG	Carbon Disulfide	5	UG/L	Ŭ	Ū		
REG	Carbon Tetrachioride	2	UG/L	Ū	Ū		
REG	Chlorobenzene	2	UG/L	Ŭ	Ū		
REG	Chloroethane		UG/L	Ũ	Ŭ ·		
REG	Chloroform	2	UG/L	Ũ	Ū		
REG	Chloromethane	2	UG/L	Ū	Ū		
REG	Dibromochloromethane	_	UG/L	Ū	Ū		
EG	Ethylbenzene	_	UG/L	Ū	Ŭ		
	Methylene Chloride	_	UG/L	Ũ	Ŭ		
EG	Styrene		UG/L	Ŭ	Ŭ		

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MC4

1		Field Sample Type: Grab Matrix: Groundwater						Collected: 07/10/93		
	Sample Type	Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	· · · · · · · · · · · · · · · · · · ·		
	REG	Tetrachloroethene		2 UG/L				414**		
	REG	Toluene		2 UG/L 2 UG/L	U U	U U				
	REG	Trichloroethene		2 UG/L	Ŭ	Ŭ				
	REG	Vinyi Chloride		2 UG/L	ŭ	ŭ				
	REG	Xylenes, Total		2 UG/L	Ū	ŬJ	C02			

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MC5

266P11

 Sample	A			~			
Туре	Volatile Organics	Result	Units	Qu Lai	alifiers b Data	Validation Code	
REG	1,1,1-Trichloroethane	2	UG/L	- U	υ	-	_
REG	1,1,2,2-Tetrachloroethane		UG/L	Ū	Ũ		
REG	1,1,2-Trichloroethane		UG/L	Ū	Ŭ		
REG	1,1-Dichloroethane		UG/L	Ū	Ŭ		
REG	1,1-Dichloroethene		UG/L	Ū	Ŭ		
REG	1,2-Dichloroethane		UG/L	Ŭ	Ŭ		
REG	1,2-Dichloropropane		UG/L	Ŭ	Ŭ		
REG	1,2-cis-Dichloroethene		UG/L	ŭ	Ŭ		
REG	1,2-trans-Dichloroethene		UG/L	ŭ	ŭ		
REG	1,3-cis-Dichloropropene		UG/L	ŭ	Ŭ		
REG	1,3-trans-Dichloropropene		UG/L	Ŭ	Ŭ		
REG	2-Bulanone		UG/L	Ŭ	Ŭ		
REG	2-Hexanone		UG/L	Ŭ	Ŭ		
REG	4-Methyl-2-pentanone		UGIL	ŭ	Ŭ		
REG	Acetone		UG/L	U	=		
REG	Benzene		UG/L	U	Ū		
REG	Bromodichloromethane	-	UG/L	Ŭ	ŭ		
REG	Bromoform		UG/L	Ŭ	Ŭ		
REG	Bromomethane		UG/L	Ŭ	Ŭ		
REG	Carbon Disulfide		UG/L	Ŭ	Ŭ		
REG	Carbon Tetrachloride		UG/L	Ŭ	Ŭ		
REG	Chiorobenzene	_	UG/L	U	Ŭ		
REG	Chloroethane		UG/L	Ŭ			
REG	Chloroform		UG/L	U	U		
REG	Chloromethane		UG/L	U	U UJ	0.07	
REG	Dibromochloromethane		UG/L	U		C05	
	Ethylbenzene		UG/L	U	U		
	Methylene Chloride		UG/L UG/L	-	U		
	Styrene			U	U		
	Tetrachloroethene		UG/L	U	U		
	Toluene		UG/L	U	U		
	Trichloroethene		UG/L	U	U		
	Vinyl Chloride		UG/L	U	U		
			UG/L	U	U	_	
NEO	Xylenes, Total	2	UG/L	U	UJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW1

261111	0).0 - 2.0 FT	Field Sample Type: Grab	Mat	rix: Sub	surface	Soll	Collected: 07/23/97
	Sample Type	Metals	Result	Units	Qual Lab	lifiers Data	Validation Code	
	REG	Arsenic	0.17	MG/KG	U	Ü	-	_
	REG	Barium		MG/KG		=		
	REG	Cadmium		MG/KG	-	Ū		
	REG	Chromium		MG/KG	-	Ŭ	F01.F06	
	REG	Lead		MG/KG		=	FV1,F00	
	REG	Mercury		MG/KG	-	Ū		
	REG	Selenium		MG/KG	-	J		
	REG	Silver		MG/KG	-	Ű		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Sample Type	Semi-Volatile Organics	Result	Units	Qual Lab	ifiers Data	Validation Code
REG	2-Chloronaphthalene	372	UG/KG	U	U	
REG	Acenaphthene	372	UG/KG	Ū	U	
REG	Acenaphthylene	372	UG/KG	Ū	Ū	
REG	Anthracene	372	UG/KG	Ŭ	Ū	
REG	Benzo(a)anthracene	372	UG/KG	U	Ŭ	
REG	Benzo(a)pyrene	372	UG/KG	Ū	Ŭ	
REG	Benzo(b)fluoranthene	372	UG/KG	Ū	Ū	
REG	Benzo(g,h,i)perylene	372	UG/KG	Ū	Ū	
REG	Benzo(k)fluoranthene	372	UG/KG	Ū	Ŭ	
REG	Chrysene	372	UG/KG	Ū	Ũ	
REG	Dibenzo(a,h)anthracene		UG/KG	-	Ũ	
REG	Fluoranthene		UG/KG	-	Ũ	
REG	Fluorene		UG/KG		Ŭ	
REG	Indeno(1,2,3-cd)ovrene		UG/KG	-	Ŭ	
	Naphthalene		UG/KG	-	Ŭ	
REG	Phenanthrene		UG/KG	-	Ŭ	
REG	Pyrene		UG/KG	-	Ŭ	

Sample Type	Volatile Organics	Result	Units	Qu Lat	allfiers Data	Validation Code
REG	1,1,1-Trichloroethane	2.3	UG/KG	U	U	
REG	1,1,2,2-Tetrachloroethane	2.3	UG/KG	υ	UJ	K01
REG	1,1,2-Trichloroethane	2.3	UG/KG	U	Ú	
REG	1,1-Dichloroethane	2.3	UG/KG	U	Ú	
REG	1,1-Dichloroethene	2.3	UG/KG	U	Ú	
REG	1,2-Dichloroethane	2.3	UG/KG	U	Ú	
REG	1,2-Dichloropropane	2.3	UG/KG	Ū	Ŭ	
REG	1,2-cis-Dichloroethene	2.3	UG/KG	Ū	Ũ	
REG	1,2-trans-Dichloroethene	2.3	UG/KG	Ū	Ű	
REG	1,3-cis-Dichloropropene	2.3	UG/KG	U	Ú	
REG	1,3-trans-Dichloropropene	2.3	UG/KG	U	Ú	
REG	2-Butanone	5.7	UG/KG	υ	U	
REG	2-Hexanone	5.7	UG/KG	U	UJ	K01
REG	4-Methyl-2-pentanone	5.7	UG/KG	U	ŬĴ	K01
REG	Acetone	5.7	UG/KG	U	U	
REG	Benzene	2.3	UG/KG	U	U	
REG	Bromodichloromethane	2.3	UG/KG	Ū	Ũ	
REG	Bromoform	2.3	UG/KG	U	U	
	Bromomethane	2.3	UG/KG	U	U	
REG	Carbon Disulfide	5.7	UG/KG	U	Ú	
REG	Carbon Tetrachloride	2.3	UG/KG	U	Ú	
REG	Chlorobenzene	2.3	UG/KG	U	ŪJ	K01
REG	Chloroethane	2.3	UG/KG	U	Ū	
REG	Chloroform	2.3	UG/KG	บ	Ū	
REG	Chloromethane	2.3	UG/KG	Ú	Ū	
REG	Dibromochloromethane	2.3	UG/KG	U	U	
REG	Ethylbenzene	2.3	UG/KG	U	ÚJ	K01
REG	Methylene Chloride	6.5	UG/KG	в	U	F01,F07
REG	Styrene	2.3	UG/KG	U	UJ	K01
REG	Tetrachloroethene	2.3	UG/KG	U	ŬĴ	K01 ·
REG	Toluene	2.3 (JG/KG	U	ŨĴ	K01
REG 1	Trichloroethene	2.3 (JG/KG	U	Ū	
REG	Vinyl Chloride		JG/KG	-	Ŭ	
REG D	Kylenes, Total		JG/KG	-	ŨJ	C02,K01

	2.0 - 3.3 FT	Fleid Sample Type: Grab	Mat	rix: Sut	surface	Soll	Collected: 07/23/97
Sampi Type		Result	Units		lifiers Data	Validation Code	9400- NOVAL
REG	Arsenic	0.56	MG/KG	B	J		_
REG	Barium	6.4	MG/KG		=		
REG	Cadmium	0.06	MG/KG	U	U		
REG	Chromium	4.3	MG/KG		=		
REG	Lead	4.7	MG/KG	в	=		
REG	Mercury	0.01	MG/KG	Ū	U		
REG	Selenium	0.67	MG/KG	B	Ĵ		
REG	Silver		MG/KG	-	Ŭ	F01,F06	

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Samp Type		Result	Units	i	Qua Lab	lifiers Data	Validation Code		
REG	2-Chloronaphthalene	376	UG/K	Gι	,	U			
REG	Acenaphthene	376	UG/K	Gυ	1	U			
REG	Acenaphthylene	376	UG/K	Gυ		U			
REG	Anthracene		UG/K			U			
REG	Benzo(a)anthracene	376	UG/K	Gυ	l i	U			
REG	Benzo(a)pyrene	376	UG/K	Gυ	1	U			
REG	Benzo(b)fluoranthene		UG/K			Ū			
REG	Benzo(g,h,i)perylene	376	UG/KC	GŪ		Ū			
REG	Benzo(k)fluoranthene	376	UG/K	ā ū		Ū			
REG	Chrysene		UG/KC			Ū			
REG	Dibenzo(a,h)anthracene		UG/K			Ŭ			
REG	Fluoranthene		UG/KC	-		Ŭ			
REG	Fluorene		UG/KG			Ŭ			
REG	Indeno(1,2,3-cd)pyrene		UG/KG			Ŭ			
REG	Naphthalene		UG/KG			ŭ			
REG	Phenanthrene		UG/KG			Ŭ			
REG	Pyrene		UG/KG	-		U			
Sampie Type	e Total Organic Carbon (TOC)	Devult			Quali		Validation		
REG	Total Organic Carbon (TOC)	Result	Units MG/KG		Lab	Data =	Code		
	-	100	MGING	3		-	F08		
<u> </u>	Volatile Organics	Result	Units		Quali Lab	fiers Data	Validation Code		
REG	1,1,1-Trichloroethane	2.3	UG/KG	Ū		Ū			
REG	1,1,2,2-Tetrachloroethane	2.3	UG/KG	U		UJ	K01		
REG	1,1,2-Trichloroethane	2.3	UG/KG	U		Ü			
REG	1,1-Dichloroethane		UG/KG	-		ŬJ	K01		
REG	1,1-Dichloroethene		UG/KG			ŨĴ	K01		
REG	1,2-Dichloroethane		UG/KG			UJ	K01		
REG	1,2-Dichloropropane		UG/KG			Ű			
REG	1,2-cis-Dichloroethene		UG/KG	-		Ŭ			
REG	1,2-trans-Dichloroethene		UG/KG			ŬJ	K01		
REG	1,3-cis-Dichloropropene		UG/KG			U U	KVI		
REG	1,3-trans-Dichloropropene		UG/KG			Ŭ			
REG	2-Butanone		UG/KG			-	KAL OPE		
REG	2-Hexanone					UJ	K01,C05		
REG	4-Methyl-2-pentanone		UG/KG			UJ	K01		
REG	Acetone		UG/KG			Ul	K01		
REG			UG/KG			J	K01,C05		
	Benzene Benzene diable error it error		UG/KG	-		U			
REG	Bromodichloromethane		UG/KG	-		U			
REG	Bromoform		UG/KG			J			
REG	Bromomethane	2.3 1	UG/KG	U	(11	K01		
REG	Carbon Disulfide	5.8 (UG/KG	U	L I	JJ	K01		
REG	Carbon Tetrachloride	2.3 เ	UG/KG	U	- 1	J			
REG	Chlorobenzene	2.3 ไ	UG/KG	U	- 1	JJ	K01		
REG	Chloroethane	2.3 (UG/KG	U	L L	JJ	K01		
REG	Chloroform		JG/KG			IJ	K01		
REG	Chloromethane		JG/KG).J	K01		
REG	Dibromochloromethane		JG/KG	-		J			
REG	Ethylbenzene		JG/KG	-		ĴJ	K01		
REG	Methylene Chloride		JG/KG)	K01, F01, F07		
REG	Styrene		JG/KG			, JJ	K01, F01, F07		
	Tetrachloroethene		JG/KG			11 12			
	Toluena		JG/KG	U.			K01		
	Trichloroethene		JG/KG		J		K01		
	Vinyl Chloride			-	L L		1404		
	Xylenes, Total		JG/KG IG/KG				K01 C02,K01		
4.0	0 -14.0 FT	Field Sample Type: Grab				ndwate		Collected:	08/13
mple	· · · · · · · · · · · · · · · · · · ·								
	Alkalinity	Result L	Jnits		ualifie 15 I	ers Data	Validation Code		
	Alkalinity	45.4.1							

Туре	Alkalinity	Result	Units	Lab	Data	Code
REG	Alkalinity	45.1	MG/L	<u> </u>	=	
Sample Type	Common Anions	Result	Units	Quai Lab	flers Data	Validation Code
REG	Nitrate	.5	MG/L		U	· · · · · · · · · · · · · · · · · · ·

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : MW1

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0	4.0 - 14.0 FT	Field Sample Type: Gra		Matrix: G			Collected:	
Samp Type		Result	Units		ulifiers Data	Validation Code		
REG	Nitrite	.5	MG/L		U	-		
REG	Sulfate	3.07	MG/L		=			
REG	Sulfide	.1	MG/L		U			
Sampi Type		Result	Units	Qua Lab	lifiers Data	Validation Code		
REG	Arsenic		UG/L		=			
REG	Barium		UG/L	В	J			
REG REG	Cadmlum Chromium		UG/L UG/L	UUU	U	540		
REG	Lead		UG/L	0	1 U1	F10 F10		
REG	Mercury		UG/L		=			
REG REG	Selenium Silver		UG/L UG/L	B	J =			
Sampl	θ			Qual	lifiers	Validation		
Type	Diesel Range Organics	Result	Units	Lab	Data	Code	_	
REG REG	Ethane Ethene		UG/L UG/L	UU	UU			
REG	Methane		UG/L UG/L	U	=			
Sample Type	s Semi-Volatile Organics	Posuit	Linite		ifiers	Validation		
REG	2-Chloronaphthalene	Result 0.21		Lab U	Data U	Code	-	
REG	Acenaphthene	0.21		U	Ŭ			
REG	Acenaphthylene	0.21	UG/L	Ŭ	Ū			
REG	Anthracene	0.21	UG/L	U	U			
REG	Benzo(a)anthracene	0.21		U	U			
REG REG	Benzo(a)pyrene Benzo(b)6ueraethene	0.21		U	U			
REG	Benzo(b)fluoranthene Benzo(c h brendeno	0.21		U	U			
REG	Benzo(g,h,i)perylene Benzo(k)fluoranthene	0.21		U U	U U			
REG	Chrysene	0.21 0.21		U	Ŭ			
REG	Dibenzo(a,h)anthracene	0.21		Ŭ	Ŭ			
REG	Fluoranthene	0.21		Ŭ	Ŭ			
REG	Fluorene	0.21		Ŭ	Ŭ			
REG	Indeno(1,2,3-cd)pyrene	0.21		Ŭ	Ŭ			
REG	Naphthalene	0.21	JG/L	Ū	Ū			
REG REG	Phenanthrene Pyrene	0.21 (0.21 (U U	U U			
Sample				Quali	fiers	Validation		
	Volatile Organics		Units	Lab	Data	Code		
REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	2 1	jg/l jg/l	U U	UUU			
REG	1,1,2-Trichloroethane		JG/L		U			
REG	1,1-Dichloroethane		JG/L		Ŭ			
REG	1,1-Dichloroethene				Ŭ			
REG	1,2-Dichloroethane		IG/L		Ů			
REG	1,2-Dichloropropane		IG/L		U			
REG	1,2-cis-Dichloroethene		IG/L	U	U			
REG	1,2-trans-Dichloroethene		IG/L		U			
REG	1,3-cis-Dichloropropene		IG/L		U			
REG	1,3-trans-Dichloropropene		IG/L		U			
REG	2-Butanone		G/L		UJ	C05		
REG	2-Hexanone	5 U			U			
	4-Methyl-2-pentanone				U			
	Acetone Benzene					C04,C05		
		2 U			U U			
REG	Bromodichloromethane							
	Bromodichloromethane Bromoform	2 U 2 U						
REG	Bromodichloromethane Bromoform Bromomethane	2 U 2 U 2 U	G/L	U	U U			

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW1

264111	4.0 -14.0 FT F		Field Sample Type: Gr	eld Sample Type: Grab		roundwa	Collected: 08/1		
	Sampi Type		Result	Units	Qua Lab	llfiers Data	Validation Code		
	REG	Carbon Tetrachloride	2	UG/L	- .	U			
	REG	Chlorobenzene	2	UG/L	U	U			
	REG	Chloroethane	2	UG/L	U	U			
	REG	Chloroform	2	UG/L	U	U			
	REG	Chloromethane	7.1	UG/L		=			
	REG	Dibromochloromethane	2	UG/L	U	U			
	REG	Ethylbenzene	2	UG/L	U	U			
	REG	Methylene Chloride		UG/L		=			
	REG	Styrene		UG/L	U	U			
	REG	Tetrachloroethene		UG/L	U	U			
	REG	Toluene		UG/L	U	U			
	REG REG	Trichloroethene		UG/L	U	U			
	REG	Vinyl Chloride Xylenes, Total		UG/L UG/L	U U	UJ UJ	C02		
64494								0 -1111	
64121		4.0 - 14.0 FT	Field Sample Type: Field Du	plicate			ndwater	Collected:	08/13/9
	Sampi Type	Alkalinity	Result	Units		ifiers Data	Validation Code		
	REG	Alkalinity	43.7	MG/L	-	=	ter en en en en en en en en en en en en en	_	
	Sample		M = =14	12-14-		iflers	Validation		
	Type REG	Common Anlons Nitrate	Result	Units MG/L	Lab	Data U	Code	_	
	REG	Nitrite		MG/L		U			
	REG	Sulfate		MG/L		=			
	REG	Sulfide		MG/L		U			
	Sample	1			Qual	fiers	Validation		
		Metals	Result	Units	Lab	Data	Code		
	REG	Arsenic		UG/L	_	=			
	REG ·			UG/L	В	J			
	REG	Cadmium		UG/L	U	U			
	REG REG	Chromium		UG/L	U	01	F10		
	REG	Lead Mercury		UG/L		J	F10		
	REG	Selenium	0.31 0.56		в	=			
	REG	Silver		UG/L	Ð	J =			
	Sample				Quali	fiers	Validation		
	Туре	Diesel Range Organics	Result	Units	Lab	Data	Code	_	
	REG	Ethane		UG/L	U	U		-	
	REG	Ethene		UG/L	U	U			
	REG	Methane	32.6	UG/L		=			
	Sample Type	Semi-Volatile Organics	Result	Units	Qualit Lab	fiers Data	Validation Code		
	REG	2-Chloronaphthalene	0.21	UG/L	U	U		-	
	REG	Acenaphthene	0.21		U	U			
	REG	Acenaphthylene	0.21		U	U			
	REG	Anthracene	0.21		U	U			
	REG	Benzo(a)anthracene	0.21			U			
	REG	Benzo(a)pyrene	0.21			U			
	REG	Benzo(b)fluoranthene	0.21			U			
	REG	Benzo(g,h,i)perylene	0.21			U			
	REG	Benzo(k)fluoranthene	0.21			U			
	REG	Chrysene	0.21			U			
	REG	Dibenzo(a,h)anthracene	0.21			U			
	REG	Fluoranthene Fluorene	0.21			U			
			0.21	רטיר	U I	U			
	REG					11			
		Indeno(1,2,3-cd)pyrene Naphthalene	0.21	JG/L	Ú	U U			

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : MW1

264121	4	i.0 -14.0 FT	Field Sample Type: Field Du	plicate	Ma	trix: Grou	ndwater	Collected: 08/13/9
	Sample Type	Semi-Volatile Organics	Result	Units	Qu La	allfiers b Data	Validation Code	Ma** •
	REG	Pyrene	0.21	UG/L	U	U		
	Sample				Qu	allfiers	Validation	
	Туре	Volatile Organics	Result	Units	La	b Data	Code	
	REG	1,1,1-Trichloroethane		UG/L	U	U		
	REG	1,1,2,2-Tetrachloroethane		UG/L	U	U		
	REG	1,1,2-Trichloroethane	2	UG/L	U	U		
	REG	1,1-Dichloroethane	2	UG/L	υ	U		
	REG	1,1-Dichloroethene	2	UG/L	U	U		
	REG	1,2-Dichloroethane	2	UG/L	U	U		
	REG	1,2-Dichloropropane	2	UG/L	U	U		
	REG	1,2-cis-Dichloroethene	2	UG/L	υ	U		
	REG	1,2-trans-Dichloroethene	2	UG/L	U	U		
	REG	1,3-cls-Dichloropropena	2	UG/L	U	U		
	REG	1,3-trans-Dichloropropene	2	UG/L	U	U		
	REG	2-Butanone	5	UG/L	U	UJ	C05	
	REG	2-Hexanone	5	UG/L	U	U		
	REG	4-Methyl-2-pentanone	5	UG/L	Ū	Ū		
	REG	Acetone	2.4	UG/L	Ĵ	Ĵ	C04,C05	
	REG	Benzene		UG/L	Ŭ	Ŭ		
	REG	Bromodichloromethane	2	UG/L	Ū	Ū		
	REG	Bromoform		UG/L	Ũ	Ū		
	REG	Bromomethane		UG/L	Ũ	Ū		
	REG	Carbon Disulfide	- 5	UG/L	Ũ	Ū		
	REG	Carbon Tetrachloride	-	UG/L	Ŭ	Ŭ		
	REG	Chlorobenzene		UG/L	Ŭ	Ŭ		
	REG	Chloroethane		UG/L	Ŭ	Ŭ		
	REG	Chloroform		UG/L	Ŭ	ŭ		
	REG	Chioromethane		UG/L	Ŭ	ŭ		
	·	Dibromochloromethane		UG/L	Ŭ	ŭ		
	REG	Ethylbenzene		UG/L	Ŭ	Ŭ		
		Methylene Chloride		UG/L	Ŭ	Ŭ		
	REG	Styrene		UG/L	Ŭ	Ŭ		
		Tetrachloroethene		UG/L	Ŭ	Ŭ		
		Toluene		UG/L	Ŭ	U		
	REG			UG/L	U	U		
		Trichloroethene		UG/L UG/L	-			
		Vinyl Chloride			U	U	000	
	REG	Xylenes, Total	2	UG/L	U	UJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW2

261211

0.0 - 2.0 FT Field Sample Type: Grab Matrix: Subsurface Soll Sample Qualifiers Validation Type Metals Result Units Lab Data REG Arsenic 0.93 MG/KG B υ F06 REG Barium 14.1 MG/KG B J 0.11 MG/KG U REG Cadmium U 6.3 MG/KG REG Chromium = 5.1 MG/KG E REG Lead J E07 0.02 MG/KG U REG Mercury U

		4.44		÷	· ·	
REG	Selenium	0.22	MG/KG	U	U	
REG	Silver	0.05	MG/KG	B*	UJ	F06,E02
Sample				Qual	ifiers	Validation
Туре	Semi-Volatile Organics	Result	Units	Lab	Data	Code
REG	2-Chloronaphthalene	7.7	UG/KG	U	U	· · · · · · · · · · · · · · · · · · ·
REG	Acenaphthene	7.7	UG/KG	U	U	
REG	Acenaphthylene	7.7	UG/KG	U	U	
REG	Anthracene	7.7	UG/KG	U	U	
REG	Benzo(a)anthracene	7.7	UG/KG	U	U	
REG	Benzo(a)pyrene	77	UG/KG	11	U	

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Collected: 07/24/97

Code
Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW2

Arsenic

Barium

Lead

Silver

1

Mercury

Selenium

Type Semi-Volatile Organics

Cadmium

Chromium

REG

REG

REG

REG

REG

REG

REG

REG

Sample

Sam Typ REC REC REC REC REC REC REC REC REC REC		Semi-Volatile Organics Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Volatile Organics	7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7	Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG				
REG REG REG REG REG REG REG REG REG REG		Benzo(a,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG				
REG REG REG REG REG REG REG REG REG REG		Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG				Ň
REC REC REC REC REC REC REC REC REC REC		Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	7.7 7.7 7.7 7.7 7.7 7.7 7.7 7.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U			Ň
REG REG REG REG REG REG REG REG REG REG		Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphtnalene Phenanthrene Pyrene	7.7 7.7 7.7 7.7 7.7 7.7 7.7	UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U	U U U U		Ň
REG REG REG REG REG REG REG REG REG REG	S S S S S S S S S S S S S S	Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	7.7 7.7 7.7 7.7 7.7 7.7	UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U	U U U U		Ň
REG REG REG REG REG REG REG REG REG REG	ble ble	Fluorene Indeno(1,2,3-co)pyrene Naphihalene Phenanthrene Pyrene	7.7 7.7 7.7 7.7	UG/KG UG/KG UG/KG UG/KG	U U U U	U U U		X
REG REG REG REG REG REG REG REG REG REG	S S S S S S S S S	Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	7.7 7.7 7.7	UG/KG UG/KG UG/KG	U U U	U U		`
REG REG REG REG REG REG REG REG REG REG	S S Ple B S S	Naphthalene Phenanthrene Pyrene	7.7 7.7	UG/KG UG/KG	U U	U		`
REG REG REG REG REG REG REG REG REG REG	s ple e	Phenanthrene Pyrene	7.7	UG/KG	U			
REG REG REG REG REG REG REG REG REG REG	gle He	Pyrene						
Sam Typ REG REG REG REG REG REG REG REG REG REG	ple e }		7.7	UG/KG	- U			
Typ REG REG REG REG REG REG REG REG REG REG		Volatile Organics			-	0J	P01	
REG REG REG REG REG REG REG REG REG REG	3	Volatile Organics				Qualifiers	Validation	
REG REG REG REG REG REG REG REG REG REG	}		Result	Units		Lab Dat	a Code	
REG REG REG REG REG REG REG REG REG REG	3	1,1,1-Trichloroethane		UG/KG		-		_
REG REG REG REG REG REG REG REG REG REG		1,1,2,2-Tetrachloroethane		UG/KG				
REG REG REG REG REG REG REG REG REG REG	i i	1,1,2-Trichloroethane		UG/KG				
REG REG REG REG REG REG REG REG REG REG		1,1-Dichloroethane		UG/KG		U		
REG REG REG REG REG REG REG REG REG REG		1,1-Dichloroethene		UG/KG				
REG REG REG REG REG REG REG REG REG REG		1,2-Dichloroethane		UG/KG		U		
REG REG REG REG REG REG REG REG REG REG		1,2-Dichloropropane		UG/KG				
REG REG REG REG REG REG REG REG REG REG		1,2-cis-Dichloroethene 1,2-trans-Dichloroethene		UG/KG		U		
REG REG REG REG REG REG REG REG REG REG		1,3-cis-Dichloropropene		UG/KG UG/KG		UU		
REG REG REG REG REG REG REG REG REG REG		1,3-trans-Dichloropropene		UG/KG	-	U		
REG REG REG REG REG REG REG REG REG REG		2-Butanone		UG/KG	_	ŬJ	C05	
REG REG REG REG REG REG REG REG REG REG		2-Hexanone		UG/KG	-	U	605	
REG REG REG REG REG REG REG REG REG REG		4-Methyl-2-pentanone		UG/KG	_	Ŭ		
REG REG REG REG REG REG REG REG REG REG		Acetone		UG/KG	v	Ĵ	C05	
REG REG REG REG REG REG REG REG REG REG		Benzene		UG/KG	J	Ĵ	0.00	
REG REG REG REG REG REG REG REG		Bromodichloromethane		UG/KG		Ŭ		
REG REG REG REG REG REG REG REG	. :	Bromoform		UG/KG		Ŭ		
REG REG REG REG REG REG REG		Bromomethane		UG/KG		Ũ		
REG REG REG REG REG REG		Carbon Disulfide	5.8	UG/KG	U	Ū		
REG REG REG REG REG REG		Carbon Tetrachloride	2.3	UG/KG	U	Ū		
REG REG REG REG REG		Chlorobenzene	. 2.3	UG/KG	υ	U		
REG REG REG REG		Chloroethane	2.3	UG/KG	U	U		
REG REG REG		Chloroform		UG/KG		U		
REG REG		Chloromethane		UG/KG		U		
REG		Dibromochloromethane		UG/KG	υ	U		
		Ethylbenzene		UG/KG		=		
RFG		Vethylene Chloride		UG/KG		U	F01,F07	
		Styrene		UG/KG		U		
REG		etrachloroethene		UG/KG	U	U		
REG		Foluene		UG/KG	•••	=		
REG	1	Frichloroethene		UG/KG		U		
REG REG	•	/inyl Chloride (ylenes, Total		UG/KG UG/KG	U	U J	C02,C05	
1212		- 5.0 FT	Field Sample Type: Grab			Subsurfac		Collected: 07/24/97
Samp)		rein semple type, size	maU		Jualifiers	Validation	Sonected: 0//24/97

Result

1.2 MG/KG B

12.4 MG/KG B

0.11 MG/KG U

5.4 MG/KG B

3.6 MG/KG E 0.04 MG/KG

1.1 MG/KG B

Units

0.19 MG/KG *

U

J

U

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J

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J

J

Qualifiers

Lab Data

F06

F10

E07

F10

E02

Validation

Code

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW2

	le				alifiers	Validation		
Туре	Semi-Volatile Organica	Result	Units	Lai) Data	Code		
REG	1,2,4-Trichlorobenzene		UG/KG		U			
REG REG	1,4-Dichlorobenzene 2,4-Dinitrotoluene		UG/KG		U			
REG	2,4-Dinitrotoitene 2-Chloronaphthalene		UG/KG		U			
REG	Acenaphthene		UG/KG UG/KG		U U			
REG	Acenaphthylene		UG/KG		Ŭ			
REG	Anthracene		UG/KG	v	J	C05		
REG	Benzo(a)anthracene		UG/KG	u.	Ů	000		
REG	Benzo(a)pyrene		UG/KG	·	=			
REG	Benzo(b)fluoranthene		UG/KG	U	U			
REG	Benzo(g,h,i)perylene		UG/KG		Ū			
REG	Benzo(k)fluoranthene	7.4	UG/KG	U	U			
REG	Chrysene	7.4	UG/KG	U	U			
REG	Dibenzo(a,h)anthracene	7.4	UG/KG	U	U			
REG	Fluoranthene		UG/KG		U			
REG	Fluorene		UG/KG		U			
REG	Indeno(1,2,3-cd)pyrene		UG/KG		U			
REG	N-Nitroso-di-n-propylami		UG/KG	U	U			
REG	Naphthalene		UG/KG		J	C05		
REG REG	Phenanthrene Pyrene		UG/KG UG/KG	U	U J	P01,C05		
		200	00.110	-				
Sample Type	Total Organic Carbon (1	roc) Result	Units	Qua Lab	llflers Data	Validation Code		
REG	Total Organic Carbon	3780	MG/KG		=	F08	_	
Sample Type) Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code		
REG	1,1,1-Trichloroethane	114	UG/KG	FI	U	·····	_	
REG	1,1,2,2-Tetrachloroethane		UG/KG		Û.	K01		
REG	1,1,2-Trichloroethane		UG/KG		Ű			
REG	1,1-Dichloroethane		UG/KG	-	Ū			
REG	1,1-Dichloroethene	114	UG/KG	U	U			
REG	1,2-Dichloroethane	114	UG/KG	U	U			
REG	1,2-Dichloropropane	114	UG/KG	U	U			
REG	1,2-cls-Dichloroethene		UG/KG		U			
REG	1,2-trans-Dichloroethene		UG/KG		U			
REG	1,3-cis-Dichloropropene		UG/KG	-	U			
REG	1,3-trans-Dichloropropene		UG/KG	-	U			
REG REG	2-Butanone		JG/KG		UJ	C05		
RCG	2-Hexanone 4-Methyl-2-pentanone		UG/KG	-	UJ	K01		
		284	JG/KG	U	UJ	K01 C05		
REG	- •			4.8	111	1.035		
REG REG	Acetone	284	JG/KG		UJ	000		
REG REG REG	Acetone Benzene	284 114	JG/KG JG/KG	U	U	000		
REG REG REG REG	Acetone Benzene Bromodichloromethane	284 114 114	JG/KG JG/KG JG/KG	U U	U U	000		
REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromoform	284 114 114 114 114	JG/KG JG/KG JG/KG JG/KG	U U U	U U U	000		
REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromoform Bromomethane	284 114 114 114 114 114	JG/KG JG/KG JG/KG JG/KG JG/KG	U U U U	U U U U			
REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromoform	284 114 114 114 114 114 114 284	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG	U U U U U				
REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide	284 114 114 114 114 114 284 114	JG/KG JG/KG JG/KG JG/KG JG/KG	U U U U U U	U U U U			
REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride	284 114 114 114 114 114 114 284 114 114	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG	U U U U U U U U		K01		
REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene	284 114 114 114 114 114 284 114 114 114	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		0 0 0 0 0 0 0			
REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene	284 114 114 114 114 284 114 114 114 114 114	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		0 0 0 0 0 0 0 0 0 0 0			
REG REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chlorotoma	284 114 114 114 114 114 284 114 114 114 114 114 114 114	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
REG REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroform Chloromethane Dibromochloromethane Ethylbenzene	284 114 114 114 114 114 284 114 114 114 114 114 114 114 114	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG					
REG REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroethane Chloromethane Dibromochloromethane Ethylbenzene Methylene Chloride	284 114 114 114 114 114 284 114 114 114 114 114 114 114 114 114 1	Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K01		
REG REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromonethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroform Chloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene	284 114 114 114 114 284 114 114 114 114 114 114 114 114 114 1	Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg		01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K01 K01		
REG REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromodorm Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroform Chloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene Tetrachloroethene	284 114 114 114 114 114 284 114 114 114 114 114 114 114 114 114 1	Jg/kg Jg/kg		1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K01 K01 F01,F07		
REG REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene Tetrachloroethene Toluene	284 114 114 114 114 114 284 114 114 114 114 114 114 114 114 114 1	JG/KG JG/KG		1 01 01 0 0 0 0 0 0 0 0	K01 K01 F01,F07 K01		
REG REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroform Chloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene Tetrachloroethene Toluene Trichloroethene	284 114 114 114 114 284 114 114 114 114 114 114 114 114 114 1	Jg/Kg Jg/Kg		0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	K01 K01 F01,F07 K01 K01		
REG REG REG REG REG REG REG REG REG REG	Acetone Benzene Bromodichloromethane Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene Tetrachloroethene Toluene	284 114 114 114 114 284 114 114 114 114 114 114 114 114 114 1	Jg/Kg Jg/Kg	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	K01 K01 F01,F07 K01 K01			

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Sampi Type		Result	Units		Qualifiers Lab Data	Validation	
REG	Arsenic	0.6	UG/L	- .	U		
REG	Barium		UG/L	8		F01,F06	
REG	Cadmium		UG/L	U		F10	
REG REG	Chromium Lead		UG/L	U		F10	
REG	Mercury		UG/L UG/L	U •	U =		
REG	Selenium		UG/L	U	Ū		
REG	Silver		UG/L	÷	J	E02	
Sample Type	semi-Volatile Organics	Result	Units		Qualifiers Lab Data	Validation Code	
REG	2-Chloronaphthalene		UG/L	U	U		_
REG REG	Acenaphthene Acenaphthylene		UG/L	U	U		
REG	Anthracene		UG/L UG/L	U U	UU		
REG	Benzo(a)anthracene		UG/L	Ŭ	Ŭ		
REG	Benzo(a)pyrene		UG/L	Ū	Ū		
REG	Benzo(b)fluoranthene	0.21	UG/L	U	U		
REG	Benzo(g,h,i)perylene	0.21	UG/L	U	U		
REG	Benzo(k)fluoranthene		UG/L	U	U		
REG REG	Chrysene Dibenzo(a,h)anthracene	0.21		U	U		
REG	Fluoranthene	0.21 0.21		U U	UU		
REG	Fluorene	0.21		Ŭ	Ŭ		
REG	Indeno(1,2,3-cd)pyrene	0.21		Ū	Ũ		
REG	Naphthalene	0.21	UG/L	U	U		
REG	Phenanthrene	0.21		U	U		
REG	Pyrene	0.21	UG/L	U	UJ	P01	
Sample Type	Volatile Organics	· Result	Units		Qualifiers .ab Data	Validation Code	
REG	1,1,1-Trichloroethane		UG/L	U	U		-
REG	1,1,2,2-Tetrachloroethane		UG/L	U	U		
REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane		UG/L	U	U		
REG	1,1-Dichloroethene		UG/L UG/L	U U	U U		
REG	1,2-Dichloroethane		UG/L	Ŭ	Ŭ		
REG	1,2-Dichloropropane		JGA	Ū	Ŭ		
REG	1,2-cis-Dichloroethene		JG/L	U	U		
REG	1,2-trans-Dichloroethene		JG/L	U	U		
REG REG	1,3-cis-Dichloropropene 1,3-trans-Dichloropropene		JG/L	U	U		
REG	2-Butanone		JG/L JG/L	U U	U UJ	C05	
REG	2-Hexanone		JG/L	Ŭ	U	000	
REG	4-Methyl-2-pentanone		JG/L	Ŭ	Ū		
	Acetone	5 L	JG/L	U	U		
	Benzene		JG/L	U	U		
	Bromodichloromethane Bromoform		JG/L	U	U		
	Bromomethane		JG/L JG/L	U U	U U		
	Carbon Disulfide		JG/L	Ŭ	υ		
	Carbon Tetrachloride		JG/L	Ŭ	Ŭ		
	Chlorobenzene		IG/L	U	Ū		
	Chloroethane		IG/L -	U	U		
	Chioroform		JG/L	U	U		
	Chloromethane		JG/L	U	U		
	Dibromochloromethane Ethylbenzene		ig/l Ig/l	U U	U U		
	Methylene Chloride	2.3 U		B	Ŭ	F01,F07	
	Styrene		IGAL	Ŭ	Ŭ		
	Tetrachioroethene		G/L	Ŭ	Ŭ		
	Toluene		G/L	U	U		
	Trichloroethene		G/L	U	U		
	Vinyl Acetate	5 U		U	U		
	Vinyl Chloride Xylenes, Total	2 U 2 U		UU	U UJ	C02	
	-14.0 FT	Field Sample Type: Grab			Groundwate		Collected:

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Sample Type	Alkalinity	Result	Units	C	Qualifiers ab Data	Validation Code
REG	Alkalinity	76.3	MG/L		=	
Sample Type	Common Anlons	Result	Units		ualifiers ab Data	Validation Code
REG	Nitrate	.5	MG/L	_	U	
REG	Nitrite		MG/L		U	
REG	Sulfate		MG/L		J	
REG	Sulfide	1	MG/L		U	
Sample Type	Metals	Result	Units	L	ualifiers ab Data	Validation Code
REG	Arsenic		UG/L	B B	ل ال	
REG REG	Barium Cadmium		UG/L UG/L	Ū	J	
REG	Chromium		UG/L	B	J	
REG	Lead		UG/L	B	J	
REG	Mercury		UG/L	-	=	
REG	Selenium	0.4	UG/L	U	U	
REG	Silver	0.51	UG/L		=	
Sample Type	Diesel Range Organics	Result	Units		ualifiers ab Data	Validation Code
REG	Ethane	5	UG/L	U	U	·
REG	Ethane	-	UG/L	Ũ	Ū	
REG	Ethene	5	UG/L	U	U	
REG	Ethene	5	UG/L	U	U	
REG	Methane	4690	UG/L	D	=	
REG	Methane	3050	UG/L	D	=	
Sample Type	Semi-Volatile Organics	Result	Units		ualifiers ab Data	Validation Code
REG	2-Chloronaphthalene	0.22	UG/L	Ū	U	
REG	Acenaphthene	0.22	UG/L	U	U	
REG	Acenaphthylene	0.22	UG/L	U	U	
REG	Anthracene		UG/L	U	U	
REG	Benzo(a)anthracene		UG/L	U	U	
REG	Benzo(a)pyrene		UG/L	U	U	
REG	Benzo(b)fluoranthene		UG/L	U	U	
REG	Benzo(g,h,i)perylene		UG/L	U	U	
REG	Benzo(k)fluoranthene	0.22	UG/L	U U	U U	
REG REG	Chrysene Diboaza(a b)anthracena	0.22		Ŭ.	Ū	
REG	Dibenzo(a,h)anthracene Fluoranthene	0.22		Ŭ	U	
REG	Fluorene	0.22		ŭ	Ŭ	
REG	Indeno(1,2,3-cd)pyrene	0.22		Ŭ	Ŭ	
REG	Naphthalene	10.5		•	=	
REG	Phenanlhrene	0.22		U	U	
REG	Pyrene	0.22	UG/L	U	U	
Sample Type	Volatlie Organics	Result	Units	Qi La	ualifiers Ib Data	Validation Code
REG	1,1,1-Trichloroethane	2	UG/L	U	U	
	1,1,2,2-Tetrachloroethane		UG/L	U	U	
	1,1,2-Trichloroethane		UG/L	U	U	
	1,1-Dichloroethane		UG/L	U	U	
	1,1-Dichloroethene		UG/L	U	U	
	1,2-Dichloroethane		UG/L		=	
	1,2-Dichloropropane		UG/L	U	U U	
	1,2-cis-Dichloroethene		ug/l Ug/l	U U	U	
	1,2-trans-Dichloroethene 1,3-cis-Dichloropropene		UG/L UG/L	U	U	
	1,3-cts-Dichloropropene 1,3-trans-Dichloropropene		UG/L	U	U	
	2-Butanone		UG/L	Ŭ	ŰJ	C05
	2-Hexanone		UG/L	Ŭ	U	
	4-Methyl-2-pentanone		UG/L	ŭ	Ŭ	
	Acetone		UG/L	Ŭ	R	C04,C05
	Benzene	329		Ď	=	

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location:	Former 724th Tanker Purge Stations (SWMU 26)
Station :	MW2

264211	4	l.0 - 14.0 FT	Field Sample Type: Gra	b A	Matrix: Gr	oundwat	er	Collected: 08/12/9
	Sample				Qual	lfiers	Validation	
	Туре	Volatile Organics	Result	Units	Lab	Data	Code	
	REG	Bromodichloromethane	2	UG/L	- 	U		<u>. </u>
	REG	Bromoform		UG/L	Ŭ	Ŭ		
	REG	Bromomethane		UG/L	Ū	Ŭ		
	REG	Carbon Disulfide		UG/L	Ŭ	Ŭ		
	REG	Carbon Tetrachloride		UG/L	Ŭ	Ŭ		
	REG	Chlorobenzene		UG/L	Ŭ	Ŭ		
	REG	Chloroethane	=	UG/L	Ū	Ŭ		
	REG	Chloroform		UG/L	ŭ	Ŭ	•	
	REG	Chloromethane		UG/L	Ŭ	Ŭ		
	REG	Dibromochloromethane		UG/L	Ŭ	Ŭ		
	REG	Ethylbenzene	62.3		•	=		
	REG	Methylene Chloride		UG/L	U	U		
	REG	Styrene		UG/L	Ŭ	Ŭ		
	REG	Tetrachloroethene		UGAL	ŭ	ŭ		
	REG	Toluene	72.6		0	=		
	REG	Trichloroethene		UG/L	U	Ū		
	REG	Vinyl Chloride		UG/L	Ŭ	Ŭ		
	REG	Xylenes, Total	296		Ď	-	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW3

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Sample Type		Result	Units	Qu: Lab	lifiers Data	Validation Code	
REG	Alkalinity	•					
NEG	Civennity	206	MG/L		<u>**</u>		
Sample Type	Common Anions	Result	Units	Qua Lab	llfiers Data	Validation Code	
REG	Nitrate	0.07	MG/L		=		_
REG	Nitrite	.05	MG/L		U		
REG	Sulfate	16.7	MG/L		=		
REG	Sulfide	.1	MG/L		U		
Sample				Оца	lifiers	Validation	
Туре	Metals	Result	Units	Lab	Data	Code	
REG	Arsenic		UG/L	В	J	· · · · · · · · · · · · · · · · · · ·	-
REG	Barium		UG/L	В	J		
REG	Cadmium	0.2	UG/L	U	U		
REG	Chromium	0.6	UG/L	U	U		
REG	Lead		UG/L	B	J	F10	
	Mercury	0.08	UG/L	U	U		
REG	Selenium	0.56	UG/L	в	J		
REG	Silver	3.3	UG/L		=		
Sample				Qual	lfiers	Validation	
Туре	Diesel Range Organics	Result	Units	Lab	Data	Code	
=	Ethane	5	UG/L	U	U		-
	Ethene	5	UG/L	U	U		
REG	Melhane	19.1	UG/L		=		
Sample				Qual	fiers	Validation	
	Semi-Volatile Organics	Result	Units	Lab	Data	Code	
	2-Chloronaphthalene	0.2	UG/L	U	U		
	Acenaphthene		UG/L	Ū	Ū		
	Acenaphthylene	0.2	UG/L	Ŭ	Ū		
	Anthracene	0.2	UG/L	Ū	Ū		
	Benzo(a)anthracene	0.2	UG/L	Ū	Ū		
	Benzo(a)pyrene	0.2	UG/L	U	Ū		
REG I	Benzo(b)fluoranthene	0.2	UG/L	U	Ū		
	Benzo(g,h,i)perviene						

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : MW3

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64311		I.0 -14.0 FT	Field Sample Type: Gra	b	Matri	x: Gro	bundwa	iter	Collected: 08/14/9
	Sample Type	Semi-Volatile Organica	Result	Units		Quali Lab		Validation Code	
	REG	Benzo(k)fluoranthene		UG/L	- .		U		_
	REG	Chrysene		UG/L	Ŭ		Ŭ		
	REG	Dibenzo(a,h)anthracene		UG/L	Ŭ		Ŭ		
	REG	Fluoranthene		UG/L	Ŭ		Ŭ		
	REG	Fluorene		UG/L	Ŭ		Ŭ		
	REG	Indeno(1,2,3-cd)pyrene		UG/L	Ŭ		Ŭ		
	REG	Naphthalene		UG/L	Ŭ		Ŭ		
	REG	Phenanlhrene		UG/L	Ŭ		Ŭ	•	
	REG	Pyrene		UG/L	Ű		Ŭ		
	Sample					Quali	fiers	Validation	
	Type	Volatile Organics	Result	Units		Lab	Data	Code	
	REG	1,1,1-Trichioroethane	—	UG/L	บ		U		
	REG	1,1,2,2-Tetrachloroethane		UG/L	U		U		
	REG	1,1,2-Trichloroethane		UG/L	υ		U		
	REG	1,1-Dichloroethane		UG/L			=		
	REG	1,1-Dichloroethene		UG/L	U		U		
	REG	1,2-Dichloroethane		UG/L	U		U		
	REG	1,2-Dichloropropane		UG/L	U		U		
	REG	1,2-cis-Dichloroethene		UG/L	U		U		
	REG	1,2-trans-Dichloroethene		UG/L	U		U		
	REG	1,3-cis-Dichloropropene		UG/L	U		U		
	REG	1,3-trans-Dichloropropene		UG/L	U		U		
	REG	2-Butanone		UG/L	U		UJ	C05	
	REG	2-Hexanone		UG/L	U		U		
	REG	4-Methyl-2-pentanone		UG/L	U		U		
	REG	Acetone		UG/L	U		R	C04,C05	
	REG	Benzene		UG/L	U		U		
	REG	Bromodichloromethane		UG/L	U		U		
	REG	Bromoform	—	UG/L	U		U		
	REG	Bromomethane		UG/L	U		U		
	REG	Carbon Disulfide		UG/L	U		U		
	REG	Carbon Tetrachloride	2	UG/L	U		U		
	REG	Chlorobenzene		UG/L	U		U		
		Chloroethane	2	UG/L	U		U		
		Chloroform		UG/L	J		J		
		Chloromethane		UG/L	U		U		
		Dibromochloromethane	2	UG/L	U		U		
		Ethylbenzene		UG/L	U		U		
		Methylene Chloride		UG/L			=		
		Styrene		UG/L	U		U		
		Tetrachloroethene	2	UG/L	U		J		
		Toluene	2	JG/L	U		U		
	REG	Trichloroethene	2	UG/L	U	1	U		
	REG	Vinyl Chloride	2 (UG/L	U	l	J		
	REG	Xylenes, Total	· 21	JG/L	U	1	JJ	C02	

264341

		Field Sample Type: Equipment	t Rinsate	e M	atrix: Gr	oundwater	Collected: 08/12/97
Sample Type	Common Anions	Result	Units	Qua Lab	alifiers Data	Validation Code	· · · • · ·
REG	Sulfate	1	MG/L	·	U	-	_
Sample Type	Metals	Result	Units	Qua Lab	alifiers Data	Validation Code	
REG	Arsenic	5	UG/L	U	UJ	F10	_
REG	Barium	3.3	UG/L	В	J		
REG	Cadmium	0.2	UG/L	U	U		
REG	Chromium	. 10	UG/L	U	UJ	F10	
REG	Lead	1	UG/L	U	UJ	F10	
REG	Mercury	0.03	UG/L	U	U		
REG	Selenium	5	UG/L	U	UJ	F10	
REG	Silver	0.1	UG/L	8	U	F06,F01	

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

I-Volatile Organics	Result	Units		ualifiers ib Data	Validation Code
loronaphthalene	0.2	UG/L	U	U	
aphthene	0.2	UG/L	U	U	
aphthylene	0.2	UG/L	U	U	
acene		UG/L	Ū	Ŭ	
o(a)anthracene		UG/L	Ū	Ū	
o(a)pyrene		UG/L	Ū	Ū	
o(b)fluoranthene		UG/L	Ŭ	Ŭ	
o(g,h,i)perylene		UG/L	Ŭ	ŭ	
o(k)fluoranthene		UG/L	Ŭ	Ŭ	
sene		UG/L	Ŭ	Ŭ	
vzo(a,h)anthracene		UG/L	Ŭ	Ŭ	
anthene		UG/L	Ŭ	U	
ene					
		UG/L	U	U	
o(1,2,3-cd)pyrene		UG/L	U	U	
thalene		UG/L	U	U	
anthrene		UG/L	U	U	
16	0.2	UG/L	U	U	
lle Organics	Result	Units	Qu La	allfiers b Data	Validation Code
Trichloroethane	<u> </u>	UG/L	U	U	
2-Tetrachloroethane		UG/L	Ŭ	Ŭ	
Trichloroethane		UG/L	Ŭ	U	
chloroethane		UG/L	Ŭ	Ŭ	
chloroethene			-	-	
chioroethane		UG/L UG/L	Ü	U	
			U	U	
chloropropane		UG/L	U	U	
s-Dichloroethene		UG/L	U	U	
Ins-Dichloroethene		UG/L	U	U	
s-Dichloropropene		UG/L	U	U	
ins-Dichloropropene		UG/L	U	U	
Inone		UG/L	U	UJ	C05
anone		UG/L	U	U	
hyl-2-pentanone		UG/L	J	J	
ne		JG/L	U	R	C04,C05
ne		JG/L	U	U	
dichloromethane		JG/L	U	U	
form		JG/L	U	U	
methane		JG/L	U	U	
n Disulfide	5 (JG/L	U	UJ	C05
n Tetrachloride	2 (JG/L	U	U	
benzene	2 (JG/L	U	U	
ethane	2 L	JG/L	U	U	
form	2 L	JG/L	U	U	
methane	2 (JG/L	U	Ū	
ochioromethane		JG/L	Ū	Ū	
enzene		JG/L	Ū	Ū	
ene Chloride		JG/L	JB	Ŭ	F01,F06
8		JG/L	Ű	Ŭ	
hloroethene		IG/L	Ŭ	Ŭ	
8					
roethene					
hloride					
roe		thene 2 L		thene 2 UG/L U	thene 2 UG/L U U

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW4

261411	0	.0 - 2.0 FT	Field Sample Type: Grab	Mati	rlx: Sub	surface	Soli	Collected: 07/26/97
	Sample Type	Metals	Result	Units	Qual Lab	ifiers Data	Validation Code	
	REG	Arsenic	0.32	MG/KG	U	U		
	REG	Barium	5.8	MG/KG	В	Ĵ		
	REG	Cadmium	0.11	MG/KG	U	Ù		
	REG	Chromium	3.9	MG/KG	B	J		
	REG	Lead		MG/KG		Ĵ	E07	
	REG	Mercury		MG/KG	_	- E		
	REG	Selenium		MG/KG	U	U		

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : MW4

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	Sample Type	Metals	Result	Units		Qualifiers .ab Data	Validation Code		
	REG	Silver	0.07	MG/KG	8*	J	E02	_	
	Sample Type	Semi-Volatile Organics	Result	Units		ualifiers ab Data	Validation Code		
	REG	2-Chloronaphthalene		UG/KG	-	U	• • • • • • • • • • • • • • • • • • •	_	
	REG REG	Acenaphthene Acenaphthylene		UG/KG UG/KG	-	U			
	REG	Anthracene		UG/KG	_	UU			
	REG	Benzo(a)anthracene	7.2	UG/KG	Ŭ	Ū			
	REG	Benzo(a)pyrene		UG/KG	-	U			
	REG REG	Benzo(b)fluoranthene Benzo(g,h,i)perylene		UG/KG UG/KG		UU			
	REG	Benzo(k)fluoranthene		UG/KG	-	U			
	REG	Chrysene		UG/KG		Ū			
	REG	Dibenzo(a,h)anthracene		UG/KG		U			
	REG REG	Fluoranthene Fluorene		UG/KG UG/KG		U U			
	REG	Indeno(1,2,3-cd)pyrene		UG/KG		U			
	REG	Naphthalene		UG/KG	-	Ŭ			
	REG	Phenanthrene		UG/KG	-	U			
	REG	Pyrene	7.2	UG/KG	U	UJ	P01		
	Sample Type	Volatile Organics	Result	Units		uailfiers ib Data	Validation Code		
	REG	1,1,1-Trichloroethane	2.2	UG/KG	U	U		<u>. </u>	
	REG	1,1,2,2-Tetrachloroethane	2.2	UG/KG	U	ŨJ	K01		
	REG REG	1,1,2-Trichloroethane		UG/KG		U			
		1,1-Dichloroethane 1,1-Dichloroethene		UG/KG UG/KG		U U			
		1,2-Dichloroethane		UG/KG		Ŭ			
		1,2-Dichloropropane		UG/KG		Ū			
		1,2-cis-Dichloroethene		UG/KG		U			
		1,2-trans-Dichloroethene 1,3-cis-Dichloropropene		UG/KG UG/KG		UU			
		1,3-trans-Dichloropropene		UG/KG		Ŭ			
		2-Butanone		UG/KG		UJ	C05		
		2-Hexanone		UG/KG		UJ	K01		
		4-Methyl-2-pentanone Acetone		ug/kg Ug/kg		U U	K01		
		Benzene		UG/KG		U			
		Bromodichloromethane		UG/KG		Ū			
		Bromoform		JG/KG		U			
		Bromomethane Carbon Disulfide		JG/KG JG/KG		U U			
		Carbon Tetrachloride		JG/KG		U			
	REG (Chlorobenzene	2.2	JG/KG	U	ŨJ	K01		
		Chloroethane		JG/KG		U			
		Chloroform Chloromethane		JG/KG I		U			
		Dibromochtoromethane		jg/kg . (jg/kg . (U U			
	REG 8	Ethylbenzene		IG/KG I		ŬJ	K01		
		Aethylene Chloride		JG/KG I			F01,F07		
		Styrene		JG/KG I			KOI		
		etrachloroethene foluene		JG/KG U JG/KG U			K01 K01		
		richloroethene		IG/KG U		U			
	REG V	/inyl Chloride (ylenes, Total	2.2 L	IG/KG U IG/KG U	J	U			
2		-14.6 FT	Field Sample Type: Grab			ou bsurface S	C02,K01 oli	Collected: 07/2	6/91
	Sample Type N		Result L		Qu	alifiers Data	Validation Code		

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW4

 Samp	8	······································		Qualifiers	Validation		
Туре		Result	Units	Lab Data			
REG	Barium	79	MG/KG	B J		—	
REG	Cadmium		MG/KG				
REG	Chromium		MG/KG	=			
REG	Lead	4.1	MG/KG	E J	E07		
REG	Mercury	0.03	MG/KG	=			
REG	Selenium	0.22	MG/KG	υu			
REG	Silver	0.41	MG/KG	• J	E02		
Sample Type	Semi-Volatile Organics	Result	Units	Qualifiers Lab Data	Validation Code		
REG	2-Chioronaphthalene		UG/KG			****	
REG	Acenaphthene		UG/KG				
REG	Acenaphthylene		UG/KG				
REG	Anthracene		UG/KG				
REG	Benzo(a)anthracene		UG/KG				
REG	Benzo(a)pyrene Roozo(b)fivores/bono		UG/KG				
REG	Benzo(b)fluoranthene		UG/KG				
REG	Benzo(g,h,i)perylene		UG/KG				
REG	Benzo(k)fluoranthene		UG/KG				
REG	Chrysene Diberra/a blasthreas		UG/KG	-			
REG REG	Dibenzo(a,h)anthracene		UG/KG				
REG	Fluoranthene		UG/KG			•	
REG	Fluorene		UG/KG	-			
REG	Indeno(1,2,3-cd)pyrene		UG/KG				
REG	Naphthalene		UG/KG				
REG	Phenanthrene		UG/KG		_		
REG	Pyrene	7.8	UG/KG	U UJ	P01		
Sample Type	Total Organic Carbon (TOC)	Result	Units	Quailfiers Lab Data	Validation Code		
REG	Total Organic Carbon	421	MG/KG		F08	-	
. .							
Sample Type	Volatile Organics		Units	Qualifiers Lab Data	Validation Code	_	
950	4 4 4 Totablass stheses						
REG	1,1,1-Trichloroethane		UG/KG				
REG	1,1,2,2-Tetrachloroethane	2,3	UG/KG	U U			
REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	2.3 2.3	UG/KG UG/KG	บ บ บ บ			
REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	2.3 2.3 2.3	UG/KG UG/KG UG/KG	U U U U U U			
REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG UG/KG UG/KG	U U U U U U			
REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane	2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U U			
REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U U U U U U			
REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U U U U U U U U U			
REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG U UG/KG U UG/KG	1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U			
REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cts-Dichloroethene 1,3-cis-Dichloroethene 1,3-cis-Dichloroethene	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG U UG/KG U UG/KG	1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U			
REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-ctrans-Dichloroethene 1,3-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG U JG/KG U JG/KG U JG/KG U JG/KG	1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U			
REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,5-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,3-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG	I J J A J A A A A A A A A A A A A A A A A	C05		
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,5-Dichloroethane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-cis-Dichloroethene 1,3-cis-Dichloroethene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG	1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U	C05		
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethane 1,3-cis-Dichloroethane 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I	1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U			
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,2-trans-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG I UG/KG I UG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I JG/KG I	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C05 C05		
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,2-trans-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG I UG/KG I UG/KG I JG/KG	= 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-cis-Dichloroethane 1,2-cis-Dichloroethane 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG UG/KG U JG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-dis-Dichloroethene 1,2-dis-Dichloroethene 1,3-dis-Dichloropropene 1,3-dis-Dichloropropene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG I UG/KG I				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-ctrans-Dichloroethene 1,3-ctrans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG I UG/KG I UG/KG I JG/KG I	1 1 1 1 1 1 1 1 1 1 1 1 1 1			
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromodichloromethane Carbon Disulfide	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U UG/KG U JG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U UG/KG U JG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U UG/KG U JG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,3-cis-Dichloropropene 2.Harans-Dichloropropene 2.Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U UG/KG U JG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromodorn Bromodethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Chloroethane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U UG/KG U JG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-dis-Dichloroethene 1,2-dis-Dichloroethene 1,3-dis-Dichloroptopene 1,3-dis-Dichloroptopene 2-Butanone 2-Butanone 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroethane Chloroothane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U UG/KG U JG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Strans-Dichloropthene 1,3-trans-Dichloropthene 1,3-trans-Dichloropthene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Chloroothane Chloroothane Dibromochloromethane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U UG/KG U JG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-dis-Dichloroethene 1,2-dis-Dichloroethene 1,3-dis-Dichloroptopene 1,3-dis-Dichloroptopene 2-Butanone 2-Butanone 2-Butanone 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroethane Chloroothane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U				
REG REG REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Dichloropthane 1,2-Strans-Dichloropthene 1,3-trans-Dichloropthene 1,3-trans-Dichloropthene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Carbon Disulfide Carbon Tetrachloride Chloroethane Chloroethane Chloroothane Chloroothane Dibromochloromethane	2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	UG/KG U UG/KG U	= - - - - - - - - - - - - -			

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW4

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		2.0 -14.5 FT	Field Sample Type: Gra) Ma	trix: St	ubsurfac	e Soli	Collected:	07/26/9
	Sample Type	Volatile Organics	Result	Units	Qu La	alifiers b Data	Validation Code		
	REG	Tetrachloroethene	2.5	UG/KG	U	U			
	REG	Toluene	40.0	UG/KG		=			
	REG	Trichloroethene	2.3	UG/KG	U	U			
	REG	Vinyl Chloride	2.3	UG/KG	U	U			
	REG	Xylenes, Total	84.3	UG/KG		J	C02,C05		
114	4	4.5 - 45.5 FT	Fleid Sample Type: Grai	Ma	trix: Su	ubsurface	Soll	Collected:	07/26/9
	Sample					alifiers	Validation		
	Туре		Result	Units	Lat		Code		
	REG	Arsenic		MG/KG		U	F06		
	REG	Barium		MG/KG		J			
	REG	Cadmium	0.44	MG/KG		=			
	REG	Chromium	12.9	MG/KG		=			
	REG	Lead	1.9	MG/KG	Е	J	E07		
	REG	Mercury	0.03	MG/KG	U	U			
	REG	Selenium		MG/KG		Ĵ			
	REG	Silver		MG/KG		J	E02		
	Sample				Qua	alifiers	Validation		
	Туре	Semi-Volatile Organics	Result	Units	Lab		Code		
	REG	2-Chloronaphthalene	8.9	UG/KG	U	U			
	REG	Acenaphthene	8.9	UG/KG	U	U			
	REG	Acenaphthylene		UG/KG		Ũ			
	REG	Anthracene		UG/KG	_	Ŭ			
	REG	Benzo(a)anthracene		UG/KG	-	Ŭ			
	REG			UG/KG		Ŭ			
		Benzo(a)pyrene			-	-			
	REG	Benzo(b)fluoranthene		UG/KG		U			
	REG	Benzo(g,h,i)perylene		UG/KG	-	U			
	REG	Benzo(k)fluoranthene		UG/KG		U			
	REG	Chrysene		UG/KG	-	U			
	REG	Dibenzo(a,h)anthracene	8.9	UG/KG	U	U			
	REG	Fluoranthene	8.9	UG/KG	U	U			
	REG	Fluorene	8,9	UG/KG	U	U			
	REG	Indeno(1,2,3-cd)pyrene	8,9	UG/KG	U	U			
	REG	Naphthalene		UG/KG		Ū			
	REG	Phenanthrene		UG/KG		Ū			
	REG	Pyrene		UG/KG		ŨJ	P01		
	Sample					lifiers	Validation		
		Total Organic Carbon (TOC)	Result	Units	Lab		Code	_	
	REG	Total Organic Carbon	19200	MG/KG		2	F08		
	Sample Type	Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code		
		1,1,1-Trichloroethane		UG/KG		U		-	
		1,1,2,2-Tetrachloroethane	2.7	UG/KG	U	UJ	K01		
	REG	1,1,2-Trichloroethane		UG/KG		U			
		1.1-Dichloroethane		UG/KG		Ũ			
	REG	1,1-Dicilioiodulario		UG/KG		Ŭ			
		1.1-Dichloroethene	2.7		-				
	REG	1,1-Dichloroethene			U	11			
	REG REG	1,1-Dichloroethene 1,2-Dichloroethane	2.7	UG/KG		U			
	REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane	2.7 2.7	UG/KG UG/KG	U	U			
	REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene	2.7 2.7 2.7	UG/KG UG/KG UG/KG	U U	U U			
	REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene	2.7 2.7 2.7 2.7	UG/KG UG/KG UG/KG UG/KG	U U U	U U U			
	REG REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene	2.7 2.7 2.7 2.7 2.7 2.7	UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U	U U U U			
	REG REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene	2.7 2.7 2.7 2.7 2.7 2.7 2.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U	ย บ บ บ บ			
	REG REG REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone	2.7 2.7 2.7 2.7 2.7 2.7 2.7 6.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	บ บ บ บ บ บ	U U U U	C05		
	REG REG REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene	2.7 2.7 2.7 2.7 2.7 2.7 2.7 6.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	บ บ บ บ บ บ	ย บ บ บ บ	C05 K01		
	REG REG REG REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone	2.7 2.7 2.7 2.7 2.7 2.7 2.7 6.7 6.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	บ บ บ บ บ บ	0 0 0 0 0			
	REG REG REG REG REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone	2.7 2.7 2.7 2.7 2.7 2.7 6.7 6.7 6.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	บ บ บ บ บ บ	U U U U U U U U U U U U	K01		
	REG REG REG REG REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone	2.7 2.7 2.7 2.7 2.7 2.7 6.7 6.7 6.7 6.7 26.8	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		1 01 01 0 0 0 0 0	K01 K01		
	REG REG REG REG REG REG REG REG REG REG	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	2.7 2.7 2.7 2.7 2.7 2.7 6.7 6.7 6.7 28.8 2.7	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K01 K01		

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW4

		14.6 - 45.5 FT	Field Sample Type: Grai	Ma	trix: Su	bsurface	Soll	Collected:	07/26/
	Sampi Type	e Volatile Organics	Result	Units	Qua	alifiers Data	Validation Code		
	REG	Bromomethane	2.7	UG/KG	U	U		_	
	REG	Carbon Disulfide	6.7	' UG/KG	U	U			
	REG	Carbon Tetrachloride		UG/KG		U			
	REG	Chlorobenzene	2.7	UG/KG	U	UJ	K01		
	REG	Chloroethane	2.7	UG/KG	U	U			
	REG	Chloroform		UG/KG		U			
	REG	Chloromethane	2.7	UG/KG	U	U			
	REG	Dibromochloromethane	2.7	UG/KG	U	U	•		
	REG	Ethylbenzene	2.5	UG/KG	J	J	K01		
	REG	Methylene Chloride	4.7	UG/KG	B	U	F01,F07		
	REG	Styrene	2.7	UG/KG	U	UJ	K01		
	REG	Tetrachloroethene	2.7	UG/KG	U	UJ	K01		
	REG	Toluene	27.9	UG/KG		J	K01		
	REG	Trichloroethene		UG/KG		U			
	REG	Vinyl Chloride	2.7	UG/KG	U	U			
	REG	Xylenes, Total	8.6	UG/KG		J	C02,C05,K01		
1411	3	5.0 -45.0 FT	Field Sample Type: Gra	b Ma	trix: G	roundwa	iter	Collected:	08/13/
	Sample Type	Alkalinity	Result	Units	Qua Lab	lifiers Data	Validation Code	8	
	REG	Alkalinity		MG/L		=			
	Sample				Qua	lifiers	Validation		
	Type	Common Anions	Result	Units	Lab		Code	_	
	REG	Nitrate		MG/L		=			
	REG	Nitrite		MG/L		U			
	REG REG	Sulfate Sulfide		MG/L MG/L		= U			
	Sample				0.04	lifiers	Validation		
	Туре	Metais	Result	Units	Lab	Data	Code		
	REG	Arsenic	0.6	UG/L	U	U		_	
	REG	Barium		UG/L	В	J			
	REG	Cadmium		UG/L	U	U			
	REG	Chromium		UG/L	U	UJ	F10		
	REG	Lead		UG/L	U	UJ	F10		
	REG	Mercury		UG/L		=			
	REG	Selenium		UG/L	В	J			
	REG	Silver	4.1	UG/L		=			
	Sample Type	Flitered Metals	Result	Units	Qual Lab	lfle rs Data	Validation Code		
	REG	Arsenic			U	<u> </u>			
	REG	Barium		UG/L	В	Ĵ			
	REG	Cadmium			Ū	Ŭ			
	REG	Chromium			Ū	ŪJ	F10		
	REG	Lead			Ū	UJ	F10		
	REG	Mercury	0.13		U	U			
	REG	Selenium	0.79		в	J			
	REG	Silver	0.19		B	Ŭ	F06		
	Sample Type	Diesel Range Organics	Result	Units	Quali Lab	lfiers Data	Validation Code		
								-	
	REG	Ethane			U	U			
	REG	Ethene			0	U -			
	REG	Methane	214	UG/L	E	=			
	Sample Type	Semi-Volatile Organics	Result	Units	Quali Lab	fiers Data	Validation Code		
	Type	Semi-Volatile Organics 2-Chioronaphthalene						-	

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26)
Station : MW4

64411	35.0 - 45.0 FT		Field Sample Type: Gra	b I	Matrix: G	roundwa	Collected: 08	8/13/93	
	Sample Type		Result	Units		lifiers Data	Validation Code	· · · · · · · · · · · · · · · · · · ·	
	REG	Acenaphthylene	0.2	UG/L	- 		-		
	REG	Anthracene		UG/L	Ū	Ū			
	REG	Benzo(a)anthracene		UG/L	Ŭ	Ū			
	REG	Benzo(a)pyrene		UG/L	Ŭ	Ŭ			
	REG	Benzo(b)fluoranthene		UG/L	Ŭ	Ŭ			
	REG	Benzo(g,h,i)perylene		UG/L	Ŭ	Ŭ			
	REG	Benzo(k)fluoranthene		UG/L	Ŭ	Ŭ			
	REG	Chrysene		UG/L	Ŭ	Ŭ			
	REG	Dibenzo(a,h)anthracene		UG/L	Ŭ	Ŭ			
	REG	Fluoranthene		UG/L	Ŭ	Ŭ			
	REG	Fluorene		UG/L	Ŭ	Ŭ			
	REG	Indeno(1,2,3-cd)pyrene		UG/L	U	U			
	REG	Naphthalene			U	U			
	REG	•		UG/L					
	REG	Phenanthrene		UG/L	U	U			
	REG	Pyrene	0.2	UG/L	U	U			
	Sample	Volatile Organics	Desuit			lifiers	Validation		
	Туре			Units	Lab		Code	_	
	REG	1,1,1-Trichloroethane		UG/L	U	U			
	REG	1,1,2,2-Tetrachioroethane		UG/L	U	U			
	REG	1,1,2-Trichloroethane		UG/L	U	U			
	REG	1,1-Dichloroethane	2	UG/L	U	U			
	REG	1,1-Dichloroethene	2	UG/L	U	U			
	REG	1,2-Dichloroethane	2	UG/L	U	U			
	REG	1,2-Dichloropropane	2	UG/L	U	U			
	REG	1,2-cis-Dichloroethene	2	UG/L	U	U			
	REG	1,2-trans-Dichloroethene	2	UG/L	U	U			
	REG	1,3-cis-Dichloropropene	2 0	UG/L	U	U			
	REG	1,3-trans-Dichloropropene	2	UG/L	U	U			
	REG	2-Butanone	5	JG/L	U	UJ	C05		
	REG	2-Hexanone		UG/L	Ū	U			
	REG	4-Methyl-2-pentanone		JG/L	Ū	Ū			
		Acetone		JG/L	Ŭ	R	C04,C05		
		Benzene		JG/L	Ŭ	Ü	00.1000		
		Bromodichloromethane		JG/L	Ŭ	Ŭ			
		Bromoform		JG/L	Ŭ	Ŭ			
		Bromomethane		JG/L	Ŭ	Ŭ			
		Carbon Disulfide		JG/L	Ŭ	Ŭ			
		Carbon Tetrachloride		JG/L	Ŭ	Ŭ			
		Chlorobenzene		JG/L	U	Ŭ			
		Chloroethane			-				
		Chloroform		JG/L	U	U			
		Chloromethane		JG/L	U	U			
				JG/L	U	U			
		Dibromochloromethane		JG/L	U	U			
		Ethylbenzene Malbulana Oblasida		JG/L	U	U			
		Methylene Chloride	1.9 L		J	J			
		Styrene		IG/L	U	U			
		Tetrachloroethene		IG/L	U	U			
		Toluene		JG/L	J	U	F04,F06		
		Trichloroethene	2 U	IG/L	U	U			
	REG	Vinyl Chloride	2 U	IG/L	U	U			
	REG	Xylenes, Total	21	IG/L	U	UJ	C02		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW5

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261511	C).0 - 2.0 FT	Field Sample Type: Grab	Mat	rix: Sub	surface S	Solt	Collected: 07/24/97
	Sample Type	Metals	Result	Units	-	lfiers Data	Validation Code	
	REG	Arsenic	0.31	MG/KG	U	U		
	REG	Barium	9.8	MG/KG	В	J		
	REG	Cadmium	0.1	MG/KG	U	U		
	REG	Chromium	1.7	MG/KG	в	J		

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW5

	mple /pe	Metals	Result	Units		Qualifiers Lab Data	Validation Code		
RE	G	Lead	4.8	MG/KG	Ε	J	E07		
	EG	Mercury	0.05	MG/KG	1	=			
RE		Selenium	0.31	MG/KG	В	U	F06		
RE	G	Silver	0.04	MG/KG	U*	UJ	E02		
	nple /pe	Semi-Volatile Organics	Result	Units		Qualifiers .ab Data	Validation Code		
RE		2-Chloronaphthalene		UG/KG		U		_	
RE		Acenaphthene Acenaphthylene		UG/KG UG/KG		U U			
RE		Anthracene		UG/KG	-	U			
RE		Benzo(a)anthracene		UG/KG		Ŭ			
RE		Benzo(a)pyrene		UG/KG	-	J			
RE	G	Benzo(b)fluoranthene		UG/KG	•	=			
RE	G	Benzo(g,h,i)perylene		UG/KG	U	U			
RE	G	Benzo(k)fluoranthene		UG/KG		Ŭ			
RE	G	Chrysene		UG/KG	-	Ū			
RE	-	Dibenzo(a,h)anthracene		UG/KG		Ũ			
RE		Fluoranthene		UG/KG		Ŭ			
RE		Fluorene		UG/KG		Ŭ			
RE		Indeno(1,2,3-cd)pyrene	7	UG/KG	U	U			
RE		Naphthalene	7	UG/KG	U	U			
RE	-	Phenanthrene	7	UG/KG	U	U			
RE	G	Pyrene	7	UG/KG	U	UJ	P01		
Sam Tyj		Volatile Organics	Result	Units		ualifiers sb Data	Validation Code		
REG	_	1,1,1-Trichloroethane		UG/KG	-	U		-	
REG	_	1,1,2,2-Tetrachioroethane		UG/KG		UJ	K01		
REG	_	1,1,2-Trichloroethane		UG/KG		U			
REC	-	1,1-Dichloroethane		UG/KG		U			
REC		1,1-Dichloroethene		UG/KG		U			
REC	_	1,2-Dichloroethane		UG/KG		U			
REC		1,2-Dichloropropane 1,2-cis-Dichloroethene		UG/KG		U			
REC	_	1,2-trans-Dichloroethene		ug/kg Ug/kg		U U			
REC		I,3-cis-Dichloropropene		UG/KG	-	U			
REG		1,3-trans-Dichloropropene		JG/KG		U			
REG		2-Butanone		JG/KG		UJ U	C05		
		2-Hexanone				UJ	K01		
REG			5.3	JG/NG					
		-Methyl-2-pentanone	5.3 U 5.3 I		U	UJ			
REG	64	I-Methyl-2-pentanone	5.3	JG/KG	-	UJ U	K01		
REG REG REG REG	6 4 6 A	Acetone Benzene	5.3 (5.3 (Ū	n n n1	KU I		
REG REG REG	6 4 6 A	cetone	5.3 5.3 2.1	JG/KG JG/KG JG/KG	Ŭ	U	KUI		
REG REG REG REG REG REG	5 4 5 A 5 B 5 B	Acetone Benzene	5.3 5.3 2.1 2.1	jg/kg jg/kg	Ŭ U U	U U	KUT		
REG REG REG REG REG REG REG	5 4 5 A 5 B 5 B	Acetone Benzene Bromodichloromethane Bromoform Bromomethane	5.3 5.3 2.1 2.1 2.1 2.1	jg/kg jg/kg jg/kg jg/kg	ม บ บ บ	U U U	KUI		
REG REG REG REG REG REG REG	6 4 6 A 6 B 6 B 6 B 6 C	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide	5.3 (5.3 (2.1 (2.1 (2.1 (2.1 (2.1 (JG/KG JG/KG JG/KG JG/KG JG/KG		U U U U	KUI		
REG REG REG REG REG REG REG REG	6 4 6 8 6 8 6 8 6 8 6 8 6 8 7 7	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride	5.3 5.3 2.1 2.1 2.1 2.1 2.1 2.1 5.3	JG/KG JG/KG JG/KG JG/KG JG/KG		ย บ บ บ บ	NUT		
REG REG REG REG REG REG REG REG REG	6 4 6 2 6 2 6 2 6 2 6 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Acetone Benzene Bromodichloromethane Bromoform Dromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene	5.3 (5.3 (2.1 (2.1 (2.1 (2.1 (5.3 (2.1 (5.3 (2.1 (JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG			K01		
REG REG REG REG REG REG REG REG REG		Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene	5.3 (5.3 (2.1 (2.1 (2.1 (2.1 (5.3 (2.1 (2.1 (2.1 (2.1 (JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG					
REG REG REG REG REG REG REG REG REG REG		Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroethane	5.3 (5.3 (2.1 (2.1 (2.1 (5.3 (2.1 (2.1 (2.1 (2.1 (2.1 (2.1 (2.1 (2.1 (2.1 (JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG					
REG REG REG REG REG REG REG REG REG REG		Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroform Chloroform	5.3 (5.3 (2.1 (2.1 (2.1 (5.3 (2.1))))))))))))))))))))))))))))))))))))	Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg Jg/kg					
REG REG REG REG REG REG REG REG REG REG		Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chlorobenane Chloroform Chloromethane Chloromethane	5.3 (5.3 (2.1))))))))))))))))))))))))))))))))))))	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG IG/KG IG/KG IG/KG IG/KG					
REG REG REG REG REG REG REG REG REG REG		Acetone Benzene Bromodichloromethane Bromoform Iromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chlorothane Chloroform Chloroform Chloromethane Dibromochloromethane thylbenzene	5.3 5.3 2.1 2.1 2.1 5.3 2.1	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
REG REG REG REG REG REG REG REG REG REG		Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane	5.3 5.3 2.1	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG			K01		
REG REG REG REG REG REG REG REG REG REG	A A A A A A A A A A A A A A A A A A A	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chloroform Chloromethane Bibromochloromethane thylbenzene Bethylene Chloride tyrene	5.3 5.3 2.1 JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG		1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K01 K01			
REG REG REG REG REG REG REG REG REG REG	4 4 A E E E E E E C O C C C C D E M S T	Acetone Benzene Bromodichloromethane Bromoform Dromomethane Sarbon Disulfide Sarbon Disulfide Sarbon Tetrachloride Chlorobenzene Chlorobenzene Chlorotom Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chloromethane Chlorobenzene Ethylene Chloride Chloride Chlorobenzene Ethylene	5.3 5.3 2.1 2.1 2.1 2.1 5.3 2.1 JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG IG/KG IG/KG IG/KG IG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	K01 K01 F01,F07 G01,K01 K01			
REG REG REG REG REG REG REG REG REG REG	4 A E E E E E C O C C C C D E M S Tr Tr	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroethane Chloroethane Chloromethane Dibromochloromethane thylbenzene Bethylene Chloride tyrene etrachloroethene oluene	5.3 5.3 2.1 2.1 2.1 5.3 2.1 JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG		01 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	K01 K01 F01,F07 G01,K01			
REG REG REG REG REG REG REG REG REG REG	3 4 4 4 5 5 6 5 7 5 7 7	Acetone Benzene Bromodichloromethane Bromodichloromethane Bromomethane Carbon Disulfide Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroethane Chloromethane Chloromethane Horomechloromethane Hotomochloromethane Hethylene Chloride tyrene etrachloroethene Oluene richloroethene	5.3 U 5.3 U 2.1 U 2.1 U 2.1 U 5.3 U 5.3 U 2.1 U	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG		0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	K01 K01 F01,F07 G01,K01 K01		
REG REG REG REG REG REG REG REG REG REG	4 A E E E E E C O C O C O C D E M S T T T T V	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroethane Chloroethane Chloromethane Dibromochloromethane thylbenzene Bethylene Chloride tyrene etrachloroethene oluene	5.3 U 5.3 U 2.1 U 2.1 U 2.1 U 5.3 U 2.1 U	JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG IG/KG		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K01 K01 F01,F07 G01,K01 K01		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Sample Type) Metais	Result	Units	Qua Lab	lifiers Data	Validation Code
REG	Arsenic	0.29	MG/KG	υ	U	
REG	Barium		MG/KG		Ĵ	
REG	Cadmium	0.1	MG/KG	U	U	
REG	Chromium		MG/KG	-	UJ	F10
REG	Lead		MG/KG		J	E07
REG	Mercury		MG/KG		U	
REG	Selenium		MG/KG		J	F10
REG	Silver	0.17	MG/KG	-	J	E02
Sample Type	Sem!-Volatile Organics	Result	Units	Qua Lab	llfiers Data	Validation Code
REG	2-Chloronaphthalene	6.9	UG/KG	U	U	
REG	Acenaphthene	6.9	UG/KG	U	U	
REG	Açenaphthylene		UG/KG		U	
REG	Anthracene		UG/KG		U	
REG	Benzo(a)anthracene		UG/KG		U	
REG	Benzo(a)pyrene		UG/KG		U	
REG	Benzo(b)fluoranthene		UG/KG	-	U	
REG REG	Benzo(g,h,i)perylene Benzo(k)fluoranthene		UG/KG UG/KG	+	UU	
REG	Chrysene		UG/KG	-	U	
REG	Dibenzo(a,h)anthracene		UG/KG		U	
REG	Fluoranthene		UG/KG	-	ŭ	
REG	Fluorene		UG/KG		Ŭ	
REG	Indeno(1,2,3-cd)pyrene		UG/KG		Ū	
REG	Naphthalene	6,9	UG/KG	U	U	
REG	Phenanthrene	6.9	UG/KG	U	U	
REG	Pyrene	6.9	UG/KG	U	UJ	P01
Sample				Qual	ifiers	Validation
Туре	Total Organic Carbon (TOC)			Lab	Data	Code
REG	Total Organic Carbon	250	MG/KG		=	F08
	Volatile Organics	Result	Units	Qual Lab	lfiers Data	Validation Code
Type REG	1,1,1-Trichloroethane	2.1	UG/KG	Lab U	Data U	
Type REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane	2.1 2.1	UG/KG UG/KG	Lab U U	Data U U	
Type REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane	2.1 2.1 2.1	UG/KG UG/KG UG/KG	Lab U U U U	Data U U U	
Type REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane	2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG	Lab U U U U U	Data U U U U	
Type REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG	Lab U U U U U U	Data U U U U U	
Type REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane	2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	Lab U U U U U U U	Data U U U U U U U	
Type REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	Lab U U U U U U U U	Data U U U U U U U U	
Type REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	Lab U U U U U U U U U	Data U U U U U U U	
Type REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	Lab U U U U U U U U U U	Data U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	Lab U U U U U U U U U U U U U	Data U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Data U U U U U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Data U U U U U U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Data U U U U U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	1.25 U U U U U U U U U U U U U U U U U U U	Data U U U U U U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	1.285 U U U U U U U U U U U U U U U U U U U	Data U U U U U U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Data U U U U U U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Data U U U U U U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UJG/		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG UJG/KG		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UJ/ UG/KG UJ/ UG/KG UJ/ UG/KG UJ/ UG/KG UJ/ UG/KG UJ/ UJ/ UJ/ UJ/ UJ/ UJ/ UJ/ UJ/ UJ/ UJ/		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UJG/		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UJ/ UG/KG UJ/ UG/KG UJ/ UG/KG UJ/ UG/KG UJ/ UG/KG UJ/ UJ/ UJ/ UJ/ UJ/ UJ/ UJ/ UJ/ UJ/ UJ/		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropane 1,2-Dichloropane 1,2-Dichloropane 1,2-Cis-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Cis-Dichloroethene 1,2-cis-Dichloroethene	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG		Data U U U U U U U U U U U U U	
Type REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropane 1,2-Dichloropane 1,2-Dichloropane 1,2-Dichloropane 1,2-Cis-Dichloroethane	2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	UG/KG UG/KG		Data U U U U U U U U U U U U U	

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW5

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	Sample Type	e Volatile Organics	Result	Units		Qualifiers Lab Data	V	alidation Code		
	REG	1,2-trans-Dichloroethene	2.1	UG/KG	ΰ	U			_	
	REG	1,2-trans-Dichloroethene		UG/KG						
	REG	1,2-trans-Dichloroethene		UG/KG						
	REG REG	1,3-cis-Dichloropropene 1,3-cis-Dichloropropene		UG/KG						
	REG	1,3-cis-Dichloropropene		UG/KG UG/KG		U U				
	REG	1,3-cis-Dichloropropene		UG/KG		Ŭ				
	REG	1,3-trans-Dichloropropene		UG/KG		Ŭ	•			
	REG	1,3-trans-Dichloropropene	2.1	UG/KG	υ	U				
	REG	1,3-trans-Dichloropropene		UG/KG		U				
	REG	1,3-trans-Dichloropropene		UG/KG		U				
	REG REG	2-Butanone 2-Butanone		UG/KG		UJ	C05			
	REG	2-Butanone		UG/KG UG/KG		U .	0.05			
	REG	2-Butanone		UG/KG		01 01	C05 C05			
	REG	2-Hexanone		UG/KG		U	005			
	REG	2-Hexanone		UG/KG		ŭ				
	REG	2-Hexanone		UG/KG		Ū				
	REG	2-Hexanone	5.2	UG/KG	U	Ū				
	REG	4-Methyl-2-pentanone		UG/KG	-	U				
	REG	4-Methyl-2-pentanone		UG/KG	-	U				
	REG REG	4-Methyl-2-pentanone		UG/KG		U				
	REG	4-Methyl-2-pentanone Acetone		UG/KG		U				
	REG	Acetone		UG/KG UG/KG		UJ U	C05			
	REG	Acetone		UG/KG		ŬJ	C05			
	REG	Acetone	-	UG/KG		UJ	C05			
í	REG	Benzene		JG/KG		Ū	•••			
	REG	Benzene	2.1	JG/KG	U	U				
	REG	Benzene	2.1	JG/KG	U	U				
	REG	Benzene		JG/KG		U				
	REG REG	Bromodichloromethane Bromodichloromethane		JG/KG		U				
	REG	Bromodichloromethane		jg/kg jg/kg (U. U				
		Bromodichloromethane		JG/KG		U				
		Bromoform		JG/KG		Ŭ				
F	REG	Bromoform		JG/KG I		Ŭ				
		Bromoform	2.1 L	JG/KG (U	U				
		Bromoform	2.1 L	IG/KG I	U	U				
		Bromomethane		IG/KG (U				
		Bromomethane		IG/KG L		U				
		Bromomethane Bromomethane		IG/KG U		U				
		Carbon Disulfide		IG/KG L IG/KG L		U				
		Carbon Disulfide		IG/KG L		UU				
		Carbon Disulfide		IG/KG L		Ŭ				
R		Carbon Disulfide		G/KG L		Ŭ				
R	EG (Carbon Tetrachloride		G/KG U		Ū				
		Carbon Tetrachloride	2.1 L	G/KG L	J	U				
		Carbon Tetrachloride		G/KG L		U				
		Carbon Tetrachloride		G/KG L		U				
		Chlorobenzene		G/KG U		U				
		Chlorobenzene Chlorobenzene		G/KG U		U				
		Chlorobenzene		G/KG U G/KG U		U U				
		Chloroethane		G/KG U		U				
		Chloroethane		G/KG U		Ŭ				
		Chloroethane		G/KG U		Ŭ				
		Chloroethane		G/KG U		Ŭ				
		Chioroform		G/KG U		Ŭ				
		Shloroform		G/KG U		U				
		Chloroform		G/KG U		U				
		Chloroform		G/KG U		U				
RI		Chloromethane Chloromethane	2.1 U	G/KG U	 	U				
			211 0			-				

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : MW5

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261512	-	5.0 - 7.5 FT	Field Sample Type: Gra			Subsurfac		Collected:	07724/5
	Sampi Type		Result	Units	_	ualifier s ab Data	Validation Code		
	REG	Chloromethane	2.	1 UG/KG	U	U		_	
	REG	Chloromethane		1 UG/KG		U			
	REG	Dibromochloromethane		1 UG/KG		U			
	REG REG	Dibromochloromethane Dibromochloromethane				U			
	REG	Dibromochloromethane		1 UG/KG 1 UG/KG		U U			
	REG	Ethylbenzene		1 UG/KG		U			
	REG	Ethylbenzene		1 UG/KG		Ŭ			
	REG	Ethylbenzene		1 UG/KG		Ŭ			
	REG	Ethylbenzene		1 UG/KG		Ū			
	REG	Methylene Chloride	4.4	4 UG/KG	В	U	F01,F07		
	REG	Methylene Chloride		4 UG/KG		U	F01,F07		
	REG	Methylene Chloride		UG/KG		U	F01,F07		
	REG	Methylene Chloride		UG/KG		U	F01,F07		
	REG REG	Styrene Styrene		IUG/KG		U U			
	REG	Styrene		UG/KG		U			
	REG	Styrene		UG/KG		Ŭ			
	REG	Tetrachloroethene		UG/KG		Ŭ			
	REG	Tetrachloroethene		UG/KG		Ŭ			
	REG	Tetrachioroethene		i UG/KG		U			
	REG	Tetrachloroethene		UG/KG	U	U			
	REG	Toluene		UG/KG		=			
	REG	Toluene		UG/KG		=			
	REG REG	Toluene Toluene		UG/KG		=			
	REG	Trichloroethene		UG/KG	н	= U			
	REG	Trichloroethene		UG/KG		U			
	REG	Trichloroethene		UG/KG		Ŭ			
	REG	Trichloroethene		UG/KG		Ŭ			
	REG	Vinyl Chloride		UG/KG		Ũ			
	REG	Vinyl Chloride	2.1	UG/KG	U	U			
	REG	Vinyl Chloride		UG/KG		U			
	REG	Vinyl Chloride		UG/KG		U			
	REG	Xylenes, Total		UG/KG		UJ	C02		
	REG	Xylenes, Total Xylenes, Total		UG/KG		UJ	C02		
	REG REG	Xylenes, Total Xylenes, Total		UG/KG		UJ	C02		
				UG/KG		UJ	C02		
4511		.0 - 14.0 FT	Field Sample Type: Gra	b Ma		Broundwa		Collected:	08/12/97
	Sample Type	Alkalinity	Result	Units	Qu Lai	alifiers Data	Validation Code		
	REG	Alkalinity	244	MG/L		=		<u></u>	
	Sample Type	Common Anions	Result	Units		allfiers Data	Validation Code		
	REG	Nitrate	5	MG/L	,	U		-	
	REG	Nitrite		MG/L		Ŭ			
	REG	Sulfate		MG/L		=			
	REG	Sulfide	0.05	MG/L		J			
	Sample Type	Metals	Result	Units	Qua Lab	alifiers Data	Validation Code		
		Arsenic		UG/L	U	UJ	F10	-	
	REG	Barium			В	J			
		Cadmium			U	U			
	DEC	Chromium	10	UG/L	U	UJ	F10		
	REG	Lead			U	UJ	F10		
	REG REG		0.58	UG/L	UB	1 = U1	F10 F10		

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Sample Type	Filtered Metals	Result	Unita	5	Qualifiers Lab Data	Validation Code
REG	Arsenic		UG/L	- U	UJ	
REG	Barium		UG/L			FIU
REG	Cadmium		UG/L	-	U	
REG	Chromium		UG/L	-	0	E40
REG	Lead		UG/L	_		F10
REG	Mercury	-		U	ÛĴ	F10
REG	Selenium		UG/L		=	
REG	Silver		UG/L	-	UJ	F10
REG	Silver	0.1	UG/L	В	U	F06,F01
Sample Type	Diesel Range Organics	Result	Units		Qualifiers Lab Data	Validation Code
REG	Ethane	5	UG/L	- v	U	
REG	Ethene	5	UG/L	U	U	
REG	Methane	248	UG/L	D	=	
Sample Type	Semi-Volatile Organics	Result	Units		Quailfiers Lab Data	Validation Code
REG	2-Chloronaphthalene	0.21	UG/L	- 1	U	
REG	Acenaphthene		UG/L	Ŭ	Ŭ	
REG	Acenaphthylene		UG/L	Ŭ	Ŭ	
	Anthracene		UG/L	ŭ	Ŭ	
REG	Benzo(a)anthracene		UG/L	Ŭ	Ŭ	
-	Benzo(a)pyrene		UG/L	Ŭ	Ű	
	Benzo(b)fluoranthene		UG/L	Ŭ	Ŭ	
	Benzo(g,h,i)perviene	0.21		Ŭ	Ŭ	
	Benzo(k)fluoranthene	0.21		Ŭ	Ŭ	
	Chrysene	0.21		Ű	U	
	Dibenzo(a,h)anthracene	0.21		U	U	
	Fluoranthene	0.21		U	-	
	Fluorene	0.21		U	U	
	Indeno(1,2,3-cd)pyrene			-	U	
	Naphthalene	0.21		U	U	
	Phenanthrene	0.21		U	U	
	TOWNING DEPENDENCE IN THE PROPERTY OF THE PROP	0.21		U	U	
REG I	Pyrene	0.21	UG/L	U	U	
	Pyrene	0.21	UG/L	-	-	
Sample Type	/olatile Organics	Result	Units	Q	U Iualifiers ab Data	Validation Code
Sample Type N REG 1	Volatile Organics	Result 2	Units JG/L	G	ualifiers	
Sample Type REG 1 REG 1	Volatile Organics i,1,1-Trichloroethane i,1,2,2-Tetrachloroethane	Result 2	Units	Q	ualifiers ab Data	
Sample Type REG 1 REG 1 REG 1	Volatile Organics i,1,1-Trichloroethane i,1,2,2-Tetrachloroethane i,1,2-Trichloroethane	Result 2 1	Units JG/L		ualifiers ab Data U	
Sample Type REG REG REG 1 REG 1 REG 1	Volatile Organics i,1,1-Trichloroethane ,1,2,2-Tetrachloroethane ,1,2-Trichloroethane ,1-Dichloroethane	Result 2 1 2 1 2 1	Units JG/L JG/L		ualifiers ab Data U U	
REG 1 REG 1 REG 1 REG 1 REG 1 REG 1	Volatile Organics i,1,1-Trichloroethane i,1,2,2-Tetrachloroethane i,1,2-Trichloroethane	Result 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L		ualifiers ab Data U U U U	
REG 1 REG 1 REG 1 REG 1 REG 1 REG 1	Volatile Organics i,1,1-Trichloroethane ,1,2,2-Tetrachloroethane ,1,2-Trichloroethane ,1-Dichloroethane	Result 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L		ualifiers ab Data U U U U U	
Sample Type N REG 1 REG 1 REG 1 REG 1 REG 1 REG 1	Volatile Organics i,1,1-Trichloroethane i,2,2-Tetrachloroethane i,1,2-Trichloroethane i,1-Dichloroethane i,1-Dichloroethane	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U	
Sample Type N REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1	Volatile Organics i,1,1-Trichloroethane i,1,2,2-Tetrachloroethane i,1,2-Trichloroethane i,1-Dichloroethane i,1-Dichloroethane i,2-Dichloroethane	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U	
Sample Type N REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1	Volatile Organics 1,1,1-Trichloroethane 1,2,2-Tetrachloroethane 1,2-Trichloroethane 1-Dichloroethane 2-Dichloroethane 2-Dichloroethane 2-Dichloropropane 2-cis-Dichloroethene 2-trans-Dichloroethene	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L		Lualifiers ab Data U U U U U U U U U U U U	
Sample Type N REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1	/olatile Organics i,1,1-Trichloroethane i,1,2,2-Tetrachloroethane i,1,2-Trichloroethane i,1-Dichloroethane i,1-Dichloroethane i,2-Dichloroethane i,2-Dichloroethane i,2-Dichloropropane i,2-cis-Dichloroethane	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		ualifiers ab Data U U U U U U U U U U U U U	
Sample Type 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1	Volatile Organics 1,1,1-Trichloroethane 1,2,2-Tetrachloroethane 1,2-Trichloroethane 1-Dichloroethane 2-Dichloroethane 2-Dichloroethane 2-Dichloropropane 2-cis-Dichloroethene 2-trans-Dichloroethene	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U	
Sample Type 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1 REG 1	Volatile Organics 1,1,1-Trichloroethane 1,2,2-Tetrachloroethane 1,2-Trichloroethane 1-Dichloroethane 1-Dichloroethane 2-Dichloroethane 2-Dichloroptopane 2-cis-Dichloroethene 3-cis-Dichloroethene 3-cis-Dichloroptopene	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U	Code
Sample Type N REG 1 REG 1	Volatile Organics 1,1-Trichloroethane 1,2-Tetrachloroethane 1,2-Trichloroethane 1-Dichloroethane 1-Dichloroethane 2-Dichloroethane 2-Dichloropropane 2-cis-Dichloroethane 2-trans-Dichloroethane 3-cts-Dichloropropane 3-cts-Dichloropropane 3-trans-Dichloropropane Butanone	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	
Sample Type N REG 1 REG 2 REG 2	Volatile Organics i,1,1-Trichloroethane i,2,2-Tetrachloroethane i,2-Trichloroethane i,2-Dichloroethane i,2-Dichloroethane i,2-Dichloropropane i,2-cis-Dichloroethane i,2-trans-Dichloroethane i,3-cis-Dichloropropane i,3-trans-Dichloropropane Butanone Hexanone	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code
Sample Type N REG 1 REG 2 REG 2 REG 2 REG 4	Volatile Organics i,1,1-Trichloroethane i,2,2-Tetrachloroethane i,2-Trichloroethane i,2-Dichloroethane i,2-Dichloroethane i,2-Dichloropropane i,2-cis-Dichloroethane i,2-cis-Dichloroethane i,2-cis-Dichloroethane i,3-cis-Dichloropropane i,3-cis-Dichloropropane i,3-trans-Dichloropropane Butanone Hexanone Methyl-2-pentanone	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type N REG 1 REG 2 REG 2 REG 4 REG 4	Volatile Organics i,1,1-Trichloroethane i,2,2-Tetrachloroethane i,2-Trichloroethane i,2-Dichloroethane i,2-Dichloroethane i,2-Dichloropropane i,2-cis-Dichloroethane i,2-trans-Dichloroethane i,3-cis-Dichloropropane i,3-trans-Dichloropropane Butanone Hexanone	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code
Sample Type N REG 1 REG 2 REG 2 REG 2 REG 2 REG 2 REG 2 REG 4 REG	Volatile Organics i,1,1-Trichloroethane i,2,2-Tetrachloroethane i,2-Trichloroethane i,2-Dichloroethane i,2-Dichloroethane i,2-Dichloroethane i,2-Cis-Dichloroethane i,2-Cis-Dichloroethane i,2-Cis-Dichloropropene i,3-Cis-Dichloropropene Butanone Hexanone Hexanone Methyl-2-pentanone cetone enzene	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		Lualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type N REG 1 REG 2 REG 2 REG 2 REG 2 REG 2 REG 2 REG 2 REG 2 REG 3 REG 3 REG 3 REG 3 REG 4 REG	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type REG REG REG REG REG REG REG REG REG REG	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type Type Y REG 1	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type Type I REG 1	Volatile Organics	Result 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type Type I REG 1 REG 2 REG 1	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type Type I REG 1	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JGAL JGAL JGAL JGAL JGAL JGAL JGAL JGAL		Lualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type Type I REG 1	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		Lualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type Type Type REG 1 REG 2 REG 1	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		Lualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type Type Image: Complex structure REG 1 REG </td <td>Volatile Organics</td> <td>Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1</td> <td>Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L</td> <td></td> <td>Lualifiers ab Data U U U U U U U U U U U U U U U U U U</td> <td>Code C05</td>	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		Lualifiers ab Data U U U U U U U U U U U U U U U U U U	Code C05
Sample Type Type Type REG 1 REG 2 REG 1 REG 1 REG 2 REG 8	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U	Code C05
Sample Type T Type T REG 1 REG 1	Volatile Organics 1,1,1-Trichloroethane 1,2,2-Tetrachloroethane 1,2-Trichloroethane 1,2-Trichloroethane 1-Dichloroethane 2-Dichloroethane 2-Cis-Dichloroethene 3-cis-Dichloropropane 3-cis-Dichloropropene 3-trans-Dichloropropene 3-trans-Dichloropropene Butanone Hexanone Methyl-2-pentanone cetone enzene tomodichloromethane arbon Disulfide arbon Tetrachloride hlorobenzene hloroethane bromochloromethane bromochloromethane bromochloromethane hloromethane bromochloromethane	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U	Code C05
Sample Type T Type T REG 1 REG 1	Volatile Organics	Result 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Units JG/L JG/L JG/L JG/L JG/L JG/L JG/L JG/L		tualifiers ab Data U U U U U U U U U U U U U	Code C05

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : MW5

4.0 - 14.0 FT		Field Sample Type: Grab Matrix: Groundwater			ter	Collected: 08/12/9	
Sample Type	Volatile Organics	Result	Units			Validation Code	
REG	Trichloroethene		2 UG/L	- U	U		
REG	Vinyl Chloride		2 UG/L	U	U		
REG	Xylenes, Total		2 UG/L	U	UJ	C02	
	Sample Type REG REG	Sample Type Volatile Organics REG Trichloroethene REG Vinyl Chloride	Sample Volatile Organics Result REG Trichloroethene REG Vinyl Chloride	Sample Result Units Type Volatile Organics Result Units REG Trichloroethene 2 UG/L REG Vinyl Chloride 2 UG/L	Sample Qual Type Volatile Organics Result Units Lab REG Trichloroethene 2 UG/L U REG Vinyl Chloride 2 UG/L U	Sample Qualifiers Type Volatile Organics Result Units Qualifiers REG Trichloroethene 2 UG/L U U REG Vinyl Chloride 2 UG/L U U	Sample Qualifiers Validation Type Volatile Organics Result Units Qualifiers Validation REG Trichloroethene 2 UG/L U U REG Vinyl Chloride 2 UG/L U U

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S01

REG

REG

REG

REG

REG

REG

1,2-trans-Dichloroethene

1,3-cis-Dichloropropene

4-Methyl-2-pentanone

2-Butanone

2-Hexanone

1.3-trans-Dichloropropene

265111	4	4.0 - 6.0 FT	Field Sample Type	: Grab	Ma	atrix: Soil		Collected: 07/08/
	Sample Type	Volatile Organics	Result	Units		ualifiers ab Data	Validation Code	
	REG	1,1,1-Trichioroethane	24.4	UG/KG	U	U		_
	REG	1,1,2,2-Tetrachloroethane	24.4	UG/KG	Ű	U		
	REG	1,1,2-Trichloroethane		UG/KG		Ū		
	REG	1,1-Dichloroethane	24.4	UG/KG	Ū	Ū		
	REG	1,1-Dichloroethene	24.4	UG/KG	Ū	Ū		
	REG	1,2-Dichloroethane		UG/KG		Ū		
	REG	1,2-Dichloropropane		UG/KG	-	Ŭ		
	REG	1,2-cis-Dichloroethene		UG/KG	_	Ŭ		
	REG	1,2-trans-Dichloroethene		UG/KG		Ũ		
	REG	1,3-cis-Dichloropropene		UG/KG		Ŭ		
	REG	1,3-trans-Dichloropropene		UG/KG		Ŭ		
	REG	2-Butanone		UG/KG		ŭ		
	REG	2-Hexanone		UG/KG	-	Ŭ		
	REG	4-Methyl-2-pentanone		UG/KG	-	Ŭ		
	REG	Acetone		UG/KG		Ŭ		
	REG	Benzene		UG/KG	U.	=		
	REG	Bromodichloromethane		UG/KG		Ū		
	REG	Bromoform		UG/KG		U		
	REG	Bromomethane		UG/KG	-	U		
	REG	Carbon Disulfide			-	-		
	REG	Carbon Tetrachioride		UG/KG	-	U		
	REG	Carbon Tetrachionde Chlorobenzene		UG/KG	-	U		
				UG/KG	-	U		
	REG	Chloroethane		UG/KG		U		
	REG	Chloroform		UG/KG		U		
	REG	Chioromethane		UG/KG	-	UJ	C05	
	REG	Dibromochloromethane		UG/KG		U		
	REG	Ethylbenzene		UG/KG	-	=		
	REG	Methylene Chloride		UG/KG		U		
	REG	Styrene		UG/KG		U		
	REG	Tetrachloroethene		UG/KG	U	U		
	REG	Toluene	76.1	UG/KG		=		
	REG	Trichloroethene	24.4	UG/KG	U	U		
	REG	Vinyl Chloride	24.4	UG/KG	U	U		
	REG	Xylenes, Total	11400	UG/KG	D	J	C02	
65121	4.	0 - 6.0 FT	Field Sample Type: Field	i Duplica	te	Matrix: S	ioli	Collected: 07/08/9
	Sample				-	alifiers	Validation	
	Туре	Volatile Organics	Result	Units .	La	b Data	Code	
	REG	1,1,1-Trichloroethane	60.2	UG/KG	υ	U		
	REG	1,1,2,2-Tetrachloroethane	60.2	UG/KG	U	U		
	REG	1,1,2-Trichloroethane	60.2	UG/KG	U	U		
	REG	1,1-Dichloroethane	60.2	UG/KG	U	U		
	REG	1,1-Dichloroethene	60.2	UG/KG	U	Ŭ		
	REG	1,2-Dichloroethane	60.2	UG/KG	U	Ŭ		
	REG	1,2-Dichloropropane		UG/KG		Ŭ		
	REG	1,2-cis-Dichloroethene		UG/KG		Ũ		
			0012					

60.2 UG/KG U

60.2 UG/KG U

60.2 UG/KG U

151 UG/KG U

151 UG/KG U

151 UG/KG U

U

U

U

U

U

U

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S01

265121		4.0 - 6.0 FT	Field Sample Type: Fiel	d Duplic	ate	Matrix: S	Soil	Collected:	07/08/97
	Sample Type	e Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code		
	REG	Acetone	151	UG/KG	ī ,	U		_	
	REG	Benzene		UG/KG		=			
	REG	Bromodichloromethane		UG/KG	U .	U			
	REG	Bromoform		UG/KG	-	Ŭ			
	REG	Bromomethane		UG/KG	-	Ŭ			
	REG	Carbon Disulfide		UG/KG	-	Ŭ			
	REG	Carbon Tetrachloride		UG/KG	-	ŭ			
	REG	Chlorobenzene		UG/KG	-	Ŭ			
	REG	Chloroethane		UG/KG	- `	Ŭ			
	REG	Chloroform		UG/KG	-	Ŭ			
	REG	Chloromethane		UG/KG	-	ŬJ	C05		
	REG	Dibromochloromethane		UG/KG	-	U	CU0		
	REG	Ethylbenzene		UG/KG	U	0 =			
	REG	Methylene Chloride		UG/KG		Ũ			
	REG	Styrene		UG/KG	-	Ŭ			
	REG	Tetrachloroethene		UG/KG	-	U			
	REG	Toluene		UG/KG	U .	U =			
	REG	Trichloroethene		UG/KG	* 1				
	REG	Vinyl Chloride		UG/KG	-	U			
	REG	Xylenes, Total			Ų	U			
			4240	UG/KG		J	C02		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S02

265211

Type REG	Volatile Organica		•		lifiers	Validatia -	
	Agiania Giñstilica	Result	Units	Lab		Validation Code	
	1,1,1-Trichloroethane	22	UG/KG	U	U	-	
REG	1,1,2,2-Tetrachioroethane		UG/KG		Ŭ		
REG	1,1,2-Trichloroethane		UG/KG	-	Ū		
REG	1,1-Dichloroethane		UG/KG	-	Ū		
REG	1,1-Dichloroethene		UG/KG	-	Ŭ		
REG	1,2-Dichloroethane		UG/KG	-	ŭ		
REG	1,2-Dichloropropane		UG/KG		Ū		
REG	1,2-cis-Dichloroethene		UG/KG	-	ū		
REG	1,2-trans-Dichloroethene		UG/KG	-	Ŭ		
REG	1,3-cis-Dichloropropene		UG/KG	-	Ŭ		
REG	1,3-trans-Dichloropropene		UG/KG		Ŭ		
REG	2-Butanone		UG/KG		Ŭ		
REG	2-Hexanone		UG/KG	-	Ŭ		
REG	4-Methyl-2-pentanone		UG/KG	-	Ŭ		
REG	Acetone		UG/KG	-	Ŭ		
REG	Benzene		UG/KG	-	Ĵ		
REG	Bromodichloromethane		UG/KG	-	ŭ		
REG	Bromoform		UG/KG		Ŭ		
REG	Bromomethane		UG/KG	-	ŭ		
REG	Carbon Disulfide		UG/KG	-	ŭ		
REG	Carbon Tetrachloride		UG/KG	-	ŭ		
REG	Chlorobenzene		UG/KG	-	Ū		
REG	Chloroethane		UG/KG	-	ŭ		
REG	Chloroform		UG/KG	-	Ŭ		
REG	Chloromethane		UG/KG	-	ŬJ	C05	
REG	Dibromochloromethane		UG/KG		Ű	000	
REG	Ethylbenzene		UG/KG	•	=		
REG	Methylene Chloride		UG/KG	R	Ü	F01,F07	
REG	Styrene		UG/KG	-	ŭ	101,101	
REG	Tetrachioroethene		JG/KG I	-	Ŭ		
REG	Toluene		JG/KG	-	J		
REG	Trichloroethene		JG/KG I	-	Ů		
REG	Vinyl Chloride		JG/KG L	-	ŭ		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : S03

			Grab		x: Soli		07/08/97
Sample					lifiers	Validation	
Туре	Volatile Organics	Result	Units	Lab	Data	Code	
REG	1,1,1-Trichloroethane	2350	UG/KG	U	U		
REG	1,1,2,2-Tetrachloroethane	2350	UG/KG	U	U		
REG	1,1,2-Trichloroethane	2350	UG/KG	U	U		
REG	1,1-Dichloroethane	2350	UG/KG	U	U		
REG	1,1-Dichloroethene	2350	UG/KG	U	U		
REG	1,2-Dichloroethane	2350	UG/KG	U	U		
REG	1,2-Dichloropropane	2350	UG/KG	U	U		
REG	1,2-cis-Dichloroethene	2350	UG/KG	U	U		
REG	1,2-trans-Dichloroethene	2350	UG/KG	U	U		
REG	1,3-cis-Dichloropropene	2350	UG/KG	U	U		
REG	1,3-trans-Dichloropropene	2350	UG/KG	U	Ū		
REG	2-Butanone	5880	UG/KG	U	Ŭ		
REG	2-Hexanone	5880	UG/KG	U	U		
REG	4-Methyl-2-pentanone	5880	UG/KG	Ū	Ū		
REG	Acetone	5880	UG/KG	Ú	Ū		
REG	Benzene	9420	UG/KG		=		
REG	Bromodichloromethane		UG/KG	U	U		
REG	Bromoform		UG/KG	-	Ū		
REG	Bromomethane		UG/KG	-	Ū		
REG	Carbon Disulfide		UG/KG	-	Ū		
REG	Carbon Tetrachloride		UG/KG	-	Ŭ		
REG	Chiorobenzene		UG/KG	-	Ū		
REG	Chloroethane		UG/KG		Ŭ		
REG	Chloroform		UG/KG		Ŭ		
REG	Chloromethane		UG/KG	-	-	C05	
REG	Dibromochloromethane		UG/KG		Ŭ	000	
REG	Ethylbenzene	27100		Ŭ.	=		
REG	Methylene Chloride		UG/KG		Ū		
REG	Styrene		UG/KG	-	Ŭ		
REG	Tetrachloroethene		JG/KG		Ŭ		
REG	Toluene	8990		•	-		
REG	Trichloroethene		JG/KG		Ū		
	Vinyl Chloride		JG/KG	-	Ŭ		
	Xylenes, Total	123000 1		0		C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S04

265411

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	4.0 - 6.0 FT	Field Sample Type	: Grab	Mati	rix: Soli		Collected:	i: 07/09/97
Sample Type	Volatile Organics	Result	Units	Qualifiers Lab Data		Validation Code		
REG	1,1,1-Trichloroethane	2.4	UG/KG	U	U		_	
REG	1,1,2,2-Tetrachloroethane	2.4	UG/KG	U	Ų			
REG	1.1.2-Trichloroethane	2.4	UG/KG	U	U			
REG	1,1-Dichloroethane	2.4	UG/KG	U	U			
REG	1,1-Dichloroethene	2.4	UG/KG	U	U			
REG	1,2-Dichloroethane	2.4	UG/KG	Ŭ	Ū			
REG	1,2-Dichloropropane	2.4	UG/KG	Ŭ	Ū			
REG	1,2-cis-Dichloroethene	2.4	UG/KG	Ū	Ū			
REG	1,2-trans-Dichloroethene	2.4	UG/KG	Ū	Ũ			
REG	1,3-cis-Dichloropropene	2.4	UG/KG	Ū	Ū			
REG	1,3-trans-Dichloropropene	2.4	UG/KG	U	Ū			
REG	2-Butanone		UG/KG		Ū			
REG	2-Hexanone	5.9	UG/KG	Ū	Ū			
REG	4-Methyl-2-pentanone		UG/KG		Ū			
REG	Acetone		UG/KG		Ū			
REG	Benzene	2.4	UG/KG	Ū	Ū			
REG	Bromodichloromethane		UG/KG		Ū			
REG	Bromoform		UG/KG		Ū.			
REG	Bromomelhane		UG/KG		Ū			
REG	Carbon Disulfide		UG/KG		Ū			
REG	Carbon Tetrachloride		UG/KG		Ũ			
REG	Chlorobenzene		UG/KG		Ŭ			

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : \$04

265411	4.0 - 6.0 FT		Field Sample Type: Grab		Mat	rix; Soll		Collected: 07/09/97
	Sample Type	• Volatile Organics	Result	Units	Qu Lai	alifiers Data	Validation Code	
	REG	Chloroethane	2.4	UG/KG	U	U		
	REG	Chloroform	2.4	UG/KG	U	U		
	REG	Chloromethane	2.4	UG/KG	U	ŪJ	C05	
	REG	Dibromochloromethane	2.4	UG/KG	Ú	U		
	REG	Ethylbenzene		UG/KG	-	Ū		
	REG	Methylene Chloride	5.8	UG/KG	B	Ū	F01.F07	
	REG	Styrene	2.4	UG/KG	Ū	Ū		
	REG	Tetrachloroethene		UG/KG	-	Ŭ		
	REG	Toluene		UG/KG	-	=		
	REG	Trichloroethene		UG/KG	u –	U		
	REG	Vinyl Chloride		UG/KG	-	Ŭ		
	REG	Xylenes, Total		UG/KG	-	ŬJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S05

265511		4.0 - 6.0 FT	Field Sample Type	: Grab	Ma	trix: Soli		Collected: 07/09/97
	Samp Type		Result	Units	Qu La	ualifiers b Data	Validation Code	ана <u>, дородна на , , , , , , , , , , , , , , , , , </u>
	REG	1,1,1-Trichloroethane	558	UG/KG	U	U	· · · · · · · · · · · · · · · · · · ·	
	REG	1,1,2,2-Tetrachioroethane		UG/KG		Ū		
	REG	1,1,2-Trichloroethane		UG/KG		Ū		
	REG	1,1-Dichloroethane	556	UG/KG	Ū	Ũ		
	REG	1,1-Dichloroethene	556	UG/KG	Ū	Ũ		
	REG	1,2-Dichloroethane		UG/KG		Ŭ		
	REG	1,2-Dichloropropane	556	UG/KG	Ū	Ŭ		
	REG	1,2-cis-Dichloroethene		UG/KG		Ũ		
	REG	1,2-trans-Dichloroethene		UG/KG	-	Ŭ		
	REG	1,3-cis-Dichloropropene		UG/KG	-	Ŭ		
	REG	1,3-trans-Dichloropropene		UG/KG		Ŭ		
	REG	2-Butanone		UG/KG	-	Ŭ		
	REG	2-Hexanone		UG/KG	-	Ŭ		
	REG	4-Methyl-2-pentanone		UG/KG	-	Ū		
	REG	Acetone	1390	UG/KG	Ŭ	Ū		
	REG	Benzene		UG/KG	•	=		
	REG	Bromodichloromethane		UG/KG	U	υ		
	REG	Bromoform		UG/KG	-	Ŭ		
	REG	Bromomethane		UG/KG	-	Ŭ		
	REG	Carbon Disulfide		UG/KG	-	Ū		•
	REG	Carbon Tetrachioride		UG/KG		Ŭ		
	REG	Chlorobenzene		UG/KG		Ŭ		
	REG	Chloroethane		UG/KG		Ŭ		
	REG	Chloroform		UG/KG	-	Ŭ		
	REG	Chloromethane		UG/KG		Ŭ		
	REG	Dibromochloromethane		UG/KG	-	Ŭ		
	REG	Ethylbenzene	24200		•	=		
	REG	Methylene Chloride		UG/KG	n.	U		
	REG	Styrene		JG/KG	-	ŭ		
	REG	Tetrachloroethene		JG/KG		ŭ		
	REG	Toluene	27400		•	=		
	REG	Trichloroethene		JG/KG	u	Ū		
	REG	Vinyl Chloride		JG/KG	-	Ŭ		
	REG	Xylenes, Total	124000 1		-		C02	
						-		

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Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S06

265611	

5611	2	.0 - 4.0 FT	Field Sample Type: Grab			x: Soll		Collected:	07/09/97
	Sample Type	Volatile Organics	Result	Units		lifiers Data	Validation Code		
	REG	1,1,1-Trichloroethane		UG/KG	-	U		-	
	REG	1,1,2,2-Tetrachloroethane		UG/KG	U	U			
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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : S06

Collected: 07/09/97 265611 Field Sample Type: Grab 2.0 - 4.0 FT Matrix: Soll Validation Sample Qualifiers Type Volatile Organics Result Units Lab Data Code REG 4 UG/KG U 1,1,2-Trichloroethane Ü REG 1,1-Dichloroethane 4 UG/KG U U REG 1,1-Dichloroethene UG/KG U U 4 1,2-Dichloroethane REG 4 UG/KG U U REG 1,2-Dichloropropane 4 UG/KG U Ų 1,2-cis-Dichloroethene 4 UG/KG U REG U REG 1,2-trans-Dichloroethene 4 UG/KG U U REG 1,3-cis-Dichloropropene 4 UG/KG U U 1,3-trans-Dichloropropene 4 UG/KG U REG U REG 2-Butanone 10 UG/KG U U 10 UG/KG U REG 2-Hexanone U 10 UG/KG U REG 4-Methyl-2-pentanone U REG Acetone 10 UG/KG U U Benzene 4 UG/KG U REG U REG Bromodichloromethane 4 UG/KG U U 4 UG/KG U REG Bromoform U 4 UG/KG U REG Bromomethane U REG Carbon Disulfide 10 UG/KG U U Carbon Tetrachloride 4 UG/KG U REG U REG Chlorobenzene 4 UG/KG U U 4 UG/KG U REG Chloroethane н REG Chloroform 4 UG/KG U U REG Chloromethane 4 UG/KG U UJ C05 REG Dibromochloromethane 4 UG/KG U U REG Ethylbenzene 4 UG/KG U U

5.6 UG/KG B

4 UG/KG U

12 UG/KG U

F01,F07

C02

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U

U

U

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UJ

Location:	Former 724th Tanker Purge Stations (SWMU 26)
	807

Styrene

Toluene

Methylene Chloride

Tetrachloroethene

Trichloroethene

Vinyl Chloride

Xylenes, Total

REG

REG

REG

REG

REG

REG

REG

oution	•
265711	

4	l.0 - 6.0 FT	Field Sample Type	: Grab	Matri	x: Solf		Collected: 07/09/97
Sample Type	Volatile Organics	Result	Units	Qual Lab	lfiers Data	Validation Code	
REG	1,1,1-Trichloroethane	4.4	UG/KG	U	U		_
REG	1,1,2,2-Tetrachioroethane	4.4	UG/KG	U	U		
REG	1,1,2-Trichloroethane	4.4	UG/KG	U	U		
REG	1,1-Dichloroethane	4.4	UG/KG	U	U		
REG	1,1-Dichloroethene	4.4	UG/KG	U	U		
REG	1,2-Dichloroethane	4.4	UG/KG	U	U		
REG	1,2-Dichloropropane	4.4	UG/KG	U	U		
REG	1,2-cis-Dichloroethene	4.4	UG/KG	υ	U		
REG	1,2-trans-Dichloroethene	4.4	UG/KG	U	U		
REG	1,3-cls-Dichloropropene	4.4	UG/KG	U	U		
REG	1,3-trans-Dichloropropene	4.4	UG/KG	U	U		
REG	2-Butanone	11.1	UG/KG	U	U		
REG	2-Hexanone	11.1	UG/KG	U	U		
REG	4-Methyl-2-pentanone	11.1	UG/KG	U	U		
REG	Acetone	34.9	UG/KG		=		
REG	Benzene	4.4	UG/KG	υ	U		
REG	Bromodichtoromethane	4.4	UG/KG	υ	U		
REG	Bromoform	4.4	UG/KG	U	U		
REG	Bromomethane	4.4	UG/KG	U	U		
REG	Carbon Disulfide	11.1	UG/KG	U	U		
REG	Carbon Tetrachloride	4.4	UG/KG	U	Ŭ		
REG	Chlorobenzene	4,4	UG/KG	Ū	Ū		
REG	Chioroethane	4.4	UG/KG	Ū	Ū		
	Chloroform		UG/KG	-	Ŭ		

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S07

265711	4.0 - 6.0 FT		Field Sample Type	: Grab	Matri	x: Soli		Collected: 07/09/97
	Sample Type	Volatile Organics	Result	Units		ifiers Data	Validation Code	······································
	REG	Chloromethane	4.4	UG/KG	U	UJ	C05	
	REG	Dibromochloromethane	4.4	UG/KG	Ū.	U		
	REG	Ethylbenzene		UG/KG	-	Ŭ		
	REG	Methylene Chloride		UG/KG	-	Ū	F01,F07	
	REG	Styrene		UG/KG	-	ŭ	101,101	
	REG	Tetrachloroethene		UG/KG	-	Ŭ		
	REG	Toluene		UG/KG	-	i		
	REG	Trichloroethene		UG/KG	-	Ů	1. Contract (1997)	
	REG	Vinyl Chloride		UG/KG	-	ŭ		
		Xylenes, Total		UG/KG	-	UJ U	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S08

265811

	6.0 - 12.0 FT	Field Sample Type	: Grab	Matri	ix: Soll		Collected: 07/08/97
Sampi Type		Result	Units	Qua Lab	lifiers Data	Validation Code	ани _{стрикстин} вт. , , ,
REG	1,1,1-Trichloroethane	2.4	UG/KG	U	U		
REG	1,1,2,2-Tetrachloroethane		UG/KG		Ū		
REG	1,1,2-Trichloroethane		UG/KG	-	Ū		
REG	1,1-Dichloroethane		UG/KG	-	Ū		
REG	1,1-Dichloroethene		UG/KG	-	Ū		
REG	1,2-Dichloroethane		UG/KG	-	Ŭ		
REG	1,2-Dichloropropane		UG/KG	-	ŭ		
REG	1,2-cis-Dichloroethene		UG/KG	-	Ū		
REG	1,2-trans-Dichloroethene		UG/KG	-	Ŭ		
REG	1,3-cis-Dichloropropene		UG/KG	-	Ŭ		
REG	1,3-trans-Dichloropropene		UG/KG	-	Ŭ		
REG	2-Butanone		UG/KG	-	Ŭ		
REG	2-Hexanone		UG/KG		Ŭ		
REG	4-Methyl-2-pentanone		UG/KG		Ŭ		
REG	Acetone		UG/KG	-	Ŭ		
REG	Benzene		UG/KG		ŭ		
REG	Bromodichloromethane		UG/KG		ŭ		
REG	Bromoform		UG/KG	-	Ŭ		
REG	Bromomethane		UG/KG	-	ŭ		
REG	Carbon Disulfide		UG/KG		Ŭ		
REG	Carbon Tetrachloride		UG/KG		Ŭ		
REG	Chlorobenzene		UG/KG	-	ŭ		
REG	Chloroethane		UG/KG	-	Ŭ		
REG	Chloroform		UG/KG	-	Ŭ		
REG	Chloromethane		UG/KG	-	ŬJ	C05	
REG	Dibromochloromethane		UG/KG		U	005	
REG	Ethylbenzene		UG/KG	-	Ŭ		
REG	Methylene Chloride		UG/KG	-	Ű	F01.F07	
REG	Styrene		UG/KG		Ŭ	ru1,ru/	
REG	Tetrachloroethene		UG/KG	-	Ŭ		
REG	Toluene		UG/KG	Ų	1	H02	
REG	Trichloroethene		UG/KG		J	nvz	
REG	Vinyl Chloride		UG/KG	-	Ŭ		
REG	Xylenes, Total		UG/KG	-	UJ U	000	
	1000	7.3 (09/10	U	03	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S09

265911	ŧ	3.0 - 10.0 FT	Field Sample Type	Field Sample Type: Grab Matrix: Soli			Collected: 07/08/97	
	Sample Type	Volatile Organics	Result	Units	Qual Lab	lifiers Data	Validation Code	
	REG	1,1,1-Trichloroethane	4.7	UG/KG	U	U		
	REG	1,1,2,2-Tetrachtoroethane	4.7	UG/KG	U	U		
	REG	1,1,2-Trichloroethane	4.7	UG/KG	U	U		
	REG	1,1-Dichloroethane	4.7	UG/KG	U	U		

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S09

265911	(6.0 -10.0 FT	Field Sample Type	Grab	Matri	x: Soll		Collected: 07/08/97
	Sample Type	volatile Organics	Result	Units	Qua Lab	liflers Data	Validation Code	
	REG	1,1-Dichloroethene	4.7	UG/KG	U	U		_
	REG	1,2-Dichloroethane	4.7	UG/KG	U	U		
	REG	1.2-Dichloropropane	4.7	UG/KG	U	U		
	REG	1.2-cis-Dichloroethene	4.7	UG/KG	U	U		
	REG	1,2-trans-Dichloroethene	4.7	UG/KG	U	U		
	REG	1,3-cis-Dichloropropene	4.7	UG/KG	U	U		
	REG	1,3-trans-Dichloropropene	4.7	UG/KG	U	U		
	REG	2-Butanone	11.8	UG/KG	U	U		
	REG	2-Hexanone	11.8	UG/KG	U	U		
	REG	4-Methyl-2-pentanone	11.8	UG/KG	U	U		
	REG	Acetone	55	UG/KG		=		•
	REG	Benzene	4.7	UG/KG	U	υ		
	REG	Bromodichloromethane	4.7	UG/KG	U	U		
	REG	Bromoform	4.7	UG/KG	U	U		
	REG	Bromomethane	4.7	UG/KG	U	U		
	REG	Carbon Disulfide	11.8	UG/KG	Ū	Ū		
	REG	Carbon Tetrachloride	4.7	UG/KG	Ū	Ū		
	REG	Chlorobenzene	4.7	UG/KG	Ū	Ū		
	REG	Chloroethane	4.7	UG/KG	Ū	Ū		
	REG	Chloroform	4.7	UG/KG	Ū	Ū		
	REG	Chloromethane		UG/KG	-	ŬJ	C05	
	REG	Dibromochloromethane		UG/KG	-	Ū		
	REG	Ethylbenzene		UG/KG		Ŭ		
	REG	Methylene Chloride		UG/KG	-	Ŭ	F01,F07	
	REG	Styrene		UG/KG		Ū		
	REG	Tetrachloroethene		UG/KG	-	มั		
	REG	Toluene		UG/KG	-	=		
	REG	Trichloroethene		UG/KG	u –	Ū		,
	REG	Vinyl Chloride		UG/KG	-	ŭ		
	REG	Xylenes, Total		UG/KG		ŬJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S10

REG

Dibromochloromethane

265A11

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1	:	2.0 - 4.0 FT	Field Sample Type	: Grab	Matr	ix: Soli		Collected:	07/08/97	
	Sample					lifiers	Validation			
	Туре	Volatile Organics	Result	Units	Lab	Data	Code			
	REG	1,1,1-Trichloroethane	4,4	UG/KG	U	U				
	REG	1,1,2,2-Tetrachloroethane	4.4	UG/KG	Ŭ	Ū				
	REĠ	1,1,2-Trichloroethane	4.4	UG/KG	Ŭ	Ū				
	REG	1,1-Dichloroethane	4.4	UG/KG	Ū	Ū				
	REG	1,1-Dichloroethene	4.4	UG/KG	Ū	Ū				
	REG	1,2-Dichloroethane	4.4	UG/KG	Ū	Ŭ				
	REG	1,2-Dichloropropane	4.4	UG/KG	Ū	ũ				
	REG	1,2-cis-Dichloroethene	4.4	UG/KG	Ū	Ũ				
	REG	1,2-trans-Dichloroethene		UG/KG		Ŭ				
	REG	1,3-cis-Dichloropropene	4.4	UG/KG	Ŭ	Ŭ				
	REG	1,3-trans-Dichloropropene	4.4	UG/KG	U	Ŭ				
	REG	2-Butanone	11.1	UG/KG	Ŭ	Ū				
	REG	2-Hexanone	11.1	UG/KG	Ū	Ū				
	REG	4-Methyl-2-pentanone	11.1	UG/KG	Ŭ	Ū				
	REG	Acetone	1060	UG/KG	D	=				
	REG	Benzene	4.4	UG/KG	Ū	U				
	REG	Bromodichloromethane	4.4	UG/KG	Ū	Ũ				
	REG	Bromoform		UG/KG		Ŭ				
	REG	Bromomethane		UG/KG	-	Ū				
	REG	Carbon Disulfide		UG/KG	-	Ŭ				
	REG	Carbon Tetrachloride		UG/KG	-	Ŭ				
	REG	Chlorobenzene		UG/KG		Ū				
	REG	Chloroethane	4.4	UG/KG	Ŭ	Ŭ				
	REG	Chloroform		UG/KG		Ŭ				
	REG	Chloromethane		UG/KG	-	-	C05			
	REG	Dihmmochloromethane		LIGIKG		11				

4.4 UG/KG U

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S10

265A11	2.0 - 4.0 FT		Field Sample Type: Grab			x: Soll		Collected: 07/08/97
	Sample Type	Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	• • • • • • • • • • • • • • • • • • •
	REG	Ethylbenzene	4.4	UG/KG	U	U		
	REG	Methylene Chloride		UG/KG	-	Ŭ	F01,F07	
	REG	Styrene		UG/KG	_	Ū		
	REG	Tetrachloroethene		UG/KG	-	Ŭ		
	REG	Toluene		UG/KG	÷	=		
	REG	Trichloroethene		UG/KG	II.	U		
	REG	Vinyl Chloride		UG/KG	-	ŭ		
	REG	Xylenes, Total		UG/KG	-	ŨJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S11

265B11

	0.0 - 2.0 FT	Field Sample Type	: Grab	Matri	x: Soil		Collected:	07/09/9
Sampi Type	e Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	nn yn ferfan ferfan yn	
REG	1,1,1-Trichloroethane	4.6	UG/KG	U	U		_	
REG	1,1,2,2-Tetrachloroethane	4.6	UG/KG	U	U			
REG	1,1,2-Trichloroethane	4.6	UG/KG	U	U			
REG	1,1-Dichloroethane	4.6	UG/KG	U	U			
REG	1,1-Dichloroethene	4.6	UG/KG	U	U			
REG	1,2-Dichloroethane	4.6	UG/KG	U	U			
REG	1,2-Dichloropropane	4.6	UG/KG	U	Ū			
REG	1,2-cis-Dichloroethene	4.6	UG/KG	U	Ū			
REG	1,2-trans-Dichloroethene	4.6	UG/KG	Ū	Ŭ			
REG	1,3-cis-Dichloropropene	4,6	UG/KG	Ŭ	Ū			
REG	1,3-trans-Dichloropropene	4.6	UG/KG	U	Ū			
REG	2-Butanone		UG/KG	-	ū			
REG	2-Hexanone	11.5	UG/KG	Ŭ	Ũ			
REG	4-Methyl-2-pentanone		UG/KG	-	ũ			
REG	Acetone		UG/KG		Ŭ			
REG	Benzene		UG/KG	-	Ŭ			
REG	Bromodichloromethane		UG/KG	+	Ū			
REG	Bromoform		UG/KG	-	Ŭ			
REG	Bromomethane		UG/KG	-	Ū			
REG	Carbon Disulfide		UG/KG	-	ŭ			
REG	Carbon Tetrachloride		UG/KG	-	Ŭ			
REG	Chlorobenzene		UG/KG	-	Ŭ			
REG	Chloroethane		UG/KG	-	Ŭ			
REG	Chloroform		UG/KG	-	Ŭ			
REG	Chioromethane		UG/KG	-	Ŭ			
REG	Dibromochloromethane		UG/KG		Ŭ			
REG	Ethylbenzene		UG/KG	-	Ŭ			
REG	Methylene Chloride		UG/KG	-	Ŭ	F01.F07		
REG	Styrene		UG/KG	-	Ŭ	rv1,rv/		
REG	Tetrachloroethene		UG/KG	-	Ŭ			
REG	Toluene		UG/KG	-	U			
REG	Trichloroethene		UG/KG	-				
REG	Vinyl Chloride		UG/KG	-	U			
REG	Xylenes, Total		UG/KG	-	U UJ	C02		

265B21

0.0 + 2.0 FT

Field Sample Type: Field Duplicate Matrix: Soll

Collected: 07/09/97

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Sample				Qual	lfiers	Validation
Туре	Volatile Organics	Result	Units	Lab	Data	Code
REG	1,1,1-Trichloroethane	4.6	UG/KG	U	U	
REG	1,1,2,2-Tetrachloroethane	4.6	UG/KG	U	ÚJ	K01
REG	1,1,2-Trichloroethane	4.6	UG/KG	U	U	
REG	1,1-Dichloroethane	4.6	UG/KG	Ū	Ū	
REG	1,1-Dichloroethene	4.6	UG/KG	ũ	Ŭ	
REG	1,2-Dichloroethane		UG/KG	-	Ŭ	
REG	1,2-Dichloropropane		UG/KG		Ū	
REG	1,2-cis-Dichloroethene		UG/KG	-	Ū	
REG	1,2-trans-Dichloroethene		UG/KG	-	Ŭ	

Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S11

265B21		0.0 - 2.0 FT	Field Sample Type: Field		2(¢	Matrix:	3011	Collected:	01109191
	Sample		Benut	11-14-		alifiers	Validation		
	Туре	Volatile Organica	Result	Units	Lab) Data	Code		
	REG	1,3-cis-Dichloropropene	4.6	UG/KG	U	U			
	REG	1,3-trans-Dichloropropene	4.6	UG/KG	U	U			
	REG	2-Bulanone	11.6	UG/KG	U	U			
	REG	2-Hexanone	11.6	UG/KG	U	UJ	K01		
	REG	4-Methyl-2-pentanone	11.6	UG/KG	U	UJ	K01		
	REG	Acetone	11.6	UG/KG	U	U			
	REG	Benzene	4.6	UG/KG	U	U			
	REG	Bromodichloromethane	4.6	UG/KG	U	U			
	REG	Bromoform	4.6	UG/KG	U	U			
	REG	Bromomethane	4.6	UG/KG	U	U			
	REG	Carbon Disulfide	11.6	UG/KG	U	U			
	REG	Carbon Tetrachloride	4.6	UG/KG	U	U			
	REG	Chlorobenzene	4.6	UG/KG	U	UJ	K01		
	REG	Chloroethane	4.6	UG/KG	U	U			
	REG	Chloroform	4.6	UG/KG	U	U			
	REG	Chloromethane	4.6	UG/KG	Ū	ŪJ	C05		
	REG	Dibromochloromethane	4.6	UG/KG	Ũ	Ū			
	REG	Ethylbenzene	4.6	UG/KG	Ū	ŪJ	K01		
	REG	Methylene Chloride		UG/KG		Ū	F01,F07		
	REG	Styrene	4.6	UG/KG	Ū	ŪJ	K01		
	REG	Tetrachioroethene		UG/KG		UJ	K01		
	REG	Toluene		UG/KG		ŪĴ	K01		
	REG	Trichloroethene		UG/KG	-	Ū.	••••		
	REG	Vinyl Chloride		UG/KG	-	Ŭ			
•		Xylenes, Total		UG/KG	-	ŬJ	C02.K01		

265C11

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ocation: Former 724th Tanker Purge Stations (SWMU 26) ,tation : S12

2.0 - 4.0 FT		Field Sample Type	: Grab	Matrix: Soil			Collected:	: 07/09/97
Sample Type	• Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	rut na t	
REG	1,1,1-Trichloroethane	4.4	UG/KG	U	U	-		
REG	1,1,2,2-Tetrachloroethane	4.4	UG/KG	U	U			
REG	1,1,2-Trichloroethane	4.4	UG/KG	U	U			
REG	1,1-Dichloroethane	4.4	UG/KG	U	U			
REG	1,1-Dichloroethene	4.4	UG/KG	U	U			
REG	1,2-Dichloroethane	4.4	UG/KG	U	U			
REG	1,2-Dichloropropane	4.4	UG/KG	U	U			
REG	1,2-cis-Dichloroethene	4.4	UG/KG	U	U			
REG	1,2-trans-Dichloroethene	4.4	UG/KG	U	U			
REG	1,3-cis-Dichloropropene	4.4	UG/KG	U	U			
REG	1,3-trans-Dichloropropene	4.4	UG/KG	U	U			
REG	2-Butanone	11.1	UG/KG	U	U			
REG	2-Hexanone	11.1	UG/KG	U	U			
REG	4-Methyl-2-pentanone	11.1	UG/KG	U	U			
REG	Acetone	63	UG/KG		=			
REG	Benzene	4.4	UG/KG	U	U			
REG	Bromodichloromethane	4.4	UG/KG	U	Ū			
REG	Bromoform	4.4	UG/KG	Ū	Ū			
REG	Bromomethane	4.4	UG/KG	Ū	Ū			
REG	Carbon Disulfide	11.1	UG/KG	Ū	Ũ			
REG	Carbon Tetrachloride	4.4	UG/KG	Ū	Ū			
REG	Chlorobenzene	4.4	UG/KG	Ŭ	Ū			
REG	Chloroethane		UG/KG		Ũ			
REG	Chioroform		UG/KG	-	ŭ			
REG	Chloromethane		UG/KG	-	ŨJ	C05		
REG	Dibromochloromethane		UG/KG	-	Ŭ			
REG	Ethylbenzene		UG/KG	-	Ĵ			
REG	Methylene Chloride		UG/KG		Ŭ	F01,F07		
REG	Styrene		UG/KG		Ŭ			
REG	Tetrachloroethene		UG/KG	-	Ŭ			
REG	Toluene		UG/KG	-	J			

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S12

265C11	2.0 - 4.0 FT		Field Sample Type: Grab 🤺 Matrix			c: Soll		Collected: 07/09/97
	Sample Type	Volatile Organics	Result	Units		ifiers Data	Validation Code	
	REG	Trichloroethene	4.4	UG/KG	U	U		_
	REG	Vinyl Chloride	4.4	UG/KG	U	U		
	REG	Xylenes, Total	13.8	UG/KG		9	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : \$13

65D11		2.0 - 4.0 FT	Field Sample Type	Grab	Mati	rix: Soli		Collected: 07/09/9
	Sample Type	Volatile Organics	Result	Units	Qu: Lat	alifiers Data	Validation Code	
	REG	1,1,1-Trichloroethane	4.6	UG/KG	U	U		
	REG	1,1,2,2-Tetrachloroethane		UG/KG		Ŭ		
	REG	1,1,2-Trichloroethane		UG/KG		Ŭ		
	REG	1,1-Dichloroethane		UG/KG		Ŭ		
	REG	1,1-Dichloroethene		UG/KG		Ū		
	REG	1,2-Dichloroethane		UG/KG	-	Ũ		
	REG	1,2-Dichloropropane		UG/KG	-	Ŭ		
	REG	1,2-cis-Dichloroethene	4.6	UG/KG	Ũ	Ū		
	REG	1,2-trans-Dichloroethene	4.6	UG/KG	Ũ	Ũ		
	REG	1,3-cis-Dichloropropene	4.6	UG/KG	Ũ	Ū		
	REG	1,3-trans-Dichloropropene	4.6	UG/KG	Ŭ	Ū		
	REG	2-Butanone	11.6	UG/KG	Ū	Ū		
	REG	2-Hexanone		UG/KG		Ŭ		
	REG	4-Methyl-2-pentanone		UG/KG		Ũ		
	REG	Acetone		UG/KG	-	=		
	REG	Benzene		UG/KG	U	U		
	REG	Bromodichloromethane	4.6	UG/KG	Ŭ	Ū		
	REG	Bromoform		UG/KG	-	Ŭ		
	REG	Bromomethane		UG/KG		Ŭ		
	REG	Carbon Disulfide	11.6	UG/KG	Ū	Ū		
	REG	Carbon Tetrachloride		UG/KG	-	Ū		
	REG	Chlorobenzene		UG/KG	-	Ŭ		
	REG	Chloroethane		UG/KG	-	Ŭ		
	REG	Chloroform		UG/KG		Ŭ		
	REG	Chloromethane		UG/KG		ŬJ	C05	
	REG	Dibromochloromethane		UG/KG	-	Ű		
	REG	Ethylbenzene		UG/KG	-	Ŭ		
	REG	Methylene Chloride		UG/KG	-	Ū	F01,F07	
		Styrene		UG/KG		Ŭ	(r. wr	
		Tetrachloroethene		JG/KG	-	Ŭ		
		Toluene		JG/KG	-	=		
	REG	Trichloroethene		JG/KG	U	Ū		
		Vinyl Chloride		JG/KG	-	ŭ		
		Xylenes, Total		JG/KG	-	ŬJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S14

265E11	2.0 - 4.0 FT		Field Sample Type	Field Sample Type: Grab		k: Soll		Collected: 07/14/97
	Sample Type	Volatile Organics	Result	Units	Qualifiers Lab Data		Vaildation Code	
	REG	1,1,1-Trichloroethane	2.3	UG/KG	U	U		
	REG	1,1,2,2-Tetrachloroethane	2.3	UG/KG	Ú	Ū		
	REG	1,1,2-Trichloroethane	2.3	UG/KG	Ŭ	Ū		
	REG	1,1-Dichloroethane	2.3	UG/KG	Ū	Ū		
	REG	1,1-Dichloroethene	2.3	UG/KG	Ū	Ū		
	REG	1,2-Dichloroethane	2.3	UG/KG	Ŭ	Ū		
	REG	1,2-Dichloropropane	2.3	UG/KG	Ū	Ŭ		
	REG	1,2-cis-Dichloroethene	2.3	UG/KG	Ŭ	Ū		
	REG	1,2-trans-Dichloroethene	2.3	UG/KG	Ū	Ū		
	REG	1,3-cis-Dichloropropene	2.3	UG/KG	Ū	Ŭ		
	REG	1,3-trans-Dichloropropene		UG/KG	-	Ŭ		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Matrix: Soll

Collected: 07/14/97

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : S14

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2.0 - 4.0 FT

Field Sample Type: Grab

Sample Type	Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	
REG	2-Butanone	5.8	UG/KG	U	U	-	
REG	2-Hexanone		UG/KG		ŭ		
REG	4-Methyl-2-pentanone		UG/KG	-	Ŭ		
REG	Acetone	5.8	UG/KG	Ŭ	Ū		
REG	Benzene		UG/KG		Ū		
REG	Bromodichloromethane	2.3	UG/KG	U	U		
REG	Bromoform	2.3	UG/KG	U	U		
REG	Bromomethane	2.3	UG/KG	U	U		
REG	Carbon Disulfide	5.8	UG/KG	U	U		
REG	Carbon Tetrachloride	2.3	UG/KG	U	U		
REG	Chlorobenzene	2.3	UG/KG	U	U		
REG	Chloroethane	2.3	UG/KG	U	U		
REG	Chloroform	2.3	UG/KG	U	U		
REG	Chloromethane	2.3	UG/KG	U	U		
REG	Dibromochloromethane	2.3	UG/KG	U	U		
REG	Ethylbenzene	2.3	UG/KG	U	U		
REG	Methylene Chloride	4.1	UG/KG	B	U	F01,F07	
REG	Styrene	2.3	UG/KG	U	U		
REG	Tetrachloroethene	2.3	UG/KG	U	U		
REG	Toluene	7.4	UG/KG		=		
REG	Trichloroethene	2.3	UG/KG	U	U		
	Vinyl Chloride	2.3	UG/KG	U	U		
REG	Xylenes, Total	2.3	UG/KG	U	UJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : \$15

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	2.0 - 4,0 FT	Field Sample Type	: Grab	Matri	x: Soll		Collected: 07/14/
Sample Type	• Volatile Organica	Result	Units	Qua Lab	lifiers Data	Validation Code	<u>n an /u>
REG	1,1,1-Trichloroethane	2.3	UG/KG	U	U		_
REG	1,1,2,2-Tetrachloroethane	2.3	UG/KG	U	U		
REG	1,1,2-Trichloroethane	2.3	UG/KG	U	U		
REG	1,1-Dichloroethane	2.3	UG/KG	U	U		
REG	1,1-Dichloroethene	2.3	UG/KG	U	U		
REG	1,2-Dichloroethane	2.3	UG/KG	U	U		
REG	1,2-Dichloropropane	2.3	UG/KG	U	U		
REG	1,2-cis-Dichloroethene	2.3	UG/KG	U	U		
REG	1,2-trans-Dichloroethene	2.3	UG/KG	U	Ú		
REG	1,3-cis-Dichloropropene	2.3	UG/KG	U	U		
REG	1,3-trans-Dichloropropene	2,3	UG/KG	U	U		
REG	2-Butanone	5.7	UG/KG	Ū	Ŭ		
REG	2-Hexanone	5.7	UG/KG	U	Ū		
REG	4-Methyl-2-pentanone	5.7	UG/KG	Ũ	Ū		
REG	Acetone	5.7	UG/KG	Ũ	Ū		
REG	Benzene		UG/KG		U		
REG	Bromodichloromethane	2.3	UG/KG	Ū	Ŭ		
REG	Bromoform	2.3	UG/KG	Ū	Ŭ		
REG	Bromomethane	2.3	UG/KG	Ŭ	Ū		
REG	Carbon Disulfide	5.7	UG/KG	Ū	Ū		
REG	Carbon Tetrachloride	2.3	UG/KG	Ū	Ū		
REG	Chlorobenzene		UG/KG		Ū		
REG	Chloroethane		UG/KG		Ū		
REG	Chloroform	2.3	UG/KG	Ū	Ů		
REG	Chloromethane	2.3	UG/KG	Ū	Ũ		
REG	Dibromochloromethane		UG/KG		Ũ		
REG	Ethylbenzene		UG/KG	-	Ũ		
REG	Methylene Chloride		UG/KG		Ū	F01,F07	
REG	Styrene		UG/KG	-	Ū		
REG	Tetrachioroethene		UG/KG		Ū		
REG	Toluene		UG/KG	-	=		
REG	Trichloroethene		UG/KG	U	υ		
REG	Vinyl Chloride		UG/KG	-	Ŭ		

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⁵tation : 35F11

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : \$15

265F11	2.0 - 4.0 FT	Field Sample Type:	Grab	Matrix	: Soll		Collected:	07/14/97
	Sample Type Volatile Organics	Result	Units	Quali Lab	fiers Data	Validation Code		
	REG Xylenes, Total	2,3	UG/KG	U	UJ	C02		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S16

Sample Type REG	Volatile Organics			A			
REG	Aniania Olĥsilines	· Denulá	11-14-		ifiers	Validation	
		Result	Units	LED	Data	Code	
	1,1,1-Trichloroethane	22.2	UG/KG	U	U		
REG	1,1,2,2-Tetrachloroethane	22.2	UG/KG	U	U		
REG	1,1,2-Trichloroethane	22.2	UG/KG	U	U		
REG	1,1-Dichloroethane	22.2	UG/KG	U	U		
REG	1,1-Dichlorosthene	22.2	UG/KG	U	U		
REG	1,2-Dichloroethane	22.2	UG/KG	U	U		
REG	1,2-Dichloropropane	22.2	UG/KG	U	U		
REG	1,2-cis-Dichtoroethene	22.2	UG/KG	U	U		
REG	1,2-trans-Dichloroethene	22.2	UG/KG	U	U		
REG	1,3-cis-Dichloropropene	22.2	UG/KG	U	U		
REG	1,3-trans-Dichloropropene	22.2	UG/KG	U	U		
REG	2-Butanone	55.6	UG/KG	Ū	Ū		
REG	2-Hexanone		UG/KG	-	Ũ		
REG	4-Methyl-2-pentanone		UG/KG	+	Ŭ		
REG	Acetone	55.6	UG/KG	Ũ	Ũ		
REG	Benzene	92.5	UG/KG	-	=		
REG	Bromodichloromethane		UG/KG	U .	U		
REG	Bromoform		UG/KG		Ŭ		
REG	Bromomethane		UG/KG		ŭ		
REG	Carbon Disulfide		UG/KG		Ŭ		
REG	Carbon Tetrachloride		UG/KG	-	ŭ		
REG	Chlorobenzene		UG/KG	-	Ŭ		
	Chloroethane		UG/KG		Ŭ		
	Chloroform		UG/KG		U		
REG	Chloromethane		UG/KG		U		
REG	Dibromochloromethane		UG/KG		U		
	Ethylbenzene		UG/KG	•	0 =		
	Methylene Chloride		UG/KG		Ū		
	Styrene		UG/KG	-	U		
	Tetrachloroethene		UG/KG	-	-		
	Toluene			-	U		
	Trichloroethene		UG/KG		=		
			UG/KG		U		
	Vinyl Chloride Xylenes, Total	22.2 (1320	UG/KG		J (C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S17

265H11	(0.0 - 2.0 FT		Field Sample Type	: Grab	Matri	x: Soil		Collected: 07/14/97
	Sample Type	• Voiatile Organics		Result	Units	Qua Lab	lifiers Data	Validation Code	nii - 111-1 -20 00-100 -
	REG	1,1,1-Trichloroethane		2.2	UG/KG	U	UJ	K01	
	REG	1,1,2,2-Tetrachloroethane		2.2	UG/KG	U	UJ	K01	
	REG	1,1,2-Trichloroethane		2.2	UG/KG	U	UJ	K01	
	REG	1,1-Dichloroethane		2.2	UG/KG	U	ŬĴ	K01	
	REG	1,1-Dichloroethene	1	2.2	UG/KG	U	UJ	K01	
	REG	1,2-Dichloroethane		2.2	UG/KG	Ū	UJ	K01	
	REG	1,2-Dichloropropane		2.2	UG/KG	Ū	UJ	K01	
	REG	1,2-cis-Dichloroethene		2.2	UG/KG	Ū	ŬĴ	K01	
	REG	1,2-trans-Dichloroethene		2.2	UG/KG	Ū	UJ	K01	
	REG	1,3-cis-Dichloropropene		2.2	UG/KG	Ū	UJ	K01	
	REG	1,3-trans-Dichloropropene		2.2	UG/KG	Ū	ŬĴ	K01	
	REG	2-Butanone		5.4	UG/KG	Ū	ŰĴ	K01	
	REG	2-Hexanone		4-1	UG/KG	-	ŨĴ	K01	

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : S17

265H11	(0.0 - 2.0 FT	Field Sample Type	: Grab	Matri	k: Soli		Collected:	07/14/9
	Sample Type	Volatile Organics	Result	Units	Qual Lab	lfiers Data	Validation Code		
	REG	4-Methyl-2-pentanone	5.4	UG/KG	U	UJ	K01		
	REG	Acetone	5.4	UG/KG	U	UJ	K01		
	REG	Benzene	2.2	UG/KG	U	UJ	K01		
	REG	Bromodichloromethane	2.2	UG/KG	U	UJ	K01		
	REG	Bromoform	2.2	UG/KG	U	UJ	K01		
	REG	Bromomethane	2.2	UG/KG	U	UJ	K01		
	REG	Carbon Disulfide	5.4	UG/KG	U	UJ	K01		
	REG	Carbon Tetrachloride	2.2	UG/KG	U	UJ	K01		
	REG	Chlorobenzene	2.2	UG/KG	U	UJ	K01 ·		
	REG	Chloroethane	2.2	UG/KG	U	UJ	K01		
	REG	Chioroform	2.2	UG/KG	U	UJ	K01		
	REG	Chloromethane	2.2	UG/KG	Ŭ	ŬĴ	K01		
	REG	Dibromochloromethane	2.2	UG/KG	Ü	ŬĴ	K01		
	REG	Ethylbenzene	2.2	UG/KG	U	ŪJ	K01		
	REG	Methylene Chloride	5.3	UG/KG	в	U	F01,F07,K01		
	REG	Styrene	2.2	UG/KG	U	ŪJ	K01		
	REG	Tetrachloroethene	2.2	UG/KG	Ŭ	ŪJ	K01		
	REG	Toluene		UG/KG		1	K01		
	REG	Trichloroethene		UG/KG	U	ŬJ	K01		
	REG	Vinyl Chloride		UG/KG		ŪJ	K01		
	REG	Xylenes, Total		UG/KG	-	ŬĴ	C02,K01		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S18

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 		Field Sample Type					
Sample Type	Volatile Organics	Result	Units		alifiers Data	Validation Code	
REG	1,1,1-Trichloroethane	2.4	UG/KG	U	U		
REG	1,1,2,2-Tetrachioroethane		UG/KG	-	Ŭ		
REG	1,1,2-Trichloroethane		UG/KG	-	Ŭ		
REG	1,1-Dichloroethane		UG/KG		ม		
REG	1,1-Dichloroethene		UG/KG		Ū		
REG	1,2-Dichloroethane		UG/KG		Ŭ		
REG	1,2-Dichloropropane		UG/KG		Ū		
REG	1,2-cis-Dichloroethene		UG/KG		Ū		
REG	1,2-trans-Dichloroethene	2.4	UG/KG	Ū	Ŭ		
REG	1,3-cis-Dichloropropene	2.4	UG/KG	Ū	Ū		
REG	1,3-trans-Dichloropropene		UG/KG	-	Ū		
REG	2-Butanone	5.9	UG/KG	Ū	Ŭ		
REG	2-Hexanone		UG/KG		Ŭ		
REG	4-Methyl-2-pentanone		UG/KG	_	Ŭ		
REG	Acetone	77.3	UG/KG	_	=		
REG	Benzene		UG/KG	U	U		
REG	Bromodichloromethane	2.4	UG/KG	Ū	Ū		
REG	Bromoform	2.4	UG/KG	Ū	Ū		
REG	Bromomethane		UG/KG	-	Ŭ		
REG	Carbon Disulfide		UG/KG	_	ŬJ	C05	
REG	Carbon Tetrachloride		UG/KG	-	Ũ	•••	
REG	Chlorobenzene		UG/KG		Ū		
REG	Chloroethane		UG/KG		Ū		
REG	Chloroform		UG/KG		Ũ		
REG	Chloromethane		UG/KG		Ũ		
REG	Dibromochloromethane		UG/KG	-	Ŭ		
REG	Ethylbenzene		UG/KG		Ŭ		
REG	Methylene Chloride		UG/KG		ŭ	F01,F07	
REG	Styrene		UG/KG	-	ŭ		
REG	Tetrachloroethene		UG/KG	-	Ŭ		
REG	Toluene		UG/KG		ŭ		
REG	Trichloroethene		JG/KG	-	Ŭ		
REG	Vinyl Chloride		JG/KG		Ŭ		
	Xvienes, Total		JG/KG		ŬJ	C02	

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S19

265K11		5.0 - 6.0 FT	Field Sample Type	Grab	Matri	x: Soll		Collected: 07/14/9
	Sample Type	Volatile Organics	Result	Units	Qual Lab	lifiers Data	Validation Code	· · · · ·
	REG	1,1,1-Trichloroethane		UG/KG		U	· · · · · · · · · · · · · · · · · · ·	
	REG	1,1,2,2-Tetrachloroethane		UG/KG		Ŭ		
	REG	1.1.2-Trichloroethane		UG/KG	-	Ŭ		
	REG	1,1-Dichloroethane		UG/KG	-	Ŭ		
	REG	1,1-Dichloroethene		UG/KG	-	ŭ		
	REG	1,2-Dichloroethane		UG/KG	-	Ŭ		
	REG	1,2-Dichloropropane		UG/KG	-	Ŭ		
	REG	1,2-cis-Dichloroethene		UG/KG	-	Ŭ	1	
	REG	1.2-trans-Dichloroethene		UG/KG		Ŭ		
	REG	1,3-cis-Dichloropropene		UG/KG	-	Ū		,
	REG	1,3-trans-Dichloropropene		UG/KG		Ŭ		
	REG	2-Butanone		UG/KG		Ū		
	REG	2-Hexanone		UG/KG	-	Ū		
	REG	4-Methyl-2-pentanone		UG/KG		Ū		
	REG	Acetone		UG/KG		Ū		
	REG	Benzene		UG/KG		Ū		
	REG	Bromodichloromethane		UG/KG	-	Ū		
	REG	Bromoform		UG/KG	-	Ŭ		
	REG	Bromomethane		UG/KG	-	Ū		
	REG	Carbon Disulfide		UG/KG		Ū		
	REG	Carbon Tetrachloride		UG/KG	-	Ŭ		
	REG	Chlorobenzene		UG/KG		Ũ		
	REG	Chloroethane		UG/KG	-	Ũ		
	REG	Chloroform		UG/KG	-	Ŭ		
	REG	Chloromethane		UG/KG	-	Ŭ		
	REG	Dibromochloromethane		UG/KG	-	Ŭ		
	REG	Ethylbenzene	•	UG/KG	-	Ŭ		
	REG	Methylene Chloride		UG/KG	-	Ū	F01,F07	
	REG	Styrene		UG/KG	-	Ŭ		
	REG	Tetrachloroethene		UG/KG		ŭ		
	REG	Toluene		UG/KG	•	ŭ		
	REG	Trichloroethene		UG/KG	-	Ŭ		
	REG	Vinyl Chloride		UG/KG	-	Ŭ		
	REG	Xylenes, Total		UG/KG	-	ŬJ	C02	

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S20

265M11		I.O - 6.0 FT	Field Sample Type	Grab	Matrix	c: Soil		Collected: 07/14/9
	Sample Type	Volatile Organics	Result	Units	Qual Lab	iflers Data	Validation Code	
	REG	1,1,1-Trichloroethane	2.4	UG/KG	U	U		
	REG	1,1,2,2-Tetrachloroethane	2.4	UG/KG	U	U		
	REG	1,1,2-Trichloroethane	2.4	UG/KG	U	U		
	REG	1,1-Dichloroethane	2.4	UG/KG	U	U		
	REG	1,1-Dichloroethene	2.4	UG/KG	U	U		
	REG	1,2-Dichloroethane	2.4	UG/KG	U	U		
	REG	1,2-Dichloropropane	2.4	UG/KG	U	U		
	REG	1,2-cis-Dichloroethene	2.4	UG/KG	U	U		
	REG	1,2-trans-Dichloroethene	2.4	UG/KG	U	U		
	REG	1,3-cis-Dichloropropene	2.4	UG/KG	U	U		
	REG	1.3-trans-Dichloropropene	2.4	UG/KG	U	U		
	REG	2-Butanone	6.1	UG/KG	U	U		
	REG	2-Hexanone	6.1	UG/KG	U	Ú		
	REG	4-Methyl-2-pentanone	6.1	UG/KG	U	Ú		
	REG	Acetone	25.7	UG/KG		=		
	REG	Benzene	2.4	UG/KG	U	U		
	REG	Bromodichloromethane		UG/KG		Ū		
	REG	Bromoform		UG/KG	-	Ŭ		
	REG	Bromomethane		UG/KG		Ū		
	REG	Carbon Disulfide		UG/KG		Ū		
	REG	Carbon Tetrachloride		UG/KG		Ŭ		
	REG	Chlorobenzene		UG/KG		Ŭ		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : S20

265M11	4	4.0 - 6.0 FT	Field Sample Type	: Grab	Matri	ix: Soil		Collected:	07/14/97
	Sample Type		Result	Units		lifiers Data	Validation Code		
	REG	Chloroethane	2.4	UG/KG	U	U		_	
	REG	Chloroform	2.4	UG/KG	U	U			
	REG	Chloromethane	2.4	UG/KG	U	U			
	REG	Dibromochloromethane	2.4	UG/KG	U	U			
	REG	Ethylbenzene	2.4	UG/KG	Ū	U			
	REG	Methylene Chloride	2.4	UG/KG	Ū	Ū			
	REG	Styrene	2.4	UG/KG	U	Ū			
	REG	Tetrachloroethene	2.4	UG/KG	Ū	Ū			
	REG	Toluene	1.6	UG/KG	J	j			
	REG	Trichloroethene	2.4	UG/KG	Ū	Ū			
	REG	Vinyl Chloride		UG/KG	-	Ū			
	REG	Xylenes, Total		UG/KG	-		C02		

Matrix: Soll

Collected: 07/14/97

Location: Former 724th Tanker Purge Stations (SWMU 26)

265N11

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^{4.0 - 6.0} FT Field Sample Type: Grab Sample Volatile O Beenk esenice

Type Volatile Organics Result Units Lab Data REG 1,1,1-Trichloroethane 2.2 UG/KG U U REG 1,1,2,2-Tetrachloroethane 2.2 UG/KG U U REG 1,1,2,7-Trichloroethane 2.2 UG/KG U U REG 1,1,2-Trichloroethane 2.2 UG/KG U U REG 1,1-Dichloroethane 2.2 UG/KG U U	Code
REG 1,1,2,2-Tetrachloroethane 2.2 UG/KG U UJ K01 REG 1,1,2-Trichloroethane 2.2 UG/KG U U	
REG 1,1,2-Trichloroethane 2.2 UG/KG U U	
REG 1,1-Dichloroethane 2.2 UG/KG U U	
REG 1,1-Dichloroethene 2.2 UG/KG U U	
REG 1,2-Dichloroethane 2.2 UG/KG U U	
REG 1,2-Dichloropropane 2.2 UG/KG U U	
REG 1,2-cis-Dichloroethene 2.2 UG/KG U U	
REG 1,2-trans-Dichloroethene 2.2 UG/KG U U	
REG 1,3-cis-Dichloropropene 2.2 UG/KG U U	
REG 1,3-trans-Dichloropropene 2.2 UG/KG U U	
REG 2-Butanone 5.6 UG/KG U U	
REG 2-Hexanone 5.6 UG/KG U UJ K01	
REG 4-Methyl-2-pentanone 5.6 UG/KG U UJ K01	
REG Acetone 5.6 UG/KG U U	
REG Benzene 2.2 UG/KG U U	
REG Bromodichloromethane 2.2 UG/KG U U	
REG Bromoform 2.2 UG/KG U U	
REG Bromomethane 2.2 UG/KG U U	
REG Carbon Disulfide 5.6 UG/KG U U	
REG Carbon Tetrachloride 2.2 UG/KG U U	
REG Chlorobenzene 2.2 UG/KG U UJ K01	
REG Chloroethane 2.2 UG/KG U U	
REG Chloroform 2.2 UG/KG U U	
REG Chloromethane 2.2 UG/KG U U	
REG Dibromochloromethane 2.2 UG/KG U U	
REG Ethylbenzene 2.2 UG/KG U UJ K01	
REG Methylene Chloride 3.4 UG/KG B U F01,F0)7
REG Styrene 2.2 UG/KG U UJ K01	
REG Tetrachloroethene 2.2 UG/KG U UJ K01	
REG Toluene 4.7 UG/KG J K01	
EG Trichloroethene 2.2 UG/KG U U	
REG Vinyl Chloride 2.2 UG/KG U U	
EG Xylenes, Total 2.2 UG/KG U UJ C02,K0	D1

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS1

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262111	C	.0 - 0.0	FT	Field S	ample Type: G	ab I	Matrix: S	Sediment	1	Collected:	08/11/97
	Sampie Type	Metals		. <u> </u>	Result	Units		lfiers Data	Validation Code		
	REG REG	Arsenic Barium				MG/KG MG/KG	-	U =		-	
				·· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·		65

Station : S21

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS1

 Sampi	e	· · · · · · · · · · · · · · · · · · ·				ualifiers	Validation	Collected: (
Туре	Metals		Result	Units		Lab Data			
REG	Cadmium		0.1	2 MG/K	GŪ	J U			
REG	Chromium			7 MG/K			F10		
REG REG	Lead Mercury			9 MG/K			E02		
REG	Selenium			2 MG/K					
REG	Silver			4 MG/K 7 MG/K		n N 01	F10 F06		
Sample Type) Semi-Volatile (Organics	Result	Units		Qualifiers Lab Data	Validation Code		
REG	2-Chioronaphth				<u>.</u>		- <u></u>	_	
REG	Acenaphthene		42	UG/KG	3 U				
REG	Acenaphthylene	8) UG/KG		-			
REG	Anthracene			UG/KG		-			
REG REG	Benzo(a)anthra) UG/KG		-			
REG	Benzo(a)pyrene Benzo(b)fluoran			UG/KG		-			
REG	Benzo(g,h,i)pery) UG/KG		_			
REG	Benzo(k)fluoran	•) ug/kg) ug/kg		+			
REG	Chrysene			UG/KG	-	U			
REG	Dibenzo(a,h)ant	thracene		UG/KG	-	U			
REG	Fluoranthene			UG/KG		Ŭ			
REG	Fluorene			UG/KG		Ŭ			
REG	Indeno(1,2,3-cd))pyrene		UG/KG		Ū			
REG	Naphthalene		420	UG/KG	U	Ū			
REG REG	Phenanthrene Pyrene			UG/KG	-	U			
NLO	ryielle		420	UG/KG	U	U			
Sample					6	Qualifiers	Validation		
Type	Volatile Organic	68	Possit	l lalía					
	Volatile Organic		Result	Units	i	Lab Data	Code	_	
REG	1,1,1-Trichloroet	hane	2.5	UG/KG	ן ר	Lab Data U		-	
REG REG	1,1,1-Trichloroeti 1,1,2,2-Tetrachlo	hane proethane	2.5	UG/KG UG/KG	เ บ บ	Lab Data U U		-	
REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett	ihane proethane hane	2.6 2.5 2.5	UG/KG UG/KG UG/KG	เ บ บ บ	Lab Data U U U		-	
REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau	ihane proethane hane ne	2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG	ม บ บ บ บ	Lab Data U U U U		-	
REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett	thane proethane hane ne ne	2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U		-	
REG REG REG REG REG REG	1,1,1-Trichloroeti 1,1,2,2-Tetrachlo 1,1,2-Trichloroeti 1,1-Dichloroethau 1,1-Dichloroethau	hane proethane hane ne ne ne	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U		-	
REG REG REG REG REG REG	1,1,1-Trichloroeti 1,1,2,2-Tetrachlo 1,1,2-Trichloroeti 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau	thane broetbane hane ne ne ne ane	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U		-	
REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroettea 1,2-Dichloroettea 1,2-Dichloroettea 1,2-Dichloroprope 1,2-cis-Dichloroe 1,2-trans-Dichloro	thane proethane hane ne ne ane ane ethene oothene	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroetteu 1,2-Dichloroetteu 1,2-Dichloroetteu 1,2-Dichloropropu 1,2-Cis-Dichloroet 1,2-trans-Dichlorop 1,3-cis-Dichloropp	thane proethane hane ne ne ane ane thene oethene propene	2.6 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U		-	
REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloroethau 1,2-Cis-Dichloroet 1,2-trans-Dichloro 1,3-cis-Dichloropt 1,3-trans-Dichloropt	thane proethane hane ne ne ane ane thene oethene propene	2.6 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroetta 1,1-Dichloroetta 1,2-Dichloroetta 1,2-Dichloropropi 1,2-cis-Dichloroet 1,2-trans-Dichloro 1,3-trans-Dichloro 2-Butanone	thane proethane hane ne ne ane ane thene oethene propene	2.6 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethai 1,2-Dichloroethai 1,2-Dichloropropi 1,2-cis-Dichloroet 1,2-trans-Dichloro 1,3-trans-Dichloro 2-Butanone 2-Hexanone	thane proethane hane ne ne ane sthene oothene ropene opropene	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	1 000000000000000000000000000000000000	Lab Data U U U U U U U U U U U U U U U U U U	Code	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloroethau 1,2-Dichloropou 1,2-cis-Dichloropu 1,2-cis-Dichloropu 1,3-cis-Dichloropu 1,3-trans-Dichloro 2-Butanone 2-Hexanone 4-Methyl-2-pentau	thane proethane hane ne ne ane sthene oothene ropene opropene	2.6 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U R		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethai 1,2-Dichloroethai 1,2-Dichloroethai 1,2-Dichloropopa 1,2-cis-Dichloropi 1,3-cis-Dichloropi 1,3-trans-Dichloro 2-Butanone 2-Hexanone 4-Methyl-2-pentar Acetone	thane proethane hane ne ne ane sthene oothene ropene opropene	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethei 1,2-Dichloroethei 1,2-Dichloroethei 1,2-Dichloropropi 1,2-cls-Dichloropi 1,2-cls-Dichloropi 1,3-cls-Dichloropi 1,3-trans-Dichloro 2-Butanone 2-Hexanone 4-Methyl-2-pentar Acetone Benzene	thane proethane hane ne ne ane sthene oethene oropene opropene opropene	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethai 1,2-Dichloroethai 1,2-Dichloroethai 1,2-Dichloropopa 1,2-cis-Dichloropi 1,3-cis-Dichloropi 1,3-trans-Dichloro 2-Butanone 2-Hexanone 4-Methyl-2-pentar Acetone	thane proethane hane ne ne ane sthene oethene oropene opropene opropene	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroetta 1,1-Dichloroetta 1,1-Dichloroetta 1,2-Dichloroetta 1,2-Dichloroetta 1,2-Cis-Dichloroetta 1,2-Cis-Dichloroetta 1,2-Cis-Dichloroetta 1,2-Cis-Dichloroetta 1,2-Cis-Dichloroetta 1,3-trans-Dichloroe 2-Butanone 2-Hexanone 2-Hexanone 4-Methyl-2-pentar Acetone Benzene Bromodichlorome	thane proethane hane ne ne ane sthene oethene oropene opropene opropene	2.6 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 6.3 6.3 6.3 6.3 6.3 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,3-dis-Dichloroe 2-Butanone 2-Hexanone 4-Methyl-2-pentau Acetone Benzene Bromodichlorome Bromoform	thane proethane hane ne ne ane sthene oethene oropene opropene opropene	2.6 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U U U	Code	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2,2-Tetrachlo 1,1,2-Trichloroetta 1,1-Dichloroetta 1,2-Dichloroetta 1,2-Dichloropropi 1,2-cis-Dichloropropi 1,2-cis-Dichloropropi 1,3	thane proethane hane ne ne ane sthene oothene opropene opropene none	2.6 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2,2-Tetrachlo 1,1,2-Trichloroetta 1,1-Dichloroetta 1,2-Dichloroetta 1,2-Dichloropropa 1,2-cis-Dichloropropa 1,2-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 1,3-cis-Dichloropropa 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 3-More and 2-Sector	thane proethane hane ne ne ane sthene oothene opropene opropene none	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U U U U U U	Code	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloropropa 1,2-cis-Dichloropi 1,2-cis-Dichloropi 1,3-cis-Dichloropi 1,3-cis-Dichloropi 1,3-cis-Dichloropi 1,3-cis-Dichloropi 2-Butanone 2-Hexanone 4-Methyl-2-pentar Acetone Benzene Bromodichlorome Bromodichlorome Bromoform Bromomethane Carbon Disulfide Carbon Tetrachlor Chlorobenzene Chloroethane	thane proethane hane ne ne ane sthene oothene ooropene opropene none	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloropropa 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 1,2-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 2,3-Cis-Dichloroethau 3,3-	thane proethane hane ne ne ane sthene oothene ooropene opropene none	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloropropa 1,2-Cis-Dichloroethau 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 1,2-Cis-Dichloropu 2-Butanone 2-Butanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Moromethane Chloroform Chloromethane	thane proethane hane ne ne ane thene oethene ooropene opropene none	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2:Tetrachlo 1,1,2:Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloroethau 1,2-Dichloropropi 1,2-Cis-Dichloropi 1,2-Cis-Dichloropi 1,3-cis-Dichloropi 1,3-cis-Dichloropi 2-Butanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Butanone 2-	thane proethane hane ne ne ane thene oethene ooropene opropene none	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloropropi 1,2-cis-Dichloropropi 1,2-cis-Dichloroet 1,2-cis-Dichloroet 1,3-cis-Dichloroet 1,3-cis-Dichloroet 1,3-cis-Dichloroet 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 3-romodichlorome Bromodichlorome Bromodichlorome Carbon Disulfide Carbon Tetrachlor Chloroethane Chloroethane Chloromethane Dibromochloromel thylbenzene	thane proethane hane ne ne ane ethene oothene opropene none ethane	2.6 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 6.3 6.3 6.3 6.3 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code C01,C04	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloropropi 1,2-cis-Dichloroethau 1,2-cis-Dichloroethau 1,3-cis-Dichloropi 1,3-cis-Dichloropi 1,3-cis-Dichloropi 1,3-cis-Dichloropi 1,3-cis-Dichloroethau 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 2-Hexanone 3-romodichlorome Bromodichlorome Bromodichlorome Carbon Disulfide Carbon Tetrachlor Chloroethane Chloroethane Chloroform Shloromethane Chloromethane Shloromethane Shloromethane Shloromethane Shloromethane Shloromethane Shloromethane Shloromethane Shloromethane Shloromethane Shloromethane Shloromethane	thane proethane hane ne ne ane ethene oothene opropene none ethane	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloropropi 1,2-cls-Dichloropropi 1,2-cls-Dichloropropi 1,3-cls-Dichloropu 1,3-cls-Dichloropu 1,3-cls-Dichloropu 1,3-crans-Dichloro 2-Butanone 2-Hexanone 4-Methyl-2-pentau Acetone Benzene Bromodichlorome Bromodichlorome Bromoothane Carbon Disulfide Carbon Tetrachlor Chlorobenzene Chloroform Chlorotorme Chloroform Chlorotormethane Chloroformethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane Chlorotormethane	thane proethane hane ne ne ane ethene oothene oothene ooropene opropene none ethane thane	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code C01,C04	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroprope 1,2-Cis-Dichloroprope 1,2-Cis-Dichloroprope 1,2-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 2-Butanone 2-Hexanone	thane proethane hane ne ne ane ethene oothene oothene ooropene opropene none ethane thane	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code C01,C04	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroethau 1,2-Dichloropropa 1,2-cis-Dichloropropa 1,2-cis-Dichloropropa 1,2-cis-Dichloropu 1,3-cis-Dichloropu 1,3-cis-Dichloropu 1,3-cis-Dichloropu 1,3-cis-Dichloropu 1,3-cis-Dichloropu 1,3-cis-Dichloropu 2-Butanone 2-Hexanone	thane proethane hane ne ne ane ethene oothene oothene ooropene opropene none ethane thane	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code C01,C04	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroett 1,1,2-Tetrachlo 1,1,2-Trichloroett 1,1-Dichloroethau 1,1-Dichloroethau 1,2-Dichloroprope 1,2-Cis-Dichloroprope 1,2-Cis-Dichloroprope 1,2-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 1,3-Cis-Dichloropu 2-Butanone 2-Hexanone	thane proethane hane ne ne ane ethene oothene oothene ooropene opropene none ethane thane	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	UG/KG UG/KG		Lab Data U U U U U U U U U U U U U	Code C01,C04	_	

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia Field Sample Type: Field Duplicate Matrix: Sediment

Collected: 08/11/97

		Field Sample Type: Field L	Duplicate		Matrix: Se	diment	Collected: (
Sample Type		Result	Units		ualifiers ab Data	Validation Code	
REG	Arsenic	0.37	MG/KG	Ū	U		
REG	Barium	1.5	MG/KG	BE	=		
REG	Cadmium		MG/KG		U		
REG	Chromium		MG/KG	-	UJ	F10	
REG	Lead		MG/KG		J	E02	
REG REG	Mercury Selenium		MG/KG		U		
REG	Silver		MG/KG MG/KG		UJ U	F10 F07	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		0.0	MONO		U	F0/	
Sample		-			ualifiers	Validation	
Туре	Semi-Volatile Organics	Result	Units		ib Data	Code	_
REG	2-Chloronaphthalene		UG/KG		U		
REG REG	Acenaphthene Acenaphthylene		UG/KG		U		
REG	Anthracene		UG/KG UG/KG		UU		
REG	Benzo(a)anthracene		UG/KG		Ŭ		
REG	Benzo(a)pyrene		UG/KG		Ŭ		
REG	Benzo(b)fluoranthene		UG/KG		Ũ		
REG	Benzo(g,h,i)perylene	419	UG/KG	U	U		
REG	Benzo(k)fluoranthene	419	UG/KG	U	U		
REG	Chrysene		UG/KG		U		
REG	Dibenzo(a,h)anthracene		UG/KG		U		
REG REG	Fluoranthene Fluorene		UG/KG		U		
REG	Indeno(1,2,3-cd)pyrene		UG/KG		U U		
REG	Naphthalene		UG/KG UG/KG		U		
REG	Phenanthrene		UG/KG	-	Ŭ		
REG	Pyrene		UG/KG		Ŭ		
	Volatile Organics	Result	Units	Qu Lai	alifiers b Data	Validation Code	
	1,1,1-Trichloroethane	2.5	UG/KG	V	U	-	-
	1,1,2,2-Tetrachloroethane		UG/KG	-	U		
	1,1,2-Trichloroethane		UG/KG	-	U		
	1,1-Dichloroethane		UG/KG		U		
	1,1-Dichloroethene 1,2-Dichloroethane		UG/KG I UG/KG I	-	U U		
	1,2-Dichloropropane		UG/KG I	-	Ŭ		
	1,2-cis-Dichloroethene		UG/KG (Ŭ.		
REG	1,2-trans-Dichloroethene		UG/KG L		Ŭ.		
	1,3-cls-Dichloropropene	2.5	UG/KG (J	U	1	
	1,3-trans-Dichloropropene		UG/KG (U		
	2-Butanone		UG/KG L		U		
	2-Hexanone		UG/KG U		U		
	4-Methyl-2-pentanone Acetone		UG/KG L		R	C01,C04	
	Benzene		UG/KG L UG/KG L		U U		
	Bromodichloromethane		UG/KG U		Ŭ		
	Bromoform		JG/KG U		Ŭ		
REG I	Bromomethane		JG/KG U		Ū		
	Carbon Disulfide	6.3 L	JG/KG U	1	U		
	Carbon Tetrachloride		JG/KG U		U		
	Chlorobenzene		JG/KG U		U		
	Chloroethane		JG/KG U		U		
	Chloroform Chloromethane		JG/KG U		U		
	Dibromochloromethane	•	jg/kg u jg/kg u		U U		
	Ethylbenzene		JG/KG U		Ŭ		
	Wethylene Chloride		JG/KG B			F01,F06	
	Styrene		IG/KG U		Ŭ	101,100	
	Tetrachloroethene		JG/KG U		Ŭ		
	loineue		IG/KG U		Ū		
	Frichloroethene		ig/kg u		U		
	/inyl Chloride		IG/KG U		U		
REG X	(ylenes, Total	2.5 U	ig/Kg U		U		
		Field Sample Type: Grab	Matrix	(: Su	rface Wate)r	Collected: 08/

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263111

0.0 - 0.0 FT

Collected: 08/13/97

Phase II RFi Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Sampi Type	le	Result	Units	~	Qualifiers Lab Data	Validation
REG	Arsenic	0.94	UG/L	B	U	
REG	Barium		UG/L	8		
REG	Cadmium	0.2	UG/L	Ų	U	
REG	Chromium	0.6	UG/L	U	U	
REG	Lead		UG/L		j	F10
REG	Mercury		UG/L		=	
REG	Selenium		UG/L	U	U	
REG	Silver	0.15	UG/L	B	ł	
Sample Type	e Semi-Volatile Organics	Result	Units		Qualifiers Lab Data	Validation Code
REG	2-Chloronaphthalene	0.22	UG/L	Ū	U	
REG	Acenaphthene	0.22	UG/L	U	U	
REG	Acenaphthylene	0.22	UG/L	U	U	
REG	Anthracene	0.22	UG/L	Ų	U	
REG	Benzo(a)anthracene	0.22	UG/L	U	U	
REG	Benzo(a)pyrene		UG/L	U	U	
REG	Benzo(b)fluoranthene		UG/L	U	U	
REG	Benzo(g,h,i)perylene		UG/L	U	U	
REG	Benzo(k)fluoranthene		UG/L	U	U	
REG	Chrysene Dibeata(a b)aaltamaana		UG/L	U	U	
REG REG	Dibenzo(a,h)anthracene		UG/L	U	U	
REG	Fluoranthene Fluorene		UG/L	U	U	
REG	Indeno(1,2,3-cd)pyrene		UG/L UG/L	U U	UU	
REG	Naphthalene		UG/L	Ŭ	U	
REG	Phenanthrene		UG/L	Ŭ	U	
REG	Pyrene		UG/L	Ŭ	Ŭ	
		U.LL	00,1	Ŭ	v	
Sample Type	Volatile Organics	Result	Units		Qualifiers .ab Data	Validation Code
REG	1,1,1-Trichloroethane	2	UG/L	Ū	U	
REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U	
REG	1,1,2-Trichloroethane	2	UG/L	U	U	
REG	1,1-Dichloroethane		UG/L	U	U	
REG	1,1-Dichloroethene		UG/L	U	U	
REG	1,2-Dichloroethane		UG/L	U	U	
REG REG	1,2-Dichloropropane		UG/L	U	U	
REG	1,2-cis-Dichloroethene 1,2-trans-Dichloroethene		UG/L	U	U	
REG	1,3-cis-Dichioropropene		UG/L UG/L	U U	UU	
REG	1,3-trans-Dichloropropene		UG/L	U	Ŭ	·
REG	2-Butanone		UG/L	Ŭ	UJ	C05
REG	2-Hexanone		UG/L	Ŭ	Ű	000
REG	4-Methyl-2-pentanone		UG/L	Ŭ	Ŭ	
REG	Acetone		UG/L	Ū	Ř	C04,C05
REG	Benzene		JG/L	Ū	Ü	·
REG	Bromodichloromethane		JG/L	U	Ū	
REG	Bromoform		JG/L	U.	U	
REG	Bromomethane		JG/L	U	U	
REG	Carbon Disulfide		JG/L	U	U	
REG	Carbon Tetrachloride		JG/L	U	U	
REG	Chlorobenzene		JG/L	U	U	
REG REG	Chloroethane Chloroform		JG/L	U	U	
REG	Chloromethane		JG/L	U	U	
REG	Dibromochloromethane		JG/L	U H	U	
REG	Ethylbenzene		JG/L JG/L	ย บ	U	
	Methylene Chloride	2 L 2.1 L		0	U U	E04 E07
	Styrene			U	U	F04,F07
	Tetrachloroethene			Ŭ	U	
	Toluene			Ŭ	Ŭ	
	Trichloroethene			Ŭ	Ŭ	
	Vinyl Chloride			Ŭ	Ŭ	
	Xylenes, Total			Ū		C02

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS2

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Samp Type		Result	Units	Qu La	allfiers b Data	Validation Code		
REG							_	
REG	Arsenic Barium		MG/KG MG/KG		U =			
REG			MG/KG		Ū			
REG			MG/KG	-	UJ U	F10		
REG	Lead		MG/KG		J	E02		
REG	Mercury		MG/KG		Ů			
REG	Selenium		MG/KG		ŬJ	F10		
REG	Silver		MG/KG		J	E02		
Samp					alifiers	Validation		
Type REG	-	Result	Units			Code	-	
REG	2-Chloronaphthalene Acenaphthene		UG/KG UG/KG		U U			
REG	Acenaphthylene		UG/KG		Ŭ			
REG	Anthracene		UG/KG		Ŭ			
REG	Benzo(a)anthracene		UG/KG		Ŭ			
REG	Benzo(a)pyrene		UG/KG		Ŭ			
REG	Benzo(b)fluoranthene		UG/KG		Ŭ			
REG	Benzo(g,h,i)perylene		UG/KG		Ū			
REG	Benzo(k)fluoranthene		UG/KG		Ū			
REG	Chrysene	433	UG/KG	U	U			
REG	Dibenzo(a,h)anthracene	433	UG/KG	U	U			
REG	Fluoranthene	433	UG/KG	U	U			
REG	Fluorene		UG/KG		U			
REG	Indeno(1,2,3-cd)pyrene		UG/KG		U			
REG	Naphthalene		UG/KG		U			
REG	Phenanthrene		UG/KG		U			
REG	Pyrene	433	UG/KG	U	U ,			
Sample				Qua	lifiers	Validation		
TVDA	Volatile Organica	Roquit	i InHe	l ab	Data			
Type	Volatile Organics	Result	Units	Lab		Code	-	
REG	1,1,1-Trichloroethane	2.6	UG/KG	U	U	Code	-	
REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	2.6 2.6	UG/KG UG/KG	บ บ	U U	Code	-	
REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	2.6 2.6 2.6	UG/KG UG/KG UG/KG	บ บ บ	U U U	Code	-	
REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG	บ บ บ บ	U U U U	Code	-	
REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	2.6 2.6 2.6 2.6 2.8 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U	บ บ บ บ	Code	-	
REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane	2.8 2.6 2.6 2.8 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U	บ บ บ บ บ	Code	-	
REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U	บ บ บ บ	Code	-	
REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U	U U U U U U	Code	-	
REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-Cis-Dichloroethene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U U	U U U U U U U	Code	-	
REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		U U U U U U U U U	Code	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-cis-Dichloropropene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	U U U U U U U U U U	U U U U U U U U U	Code	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-cis-Dichloroethene 1,2-cis-Dichloroptopene 1,3-cis-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		U U U U U U U U U U	Code	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG			Code 	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-cis-Dichloroethene 1,2-cis-Dichloropropene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG				-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Dichloroethene 1,2-Dichloroethene 1,2-cis-Dichloroethene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG		U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Hexanone 2-Hexanone A-tethyl-2-pentanone Accetone Benzene Bromodichlorormethane	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-trans-Dichloropropene 2-Hexanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichlorormethane Bromodichlorormethane	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,2-trans-Dichloroethene 1,3-trans-Dichloropropene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Bromoform Bromomethane Carbon Disulfide	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroptopane 1,2-Cis-Dichloroptopene 1,3-cis-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodinloromethane Carbon Disulfide Carbon Tetrachloride	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Disulfide Carbon Tetrachloride Chlorobenzene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,2-Cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG UG/KG		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chlorobenzene Chlorobenzene Chloroethane Chlorobenzene Chloroethane Chlorobenzene Chloroethane Chloroetha	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG UJG/K		U U U U U U U U U U U U U U U U U U U		_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Carbon Tetrachloride Chlorobenzene Chloroethane Chloroethane Chloroethane Chloroethane	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG U J JG/KG U J JG/KG U J JG/KG U J JG/KG U J JG/KG U J JG/KG U J JG/KG U J J J J J J J J J J J J J J J J J J		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,3-trans-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chlorobenzene Chlorobenzene Chloromethane Dioform Chloromethane Dioromethane	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG U J JG/KG U J JG/KG U J JG/KG U J JG/KG U J JG/KG U J J JG/KG U J J JG/KG U J J J J J J J J J J J J J J J J J J		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,2-cis-Dichloroptopene 1,3-trans-Dichloroptopene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Carbon Tetrachloride Chlorobenzene Chloroethane Chlorotorm Chloroomethane Dibromochloromethane Ehlorobenzene Chlorotorm Chlorotentane Dibromochloromethane Ehlorotermane	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		U U U U U U U U U U U U U U U U U U U	C01,C04	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Dichloropropane 1,2-Dichloropthorethene 1,2-Dichloropthorethene 1,3-trans-Dichloropthene 1,3-trans-Dichloropthene 1,3-trans-Dichloropthene 1,3-trans-Dichloropthene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Carbon Tetrachloride Chlorobenzene Chlorothane Chloromethane Dibromochloromethane Dibromochloromethane Ethylbenzene Methylee Chloride	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		U U U U U U U U U U U U U U U U U U U		-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Dichloropropane 1,2-Cis-Dichloropthene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Carbon Tetrachloride Chlorobenzene Chlorobenzene Chlorobenzene Chloromethane Dibromochloromethane Dibromochloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG UG/KG		UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	C01,C04	-	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Cis-Dichloroethene 1,3-cis-Dichloropropene 1,3-cis-Dichloropropene 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromodichloromethane Carbon Disulfide Carbon Disulfide Carbon Tetrachloride Chloroform Chloromethane Dibromochloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene Tetrachloroethene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG UG/KG		U U U U U U U U U U U U U U U U U U U	C01,C04	_	
REG REG REG REG REG REG REG REG REG REG	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene 1,2-Dichloropropane 1,2-Lirans-Dichloropropene 1,3-cis-Dichloropropene 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Accetone Benzene Bromodichloromethane Bromodichloromethane Carbon Tetrachloride Chlorobenzene Chlorobenzene Chlorobenzene Chloromethane Dibromochloromethane Dibromochloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene	2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG JG/KG JG/KG JG/KG JG/KG JG/KG JG/KG UG/KG		UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	C01,C04	_	
Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS2

REG

4-Methyl-2-pentanone

Bromodichloromethane

Acetone

Benzene

Bromoform

Bromomethane

Chlorobenzene

Chloromethane

Ethylbenzene

Chloroethane

Chloroform

Carbon Disulfide

Carbon Tetrachloride

Dibromochloromethane

262211		.0 - 0.0 FT	Fleid Sample Type: G	190		Sedime		Collected:	V0/11/9
	Sample Type	Volatile Organics	Result	Units	Qu: Lat	alifiers Data	Validation Code		
	REG	Xylenes, Total	2.6	UG/KG	U	U			
62241		Field S	ample Type: Equipment	Rinsate	Ma	atrix: Su	rface Water	Collected:	08/11/9
	Sample					alifiers	Validation		
	Туре	Metals	Result	Units	Lab) Data	Code		
	REG	Arsenic	0.6	UGIL	Ũ	U		_	
	REG	Barium	3.5	UG/L	В	J			
	REG	Cadmium	0.2	UG/L	U	U			
	REG	Chromium	0.6	UG/L	U	U			
	REG	Lead	1	UG/L	U	UJ	F10		
	REG	Mercury	0.04	UG/L	Ū	=			
	REG	Selenium		UG/L	Ū	U			
	REG	Silver		UG/L	Ū	Ŭ			
	Sample				Qua	lifiers	Validation		
	Туре	Semi-Volatile Organics	Result	Units	Lab	Data	Code		
	REG	2-Chloronaphthalene		UG/L	U	U			
	REG	Acenaphthene	0.22	UG/L	U	U			
	REG	Acenaphthylene	0.22	UG/L	U	U			
	REG	Anthracene	0.22	UG/L	U	U			
	REG	Benzo(a)anthracene	0.22	UG/L	U	U ·			
	REG	Benzo(a)pyrene	0.22	UG/L	Ú	Ú			
	REG	Benzo(b)fluoranthene		UG/L	Ū	Ū			
	REG	Benzo(g,h,i)perylene		UG/L	Ū	Ū			
	REG	Benzo(k)fluoranthene		UG/L	Ŭ	Ū			
	REG	Chrysene		UG/L	ŭ	Ŭ			
	REG	Dibenzo(a,h)anthracene		UG/L	Ŭ	Ŭ			
	REG	Fluoranthene		UG/L	Ŭ	ŭ			
	REG	Fluorene		UG/L	Ŭ	Ŭ			
		Indeno(1,2,3-cd)pyrene		UG/L	Ŭ	ŭ			
	REG	Naphthalene		UG/L	Ŭ	Ŭ			
		Phenanthrene			U	U			
	+	Prena norrene Pyrene		ug/l Ug/l	U	U			
	Sample				Qua	lifiers	Validation		
	Туре	Volatile Organics	Result	Units	Lab		Code		
		1,1,1-Trichloroethane			U	U		-	
	REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U			
	REG	1,1,2-Trichloroethane	2	UG/L	U	U			
	REG	1,1-Dichloroethane	2	UG/L	U	U			
		1,1-Dichloroethene	2	UG/L	Ū	Ū			
		1,2-Dichloroethane	_	UG/L	Ū	Ū			
		1,2-Dichloropropane		UG/L	Ŭ	Ũ			
		1,2-cis-Dichloroethene		UG/L	Ŭ	ŭ			
		1,2-trans-Dichloroethene		UG/L	Ŭ	Ŭ			
		1,3-cis-Dichloropropene	_		Ŭ	Ŭ			
		• •			U	U			
		1,3-trans-Dichloropropene		-	U ·	UJ	005		
		2-Butanone			-		C05		
	REG	2-Hexanone	5	UG/L	U	U			

5 UG/L

5 UG/L

2 UG/L

2 UG/L

2 UG/L

2 UG/L

5 UG/L

2 UG/L

2 UG/L

2 UG/L

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS2

262241			Field Sample Type: Equipment	Rinsate	Mai	trix: Su	face Water	Collected: 08/11/9
	Sample Type	Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code	
	REG	Methylene Chloride	2	UG/L	J	U	F04,F06	_
	REG	Styrene	2	UG/L	U	U		
	REG	Tetrachioroethene	2	UG/L	U	U		
	REG	Toluene	2	UG/L	U	U		
	REG	Trichloroethene	2	UG/L	Ū	Ū		
	REG	Vinyl Chloride	2	UG/L	Ū	Ū		
	REG	Xylenes, Total	2	UG/L	Ŭ	ŪJ	C02	
263211			Field Sample Type: Grat	Ma	trix: Su	face W	ater	Collected: 08/11/9
	Sample Type	Metals	Result	Units		Iflers	Validation	
	i y þe	miciala	resuit	Units	Lab	Data	Code	
	REG	Arsenic	1.7	UG/L	В	U	F06	
	REG	Barium	26.4	UG/L	В	J		
	REG	Cadmium	0.2	UG/L	U	U		
	REG	Chromium	0.6	UG/L	U	U		
	REG	Lead	1	UG/L	8	UJ	F10	
	REG	Mercury	0.4	UG/L		=		
	REG	Selenium	0.4	UG/L	U	U		
	REG	Silver	0.24	UG/L		=		
	Sample				Quali	fiers	Validation	
	Туре	Semi-Volatile Organics	Result	Units	Lab	Data	Code	
		2-Chloronaphthalene	0.22	UG/L	U	U		_
		Acenaphthene	0.22	UG/L	U	U		
		Acenaphthylene	0.22	UG/L	U	U		
	REG	Anthracene	0.22	UG/L	U	U		
	REG	Benzo(a)anthracene	0.22	UG/L	U	U		
	REG	Benzo(a)pyrene	0.22	UG/L	U	U		
	REG	Benzo(b)fluoranthene	0.22	UG/L	Ū	Ũ		
	REG	Benzo(g,h,i)perylene	0.22	UG/L	Ũ	Ŭ		
		Benzo(k)fluoranthene	0.22		Ŭ	Ŭ		

REG Benzo(a)anthracene 0.22 UG/L U U REG Benzo(a)pyrene 0.22 UG/L U U REG Benzo(b)fluoranthene 0.22 UG/L U U REG Benzo(b)fluoranthene 0.22 UG/L U U REG Benzo(g,h,i)perylene 0.22 UG/L U U REG Benzo(k)fluoranthene 0.22 UG/L U U	
REG Benzo(b)fluoranthene 0.22 UG/L U REG Benzo(g,h,i)perylene 0.22 UG/L U	
REG Benzo(g,h,i)perylene 0.22 UG/L U U	
REG Benzo(k)fluoranthene 0.22 UG/L U U	
REG Chrysene 0.22 UG/L U U	
REG Dibenzo(a,h)anthracene 0.22 UG/L U U	
REG Fluoranthene 0.22 UG/L U U	
REG Fluorene 0.22 UG/L U U	
REG Indeno(1,2,3-cd)pyrene 0.22 UG/L U U	
REG Naphthalene 0.22 UG/L U U	
REG Phenanthrene 0.22 UG/L U U	
REG Pyrene 0.22 UG/L U U	

Sample Type	Volatile Organics	Result	Units	Qua Lab	lifiers Data	Validation Code
REG	1,1,1-Trichloroethane		UG/L	υ	U	
REG	1,1,2,2-Tetrachloroethane	2	UG/L	U	U	
REG	1,1,2-Trichloroethane	2	UG/L	U	U	
REG	1,1-Dichloroethane	2	UG/L	U	U	
REG	1,1-Dichloroethene	2	UG/L	U	Ū	
REG	1,2-Dichloroethane	2	UG/L	. U	Ú	
REG	1,2-Dichloropropane	2	UG/L	U	U	
REG	1,2-cis-Dichloroethene	2	UG/L	U	U	
REG	1,2-trans-Dichloroethene	· 2	UG/L	U	U	
REG	1,3-cis-Dichloropropene	2	UG/L	U	U	
REG	1,3-trans-Dichloropropene	2	UG/L	U	Ú	
REG	2-Butanone	5	UG/L	U	ÚJ	C05
REG	2-Hexanone	. 5	UG/L	U	Ű	
REG	4-Methyl-2-pentanone	5	UG/L	Ů	Ū	
REG	Acetone	5	UG/L	U	R	C04.C05
REG	Benzene	2	UG/L	U	U	
REG	Bromodichloromethane	2	UG/L	U	Ú	
REG	Bromoform	2	UG/L	U	Ū	
REG	Bromomethane	2	UG/L	Ū	Ū	
REG	Carbon Disulfide	5	UG/L	Ū	Ū	
REG	Carbon Tetrachloride	2	UG/L	Ū	Ũ	

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS2

263211

.11			Field Sample Type: 0	irat	o Ma	atrix: Su	rface W	ater	Collected: (08/11/97
<u></u>	Sample Type	Volatile Organics	Result		Units	Qua Lab	lifiers Data	Validation Code		
	REG	Chlorobenzene		2	UG/L	U	U			
	REG	Chloroethane		2	UG/L	U	U			
	REG	Chloroform		2	UG/L	Ū	Ū			
	REG	Chloromethane		2	UG/L	Ū	Ū			
	REG	Dibromochloromethane		2	UG/L	Ū	Ū			
	REG	Ethylbenzene		2	UG/L	Ū	Ū			
	REG	Methylene Chloride		2	UG/L	J	Ū	F04,F06		
	REG	Styrene		2	UG/L	Ü	Ū			
	REG	Tetrachloroethene			UG/L	ŭ	Ū			
	REG	Toluene			UG/L	Ū	ū			
	REG	Trichloroethene			UG/L	ũ	Ŭ			
	REG	Vinyl Chloride			UG/L	ū	ū			
	REG	Xylenes, Total			UG/L	Ũ	ŬJ	C02		

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS3

262311	().0 - 0.0 FT	Field Sample Type: G	rab	Matrix:	Sedimer	nt	Collected: 08/11
	Sample Type	Metals	Result	Unita	Qua Lab	lifiers Data	Validation Code	
	REG	Arsenic	0.35	MG/KG	U	U		
	REG	Barium		MG/KG		=		
	REG	Cadmium	0.12	MG/KG	U	U		
	REG	Chromium		MG/KG		=		
	REG	Lead		MG/KG		J	E02	
	REG	Mercury		MG/KG		=		
	REG	Selenium	0.23	MG/KG	U	UJ	F10	
	REG	Silver		MG/KG		J	E02	
	Sample				Qual	lfiers	Validation	
	Туре	Semi-Volatile Organics	Result	Units	Lab	Data	Code	
	REG	2-Chloronaphthalene	386	UG/KG	U	U		_
	REG	Acenaphthene	386	UG/KG	U	U		
	REG	Acenaphthylene	386	UG/KG	U	U		
	REG	Anthracene	386	UG/KG	U	U		
	REG	Benzo(a)anthracene	386	UG/KG	U	U		
	REG	Benzo(a)pyrene	. 386	UG/KG	U	U		
	REG	Benzo(b)fluoranthene	386	UG/KG	U	U		
	REG	Benzo(g,h,i)perylene	386	UG/KG	U	U		
	REG	Benzo(k)fluoranthene	386	UG/KG	U	U		
	REG	Chrysene	386	UG/KG	U	U		
	REG	Dibenzo(a,h)anthracene	386	UG/KG	U	U		
	REG	Fluoranthene	386	UG/KG	U	U		
	REG	Fluorene	386	UG/KG	U	U		
	REG	Indeno(1,2,3-cd)pyrene	386	UG/KG	U	U		
	REG	Naphthalene	386	UG/KG	U	U		
	REG	Phenanthrene	386	UG/KG	U	U		
	REG	Pyrene	386	UG/KG	U	U		
	Sample				Quali	fiers	Validation	
	Туре	Volatile Organics	Result	Units	Lab	Data	Code	
		1,1,1-Trichloroethane		UG/KG		U		•
		1,1,2,2-Tetrachloroethane		UG/KG	-	U		
		1,1,2-Trichloroethane		UG/KG	-	U		
		1,1-Dichloroethane		UG/KG	-	U		
		1,1-Dichloroethene		UG/KG		U		
		1,2-Dichloroethane		UG/KG	+	U		
		1,2-Dichloropropane	2.3	UG/KG	U	U		
		1,2-cis-Dichloroethene	2.3	JG/KG	U	U		
		1,2-trans-Dichloroethene	2.3	JG/KG	U	U		
		1,3-cis-Dichloropropene	2.3	JG/KG	U	U		
	REG ¹	1,3-trans-Dichloropropene		JG/KG		U		

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS3

Comat								
Sampia Type	Volatile Organics	Result	Units	Qual Lab	iflers Data	Validation Code		
REG	2-Butanone	5.8	UG/KG	U	U	·	_	
REG	2-Hexanone	5.8	UG/KG	U	U			
REG	4-Methyl-2-pentanone	5.8	UG/KG	U	R	C01,C04		
REG	Acetone	5.8	UG/KG	U	U			
REG	Benzene	2.3	UG/KG	U	U			
REG	Bromodichloromethane	2.3	UG/KG	U	U			
REG	Bromoform	2.3	UG/KG	U	U			
REG	Bromomethane	2.3	UG/KG	U	U			
REG	Carbon Disulfide	5.8	UG/KG	U	U			
REG	Carbon Tetrachloride	2.3	UG/KG	U	U			
REG	Chlorobenzene	2.3	UG/KG	U	U			
REG	Chloroethane	2.3	UG/KG	U	U			
REG	Chloroform	2.3	UG/KG	U	U			
REG	Chloromethane	2.3	UG/KG	U	U			
REG	Dibromochloromethane	2.3	UG/KG	U	U			
REG	Ethylbenzene	2.3	UG/KG	U	U			
REG	Methylene Chloride		UG/KG		J			
REG	Styrene	2.3	UG/KG	Ŭ	Ū			
REG	Tetrachloroethene	2.3	UG/KG	Ŭ	Ū			
REG	Toluene	2.3	UG/KG	Ŭ	Ū			
REG	Trichloroethene		UG/KG	-	Ū			
REG	Vinyl Chloride		UG/KG	-	Ū			
REG	Xylenes, Total		UG/KG	-	J			

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS4

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 Sample	3			OII	lifiers	Validation
Туре		Result	Units	Lab		Code
REG	Arsenic	0.44	MG/KG	Ū	Ú	· · · · · · · · · · · · · · · · · · ·
REG	Barium	17	MG/KG	BE	=	
REG	Cadmium		MG/KG		U	
REG	Chromium		MG/KG	-	=	
REG	Lead		MG/KG	_	J	E02
REG	Mercury		MG/KG		Ŭ	LVL
REG	Selenium		MG/KG	-	ŬJ	F10
REG	Silver		MG/KG	-	Ĵ	E02
Sample	,			Qual	ifiers	Validation
Туре	Semi-Volatile Organics	Result	Units	Lab	Data	Code
DIL	2-Chloronaphthalene	5030	UG/KG	U	U	
DIL	Acenaphthene	5030	UG/KG	U	U	
DIL	Acenaphthylene	5030	UG/KG	U	U	
DIL	Anthracene	5030	UG/KG	U	U	
DIL	Benzo(a)anthracene	5030	UG/KG	U	Ū	
DIL	Benzo(a)pyrene	5030	UG/KG	Ú	Ū	
DIL	Benzo(b)fluoranthene	5030	UG/KG	Ú	Ū	
DIL	Benzo(g,h,i)perylene		UG/KG	-	Ū	
DIL	Benzo(k)fluoranthene		UG/KG	-	Ū	
DIL	Chrysene		UG/KG	-	Ŭ	
DIL	Dibenzo(a,h)anthracene		UG/KG	-	Ŭ	
DIL	Fluoranthene		UG/KG	-	Ŭ	
DIL	Fluorene	•	UG/KG	-	Ŭ	
DIL	Indeno(1,2,3-cd)pyrene		UG/KG	-	Ū	
DIL	Naphthalene		UG/KG		Ŭ	
DIL	Phenanthrene		UG/KG		ŭ	
DIL	Pyrene		UG/KG	-	Ŭ	
Sample				Quall	fiars	Validation
Туре	Semi-Volatile Organics	Result	Units	Lab	Data	Code
REG	2-Chioronaphthalene	503	UG/KG	11	U	

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS4

 Sample	9	Field Sample Type: G			urix: Sedimer	Validation	Collected: 08/1	
Туре	Semi-Volatile Organica	Result	Units		Lab Data	Code		
REG	Acenaphthene	503	UG/KG	Ū	U	· · · · · · · · · · · · · · · · · · ·		
REG	Acenaphthylene	503	UG/KG	U	U			
REG	Anthracene		UG/KG		R	K02		
REG	Benzo(a)anthracene		UG/KG		U			
REG	Benzo(a)pyrene		UG/KG		U			
REG REG	Benzo(b)fluoranthene		UG/KG		U			
REG	Benzo(g,h,i)perylene		UG/KG		U			
REG	Benzo(k)fluoranthene Chrysene		UG/KG		U			
REG	Dibenzo(a,h)anthracene		UG/KG UG/KG		UU			
REG	Fluoranthene		UG/KG		R	K02		
REG	Fluorene		UG/KG		Ŭ	RU2		
REG	Indeno(1,2,3-cd)pyrene		UG/KG		Ŭ			
REG	Naphinalene		UG/KG		Ŭ			
REG	Phenanthrene		UG/KG		Ř	K02		
REG	Pyrene		UG/KG		Ŭ	NVE		
Sample Type	Volatile Organics	Decut	11-14-		Qualifiers	Validation		
REG	1,1,1-Trichloroethane	Result	Units UG/KG		_ab Data	Code		
REG	1,1,2,2-Tetrachloroethane		UG/KG		U			
REG	1,1,2-Trichloroethane		UG/KG		UU			
REG	1,1-Dichloroethane		UG/KG		Ű			
REG	1,1-Dichloroethene		UG/KG		U -			
REG	1,2-Dichloroethane		UG/KG		Ŭ			
REG	1,2-Dichloropropane		UG/KG		ŭ			
REG	1,2-cis-Dichloroethene		UG/KG		Ŭ			
REG	1,2-trans-Dichloroethene		UG/KG		Ŭ			
REG	1,3-cis-Dichloropropene		UG/KG		Ŭ			
REG	1,3-trans-Dichloropropene	154	UG/KG	U	Ū			
	2-Butanone	385	UG/KG	U	U			
	2-Hexanone	385	UG/KG	U	U			
	4-Methyl-2-pentanone	385	UG/KG	U	R	C01,C04		
	Acetone	385	UG/KG	U	U			
	Benzene	154	UG/KG	U	U			
	Bromodichloromethane		UG/KG		U			
	Bromoform		UG/KG	-	U			
	Bromomethane		UG/KG		U			
	Carbon Disulfide		UG/KG		U			
	Carbon Tetrachloride		UG/KG		U			
	Chlorobenzene		JG/KG		U			
	Chloroethane		JG/KG		U			
•	Chloroform		JG/KG		U			
	Chloromethane		JG/KG		U			
	Dibromochloromethane		JG/KG		U			
	Ethylbenzene Methylogo Chlorida		JG/KG		U			
	Methylene Chloride Styrene		JG/KG			F01,F06		
	Styrene Tetrachloroethene		JG/KG		U			
	Toluene		JG/KG	U	U			
	Trichloroethene		JG/KG		=			
	Vinyl Chloride		JG/KG		U			
	Xylenes, Total		jg/kg i Ig/kg i		U			
	nyinning, rotas	104 L	JG/KG	0	U			

Field Sample Type: Grab Matrix: Surface Water Collected: 08/11/97 Sample Qualifiers Validation Type Metals Result Units Lab Data Code REG Arsenic 0.62 UG/L B U F06 REG Barium 7.3 UG/L В J REG Cadmium 0.2 UG/L υ U REG Chromium 0.6 UG/L U U Ĵ REG Lead 0.46 UG/L В F10 REG Mercury 0.18 UG/L Ŧ REG Selenium 0.4 UG/L U U

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Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS4

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Samp Type		Result	Units		Qualifiers .ab Data	Validation Code	
REG	Silver		UG/L		=		
Samp Type		Result	Unita		tualifiers ab Data	Validation Code	
REG	2-Chloronaphthalene		UG/L	U	U		_
REG REG	Acenaphthene Acenaphthylene		UG/L UG/L	U U	UU		
REG	Anthracene		UG/L	Ŭ	Ŭ		
REG	Benzo(a)anthracene		UG/L	U	U		
REG REG	Benzo(a)pyrene Benzo(b)fiuoranthene		UG/L UG/L	UU	U U		
REG	Benzo(g,h,i)perylene		UG/L	Ŭ	Ŭ		
REG	Benzo(k)fluoranthene		UG/L	Ū	Ũ		
REG	Chrysene Dibosec(a b)astherese		UG/L	U	U		
REG REG	Dibenzo(a,h)anthracene Fluoranthene		UG/L UG/L	U U	U U		
REG	Fluorene		UG/L	Ŭ	Ŭ		
REG	Indeno(1,2,3-cd)pyrene	0.2	UG/L	U	Ŭ		
REG REG	Naphthalene		UG/L	U	U		
REG	Phenanthrene Pyrene		UG/L UG/L	U U	U U		
Sample				_	ualifiers	Validation	
Туре	Volatile Organica	Result	Units		ib Data	Code	_
REG REG	1,1,1-Trichloroethane		UG/L	U	U		
REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane		UG/L UG/L	U U	U U		
REG	1,1-Dichloroethane		UG/L	Ŭ	Ŭ		
REG	1,1-Dichloroethene		UG/L	Ū	U		
REG REG	1,2-Dichloroethane		UG/L	U	U		
REG	1,2-Dichloropropane 1,2-cis-Dichloroethene		UG/L UG/L	UU	U U		
REG	1,2-trans-Dichloroethene		UG/L	Ŭ	Ŭ		
REG	1,3-cis-Dichloropropene		UG/L	U	U		
REG REG	1,3-trans-Dichloropropene 2-Butanone		UG/L UG/L	U U	U UJ	0.05	
REG	2-Hexanone		UG/L	U	U	C05	
REG	4-Methyl-2-pentanone		UG/L	Ū	Ū		
REG	Acetone		UG/L	U	R	C04,C05	
REG REG	Benzene Bromodichloromethane		ug/l Ug/l	U U	U U		
REG	Bromoform		UG/L	U	U		
REG	Bromomethane		UG/L	Ū	Ű		
REG	Carbon Disulfide		UG/L	U	U		
REG REG	Carbon Tetrachloride Chlorobenzene			U U	UU		
REG	Chloroethane			U	U		
REG	Chloroform			Ŭ	Ŭ		
REG	Chloromethane			U	U		
REG REG	Dibromochloromethane Ethylbenzene			ม ม	U U		
REG	Methylene Chloride			J	U	F04,F06	
REG	Styrene			Ŭ	Ŭ	· - ·p	
REG	Tetrachloroethene			U	U		
REG REG	Toluene Trichloroethene			U. U	U U		
REG	Vinyl Chloride			U	U U		
REG	Xylenes, Total			Ŭ	ŬJ	C02	
	FI	eld Sample Type: Field Dupli	cate	Mate	ix: Surfac	e Water	Collected: 08/11/97
Sample Type	Metals	Result L	Jnits	Qu: Lat	alifiers Data	Validation Code	

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS4

Sample Type	Metals	Result	Units	La	ualifiers b Data	Validation Code		
REG	Barium	7.6	UG/L	в	J		_	
REG	Cadmium		UG/L	Ũ	Ů			
REG	Chromium		UG/L	Ŭ	ŨJ	F10		
REG	Lead		UG/L	8	Ĵ	F10		
REG	Mercury		UG/L	-	=			
REG	Selenium		UG/L	в	J			
REG	Silver		UG/L	B	J			
Sample Type	Semi-Volatile Organics	Result	Units	Qu La	ualifiera b Data	Validation Code		
REG REG	2-Chloronaphthalene		UG/L UG/L	UU	UUU		-	
REG	Acenaphthene Acenaphthylene			U	U			
REG	Anthracena		UG/L UG/L	U	υ			
REG				Ŭ				
	Benzo(a)anthracene		UG/L	-	U.			
REG REG	Benzo(a)pyrene Benzo(b)Buompihana		UG/L	UU	UUU			
REG	Benzo(b)fluoranthene Benzo(g,h,i)perylene		UG/L UG/L	U	U			
REG	Benzo(g,n,)perviene Benzo(k)fluoranthene		UG/L	U	U			
REG			UG/L	U	U			
REG	Chrysene Dibenzo(a,h)anthracene		UG/L UG/L	U	U			
REG	Fluoranthene							
REG	Fluorene		UG/L UG/L	U U	UUU			
REG	Indeno(1,2,3-cd)pyrene		UG/L	U	U			
REG	Naphthalene		UG/L	Ŭ	U			
REG	Phenanthrene		UG/L	U	U			
	Pyrene		UG/L	Ŭ	Ŭ			
Sample				Ou	alifiers	Validation		
	Volatile Organics	Result	Units	Lat		Code		
REG	1,1,1-Trichloroethane	2	UG/L	U	U	<u> </u>	-	
	1,1,2,2-Tetrachloroethane		UG/L	Ū	Ũ			
REG	1,1,2-Trichloroethane		UG/L	Ũ	Ū			
REG	1,1-Dichloroethane		UG/L	Ū	Ŭ			
	1,1-Dichloroethene		UG/L	Ű	Ŭ			
	1,2-Dichloroethane		UG/L	Ū	Ū			
	1,2-Dichloropropane		UG/L	Ū	Ū			
	1,2-cis-Dichloroethene		UG/L	Ū	Ū			
	1,2-trans-Dichloroethene		UG/L	Ŭ	Ŭ			
	1,3-cis-Dichloropropene		UGA	Ŭ	Ŭ			
	1,3-trans-Dichloropropene		UG/L	Ū	Ū			
	2-Butanone		UG/L	Ŭ	ŬJ	C05		
	2-Hexanone		JG/L	Ŭ	Ű	~~ v		
	4-Methyl-2-pentanone		JG/L	Ŭ	Ŭ			
	Acetone		JG/L	Ŭ	R	C04,C05		
	Benzene		JG/L	Ŭ	Ü			
	Bromodichloromethane		JG/L	Ŭ	ŭ			
	Bromoform		JG/L	Ŭ	Ŭ			
	Bromomethane		JG/L	Ŭ	U			
	Carbon Disulfide		JG/L	Ŭ	Ŭ			
	Carbon Tetrachloride		JG/L	Ŭ	Ŭ			
	Chlorobenzene			Ŭ	Ŭ			
	Chioroethane			Ŭ	U			
	Chloroform			U	U			
	Chloromethane			Ŭ	U			
	Dibromochloromethane			U	U			
				U				
	Ethylbenzene Jethylene Chloride			-	U	E04 E00		
	Methylene Chloride			J		F04, F06		
	Styrene Fotmoblomothene			U	U			
	Fetrachloroethene			U	U			
	Foluene			U	U			
REG 1	Trichloroethene	2 (IG/L	U	U			
REG \	/inyl Chloride		IG/L	U	U			

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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS5

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	Metals Arsenic Barium Cadmium Cadmium Chromium Lead Mercury Selenium Silver SemI-Volatile Organics 2-Chloronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(a)hjanthracene Benzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Volatile Organics 1,1,1-Trichloroethane	ţ	2.9 0.13 0.38 1.2 0.03 0.25 0.91 Result 444 444 444 444 444 444 444 444 444 4	Units MG/KG MG/KG MG/KG MG/KG MG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		BE = U UJ U UJ U UJ U UJ Lab Data J U J U J U J U J U J U J U J U J U J U U U U U U U U U U U U U U U U U U U U U U U U U U U U U	F10 F10,E02 F10 E02 Validation Code		
	Barium Cadmium Chromium Lead Mercury Selenium Silver Semi-Volatile Organics 2-Chloronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(a)filuoranthene Benzo(a),h.j)perylene Benzo(a,h.j)perylene Benzo(a,h.j)nthracene Filuoranthene Filuoranthene Filuoranthene Filuoranthene Filuoranthene Phenanthrene Pyrene	r	2.9 0.13 0.38 1.2 0.03 0.25 0.91 Result 444 444 444 444 444 444 444 444 444 4	MG/KG MG/KG MG/KG MG/KG MG/KG MG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		BE = U UJ U UJ U UJ U UJ Lab Data J U J U J U J U J U J U J U J U J U J U U U U U U U U U U U U U U U U U U U U U U U U U U U U U	F10,E02 F10 E02 Validation Code	_	
	Cadmium Chromium Lead Mercury Selenium Silver Semi-Volatile Organics 2-Chloronaphthalene Acenaphthene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Filuoranthene Filuoranthene Filuorantene Filuorantene Phenanthrene Phenanthrene Pyrene	5	0.13 0.38 1.2 0.03 0.25 0.91 Result 444 444 444 444 444 444 444 444 444 4	MG/KG MG/KG MG/KG MG/KG MG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		U U U Uj J U Uj Gualifiers Lab Data J U J U J U J U J U J U J U J U J U J U	F10,E02 F10 E02 Validation Code		
	Chromium Lead Mercury Selenium Silver Semi-Volatile Organics 2-Chioronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Filuoranthene Filuorantene Filuorantene Filuorantene Phenanthrene Phenanthrene Pyrene	r	0.38 1.2 0.03 0.25 0.91 Result 444 444 444 444 444 444 444 444 444 4	MG/KG MG/KG MG/KG MG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		U UJ	F10,E02 F10 E02 Validation Code	_	
66666666666666666666666666666666666666	Lead Mercury Selenium Silver Semi-Volatile Organics 2-Chloronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(a)fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	t	1.2 0.03 0.25 0.91 Result 444 444 444 444 444 444 444 444 444 4	MG/KG MG/KG MG/KG Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		J J U Uj J Uj Lab Data J U U U U U U U U U U U U U	F10,E02 F10 E02 Validation Code	_	
6	Mercury Selenium Silver Semi-Volatile Organics 2-Chloronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(a)pyrene Benzo(a)fluoranthene Benzo(a,h)anthracene Benzo(a,h)anthracene Fluoranthene Fluorene ndeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	\$	0.03 0.25 0.91 Result 444 444 444 444 444 444 444 444 444 4	MG/KG MG/KG Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		U U U Uj J U J U J U J U J U J U J U J U	F10 E02 Validation Code	_	
S S S S S S S S S S S S S S S S S S S	Selenium Silver SemI-Volatile Organics 2-Chloronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(a)pyrene Benzo(a)pyrene Benzo(a)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluoranthene Fluorene ndeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	5	0.25 0.91 Result 444 444 444 444 444 444 444 444 444 4	MG/KG MG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		U Uj Gualifiens Lab Data J U J U J U J U J U J U J U J U	E02 Validation Code	_	
i i i i i i i i i i i i i i i i i i i	Silver Semi-Volatile Organics 2-Chloronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene /olatile Organics	2	0.91 Result 444 444 444 444 444 444 444 444 444	MG/KG Units UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Qualifiers Lab Data J U J U J U J U J U J U J U J U J U J U	E02 Validation Code	_	
	2-Chloronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluoranthene Phenanthrene Phenanthrene Pyrene	;	444 444 444 444 444 444 444 444 444 44	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG		Lab Data	Code	_	
	2-Chloronaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluoranthene Phenanthrene Phenanthrene Pyrene	t	444 444 444 444 444 444 444 444 444 44	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG				_	
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	,	444 444 444 444 444 444 444 444 444 44	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
i i i i i i i i i i i i i i i i i i i	Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	,	444 444 444 444 444 444 444 444 444 44	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
i i i i i i i i i i i i i i i i i i i	Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Phenanthrene Phenanthrene Pyrene	;	444 444 444 444 444 444 444 444 444 44	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
i i i i i i i i i i i i i i i i i i i	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(y,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Pluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	÷	444 444 444 444 444 444 444 444 444 44	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
i i i i i i i i i i i i i i i i i i i	Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ţ	444 444 444 444 444 444 444 444 444 44	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
i i i i i i i i i i i i i i i i i i i	Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ţ	444 444 444 444 444 444 444 444 444 44	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
i i i i i i i i i i i i i i i i i i i	Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	;	444 444 444 444 444 444 444 444 444	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
le \	Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	;	444 444 444 444 444 444 444 444	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
 	Chrysene Dibenzo(a,h)anthracene Fluoranthene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Volatile Organics	;	444 444 444 444 444 444 444	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG					
le 	Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Volatile Organics	;	444 444 444 444 444 444	UG/KG UG/KG UG/KG UG/KG UG/KG					
 	Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene /olatile Organics		444 444 444 444 444 444	UG/KG UG/KG UG/KG UG/KG UG/KG					
 	Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene /olatile Organics	;	444 444 444 444 444	UG/KG UG/KG UG/KG UG/KG	U U U U U				
 	Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene /olatile Organics	;	444 444 444 444	UG/KG UG/KG UG/KG	U U U U U				
 e 	Naphthalene Phenanthrene Pyrene Volatile Organics	;	444 444 444	UG/KG UG/KG	U U U	U U U			
 e \ 	Phenanthrene Pyrene /olatile Organics	\$	444 444	UG/KG	U U	U U			
le • • •	Pyrene /olatile Organics	\$ 	444		Ú	Ū			
le \	/olatile Organics	÷		06/66					
	,1,1-Trichloroethane			Units		Qualifiers Lab Data	Validation Code		
1	, , , , , , , , , , , , , , , , , , , ,			10 ***				_	
				UG/KG		-			
	1,2,2-Tetrachloroethane			UG/KG			K01		
	,1-Dichloroethane			UG/KG		-			
	,1-Dichloroethene			UG/KG			K01		
	,2-Dichloroethane			UG/KG		UJ	K01		
	,2-Dichloropropane			UG/KG		UJ	K01		
	,2-cis-Dichloroethene			JG/KG		U	1404		
	,2-trans-Dichloroethene			JG/KG		UJ	K01		
	,3-cis-Dichloropropene			JG/KG		IJ	K01		
	,3-trans-Dichloropropene			JG/KG		U			
	-Butanone			JG/KG		U U	V04		
	-Hexanone			JG/KG			K01		
	-Methyl-2-pentanone			JG/KG JG/KG		UJ	K01		
	celone			JG/KG		R	C01,C04,K01		
	enzene					UJ	K01		
	romodichioromethane			JG/KG		U			
	• • • • • • • • • • •			JG/KG		U			
							KOA		
							NUT		
							Kot		
							K01		
	-						K01		
Et	•					U	F01,F06,K01		
Et Ma	-					UJ	K01		
Et M St	URCHINDONAD					UJ	K01		
Et Mi St Te	-			A #/A		UJ			
	B C C C C C C C C C C C C C C C C C C C	Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene Tetrachloroethene Totuene	Bromomethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane Dibromochloromethane Ethylbenzene Methylene Chloride Styrene Tetrachloroethene	Bromoform 2.7 L Bromomethane 2.7 L Carbon Disulfide 6.8 L Carbon Tetrachloride 2.7 L Chlorobenzene 2.7 L Chlorobenzene 2.7 L Chloroform 2.7 L Chloroform 2.7 L Chloromethane 2.7 L Dibromochloromethane 2.7 L Ethylbenzene 2.7 U Methylene Chloride 6.8 U Styrene 2.7 U Tetrachloroethene 2.7 U	Bromoform 2.7 UG/KG Bromomethane 2.7 UG/KG Carbon Disulfide 6.8 UG/KG Carbon Tetrachloride 2.7 UG/KG Chlorobenzene 2.7 UG/KG Chlorobethane 2.7 UG/KG Chloromethane 2.7 UG/KG Dibromochloromethane 2.7 UG/KG Ethylbenzene 2.7 UG/KG Methylene Chloride 6.8 UG/KG Styrene 2.7 UG/KG	Bromoform2.7UG/KGUBromomethane2.7UG/KGUCarbon Disulfide6.8UG/KGUCarbon Tetrachloride2.7UG/KGUChlorobenzene2.7UG/KGUChloroform2.7UG/KGUChloroform2.7UG/KGUChloromethane2.7UG/KGUDibromochloromethane2.7UG/KGUEthylbenzene2.7UG/KGUMethylene Chloride6.8UG/KGBJStyrene2.7UG/KGUTetrachloroethene2.7UG/KGU	Bromoform 2.7 UG/KG U Bromomethane 2.7 UG/KG U UJ Carbon Disulfide 6.8 UG/KG U UJ Carbon Tetrachloride 2.7 UG/KG U UJ Carbon Tetrachloride 2.7 UG/KG U UJ Carbon Tetrachloride 2.7 UG/KG U UJ Chlorobenzene 2.7 UG/KG U UJ Chloroethane 2.7 UG/KG U UJ Chloromethane 2.7 UG/KG U UJ Chloromethane 2.7 UG/KG U UJ Chloromethane 2.7 UG/KG U U Ethylbenzene 2.7 UG/KG U UJ Methylene Chloride 6.8 UG/KG U UJ Styrene 2.7 UG/KG U UJ	Bromoform 2.7 UG/KG U Bromomethane 2.7 UG/KG U UJ K01 Carbon Disulfide 6.8 UG/KG U UJ K01 Carbon Tetrachloride 2.7 UG/KG U UJ K01 Carbon Tetrachloride 2.7 UG/KG U U Chlorobenzene 2.7 UG/KG U UJ K01 Chlorobenzene 2.7 UG/KG U UJ K01 Chlorotomm 2.7 UG/KG U UJ K01 Chloromethane 2.7 UG/KG U UJ K01 Chloromethane 2.7 UG/KG U UJ K01 Dibromochloromethane 2.7 UG/KG U U Ethylbenzene 2.7 UG/KG U U F01,F06,K01 Styrene 2.7 UG/KG U UJ K01 K01 Tetrachloroethene 2.7 UG/KG U UJ	Bromoform2.7UG/KGUUBromomethane2.7UG/KGUUJK01Carbon Disulfide6.8UG/KGUUJK01Carbon Tetrachloride2.7UG/KGUUUChiorobenzene2.7UG/KGUUJK01Chioroethane2.7UG/KGUUJK01Chioromethane2.7UG/KGUUJK01Chioromethane2.7UG/KGUUJK01Dibromochloromethane2.7UG/KGUUJK01Ethylbenzene2.7UG/KGUUJK01Styrene2.7UG/KGUUJK01

Phase II RFI

Former 724th Tanker Purging Station, Ft. Stewart, Georgia

Location: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS5

262511		0.0 - 0.0 FT	Field Sample Type: G	rab	Matrix	: Sedime	nt	Collected:	08/11/9
		Volatile Organics	Result	Units	Qı La	ialifiers b Data	Validation Code		
	REG	Vinyl Chloride		UG/KG	-	UJ	K01		
	REG	Xylenes, Total	2.7	UG/KG	U	UJ	K01		
53511			Field Sample Type: Grat) Ma	trix: S	urface W	ater	Collected:	08/11/9
	Sample					alifiers	Validation		
	Туре	Metals	Result	Units	La	b Data	Code		
	REG	Arsenic		UG/L	В	J	F10		
	REG REG	Barium Cadmium		UG/L	В	J			
	REG	Chromium		UG/L UG/L	в	=	F 00		
	REG	Lead		UG/L	D	J U	F06 F10		
	REG	Mercury		UG/L		=	710		
	REG	Selenium		ŬG/L	υ	Ū			
	REG	Silver	0.29		•	=			
	Sample				0	alifiers	Velldation		
	Туре	Semi-Volatile Organics	Result	Units	Lat		Validation Code		
	REG	2-Chloronaphthalene	0.2	UG/L	U	U		-	
	REG	Acenaphthene		UG/L	U	U			
	REG	Acenaphthylene		UG/L	U	U			
	REG	Anthracene		UG/L	U	U			
	REG REG	Benzo(a)anthracene			U	U			
	REG	Benzo(a)pyrene Benzo(b)fluoranthene		UG/L	U	U			
	REG	Benzo(g,h,i)perviene	0.2		U U	U			
		Benzo(k)fluoranthene	0.2		U	UU			
		Chrysene	0.2		Ŭ	U			
		Dibenzo(a,h)anthracene	0.2		Ŭ	٠Ŭ			
	REG	Fluoranthene	0.2		Ũ	Ŭ			
		Fluorene	0.2	JG/L	Ū	Ũ			
		Indeno(1,2,3-cd)pyrene	0.2	JG/L	U	U			
		Naphthalene	0.2	JG/L	U	U			
		Phenanthrene Pyrene	0.2 U 0.2 U		U U	U U			
			V.L (•	U			
	Sample Type	Volatile Organics	Result	Jnits	Quai Lab	lifiers Data	Validation Code		
	REG	1,1,1-Trichloroethane	2 1	IG/L	U	U			
	REG	1,1,2,2-Tetrachloroethane	21		Ū	Ŭ			
				01.					
	REG	1,1,2-Trichloroethane			Ū	U			
	REG	1,1,2-Trichloroethane 1,1-Dichloroethane	2 L	IG/L (U U			
	REG REG	1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene	2 L 2 L 2 L	ig/l (ig/l i ig/l i	1 1 1	U U			
	REG REG REG	1, 1, 2-Trichloroethane 1, 1-Dichloroethane 1, 1-Dichloroethene 1, 2-Dichloroethane	2 L 2 L 2 L 2 L 2 L	1G/L (1G/L (1G/L (1G/L (1 1 1 1	U U U			
	REG REG REG REG	1, 1, 2-Trichloroethane 1, 1-Dichloroethane 1, 1-Dichloroethene 1, 2-Dichloroethane 1, 2-Dichloroethane	2 L 2 L 2 L 2 L 2 L 2 L	1G/L (1G/L (1G/L (1G/L (1G/L (1 1 1 1	ม ม ม ม			
	REG REG REG REG REG	1, 1, 2-Trichloroethane 1, 1-Dichloroethane 1, 1-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloropropane 1, 2-cis-Dichloroethane	2 L 2 L 2 L 2 L 2 L 2 L 2 L	16/L (16/L (16/L (16/L (16/L (1 1 1 1 1 1 1 1 1	U U U U U			
	REG REG REG REG REG REG REG	1, 1, 2-Trichloroethane 1, 1-Dichloroethane 1, 1-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloropropane 1, 2-cis-Dichloroethene 1, 2-trans-Dichloroethene	2 L 2 L 2 L 2 L 2 L 2 L 2 L 2 L	16/L (16/L (16/L (16/L (16/L (16/L (16/L (1 1 1 1 1 1 1 1 1 1	U U U U U U			
	REG REG REG REG REG 1 REG 1 REG 1	1, 1, 2-Trichloroethane 1, 1-Dichloroethane 1, 1-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloropropane 1, 2-cis-Dichloroethene 1, 2-trans-Dichloroethene 1, 3-cis-Dichloropropene	2 L 2 L 2 L 2 L 2 L 2 L 2 L 2 L 2 L 2 L	G/L G/L G/L G/L G/L G/L	1 1 1 1 1 1 1 1	U U U U U U U			
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Phase II RFI Former 724th Tanker Purging Station, Ft. Stewart, Georgia

.ocation: Former 724th Tanker Purge Stations (SWMU 26) Station : SWS5

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263511	Field Sample Type: Grab Matrix: Surface Water							Collected: 08/11/97	
	Sample Type	Volatile Organice	Result	Qualifiers Units Lab Data		Validation Code	n		
	REG	Ethylbenzene		2	UG/L	U	υ		
	REG	Methylene Chloride		2	UG/L	U	U		
	REG	Styrene		2	UG/L	U	U		
	REG	Tetrachloroethene		2	UG/L	U	Ŭ		
	REG	Toluene		2	UG/L	Ŭ	Ŭ		
	REG	Trichloroethene		2	UG/L	Ū	Ū		
	REG	Vinyl Chloride			UG/L	Ŭ	Ū		
	REG	Xylenes, Total			UG/L	Ŭ	ŪJ	C02	

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APPENDIX H

PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANKER PURGING STATION (SWMU 26) FORT STEWART, GEORGIA

SUPPLEMENTAL PHASE II GROUNDWATER CHARACTERIZATION

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1.0 INTRODUCTION

This letter report summarizes the results of the supplemental characterization of groundwater at the Former 724th Tanker Purging Station (TPS) at Fort Stewart, Georgia. This characterization was conducted in accordance with the recommendations of the *Phase II Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report for the Former 724th Tanker Purging Station [Solid Waste Management Unit (SWMU) 26] (SAIC 1998) and as agreed to by Georgia Environmental Protection Divison in their review comments on that report. This report has been prepared by Science Applications International Corporation (SAIC) for the U.S. Army Corps of Engineers (USACE), Savannah District, under Contract DACA21-95-D-0022, Delivery Order No. 0007. The supplemental sampling was conducted in accordance with USACE guidance EM200-1-3 and the procedures described in the original Phase II RFI Work Plan (SAIC 1997).*

The purpose of this supplemental characterization is to verify concentrations of metals in groundwater and to provide further evidence that natural attenuation of volatile organic compounds (VOCs) is occurring. The scope of work included sampling of the four existing on-site monitoring wells (MW-1 through MW-4), and analyzing the samples for VOCs, polyaromatic hydrocarbons (PAHs), RCRA metals, and water quality parameters. The four wells were previously installed during the Phase II RFI for monitoring the following aquifer units:

- MW-1: Shallow water table, upgradient;
- MW-2: Shallow water table, center of site;
- MW-3: Shallow water table, downgradient; and
- MW-4: Deeper portion of the surficial aquifer (35 to 45 feet below land surface), center of site.

2.0 SUMMARY OF INVESTIGATION ACTIVITIES

2.1 SAMPLING METHODOLOGY

The supplemental groundwater sampling at the Former 724th TPS was conducted from September 19 through 21, 1998. The sampling procedures used were the same as those used during the Phase II RFI sampling in August 1997. Prior to installing the sampling pump, the static water level was recorded. Monitoring wells were sampled using low-flow micropurging techniques to minimize the volume of purge water, minimize disturbance of the aquifer, and thereby minimize turbidity in the sample. Field parameters [pH, conductivity, temperature, dissolved oxygen (DO), oxidation-reduction potential (Eh), and turbidity] were monitored during micropurging. The purge rate was adjusted, as necessary, to avoid purging any well to dryness and to equal the recharge of the aquifer. Purging was considered complete when the field parameters stabilized within plus or minus 10 percent after a minimum of three readings at 5-minute intervals. Purging times varied, requiring from 1.3 to 4.0 hours to purge in order to attain a turbidity less than 10 nephelometric turbidity units (NTUs). The exception to this procedure occurred at MW-4, where purging was stopped after 9.8 hours, having removed 68.4 liters of water, and when turbidity was at 22.3 NTUs. Results of field parameter measurements made at the end of purging in each well are listed in Table H.1.

		Field Reading at Monitoring Well							
Parameter	Units	MW-1	MW-2	MW-3	MW-4				
Purging time	hours	2.6	4.0	1.3	9,8				
Volume purged	liters	40.3	18.5	20.0	68.4				
pН	su	6.24	6.26	6.77	8.64				
Conductivity	µmho/cm	140	560	274	648				
Temperature	°C	25.49	26.52	23.35	23.65				
Turbidity	NTU	9.0	7.0	8.4	22.3				
DO	mg/L	na	11.69	na	18.13				
Eh	mV	-18.3	-15.4	-99.7	-19.7				
Ferric iron	mg/L	6.6	10	6.5	1.8				
Elevation TOC	feet msl	67.08	70.86	67.51	71.23				
Depth to water ^a	feet	5.75	12.47 ^b	7.19	12.18				
Elevation water ^a	feet msl	61.33	58.39 ^b	60.32	59.05				

 Table H.1. Field Parameter Measurements During Supplemental Groundwater Sampling

 Former 724th Tanker Purging Station, Fort Stewart

DO - dissolved oxygen

msl - mean sea level (National Geodetic Vertical Datum of 1929).

na - not measured during sampling

NTU - nephelometric turbidity unit

TOC - top of casing

^a - depth to water measured on September 17, 1998, during pump installation.

^b - elevation does not include approximately 1.9 feet of floating free product.

Sampling of each monitoring well began immediately after completion of purging, using the same micropurging pump. Groundwater samples were transferred directly into laboratory sample containers, with the portion designated for volatile organic analysis taken first. Ferric iron was measured in the field at the time of sampling. Groundwater samples were then sent off site for laboratory analysis for VOCs, PAHs, RCRA metals, and water quality parameters (sulfate and alkalinity).

2.2 DATA QUALITY ASSESSMENT

Activities to achieve the desired data quality were as described in the Phase II RFI Report and the Phase II RFI Work Plan. One field quality control (QC) duplicate sample was taken from MW-1; a total of five samples were, therefore, collected and analyzed. The project produced acceptable results for over 98 percent of the data analyzed. Volatile organic compound data for 2-butanone were rejected due to poor calibration response factors and percent differences. Reporting levels were elevated for sample 264212 on both PAH and VOC analyses due to elevated contaminant concentrations in the sample. Methane, ethane, and ethene gaseous organic analyses were lost due to laboratory handling errors; additional samples will be collected in December 1998 for methane, ethane, and ethene analysis. The overall quality of the laboratory data meets the established project objectives, and the data are acceptable for use.

3.0 SUMMARY OF INVESTIGATION RESULTS

3.1 POTENTIOMETRIC MAP

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Water table measurements were taken in each of the four wells on September 17, 1998, prior to sampling. Table H.1 lists the measured depth below top of casing and the corresponding water elevation. Because of the presence of nearly 2 feet of floating free product in well MW-2, an accurate current potentiometric map cannot be drawn. Water table elevations in September 1998 were generally similar to those measured in August 1997. Groundwater flow is, therefore, expected to be to the west toward Mill Creek. The vertical hydraulic gradient, as measured between MW-4 and the shallow monitoring wells, is expected to be upward, with a hydraulic head difference between one and three feet.

3.2 RESULTS OF GROUNDWATER ANALYSES

Analytical results for groundwater samples from the four monitoring wells are summarized in Table H.2 for those parameters detected in at least one sample. Figure H.1 shows the distribution of the detected constituents at the Former 724th TPS during the September 1998 sampling; only those inorganics exceeding background concentrations are shown. All organic compounds are considered site-related contaninants, when detected.

				Mo	nitoring We	ell ID	
				MW-1			
Parameter	Reference		MW-1	(dup)	MW-2	MW-3	<u>MW-4</u>
Sample ID	Background		264112	264122	264212	264312	264412
Date	Criteria	MCL	9/21/98	9/21/98	9/20/98	9/21/98	9/19/98
	V	olatile Orga	nic Compo	unds (µg/L)			
1,1-Dichloroethane	0.0	5				1.4	
2-Hexanone	0.0					6.7	
Benzene	0.0	5			1350		
Chloroform	0.0	100			18.7		
Ethylbenzene	0.0	700			477		
Toluene	0.0	1,000			1540	·····	
Xylenes, total	0.0	10,000			2350		
	Р	olyaromatic	Hydrocarb	ons (µg/L)			
Naphthalene	0.0				242		
		RCRA	Metals (14	g/L)			
Arsenic	3.02	50	16.4	13.8	4.3		
Barium	71.72	2,000	51.1	52.1	16,3	42.9	87.9
Chromium	3.56	100			6.1		
Mercury	0.14	2			0.15		0.59
		Other a	Analytes (m	g/L)			
Alkalinity	90.2		102	103	145	247	321
Sulfate	26.7		1.39	1.28	0.18	3.83	11.4

 Table H.2. Summary of Analytical Results in Groundwater (September 1998)

 Former 724th Tanker Purging Station, Fort Stewart

Bold outlined box with *bold italicized* type indicates concentration above maximum contaminant level (MCL). **Bold** type indicates concentration above Fort Stewart Military Reservation reference background criteria. Blank indicates analyte not detected.



Figure H.1. Results of Groundwater Sampling (September 1998)

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VOCs. Seven individual VOCs were detected in groundwater samples. Benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds were detected only in a single well, MW-2, which is screened at the water table and located in the center of the former facility (i.e., the identified source). During sampling, approximately 1.9 feet of free petroleum product were encountered in MW-2; no free product had been encountered in any of the direct-push groundwater samples or any of the wells during the Phase II RFI activities conducted in August 1997. Once free product was discovered, a ferret system was installed in MW-2 for recovery of the free product; operation of the ferret system is ongoing. The product is being stored in an aboveground storage tank and is labelled as off-spec fuel. All collected free product will be burned at the Central Energy Plant.

Benzene (1,350 μ g/L), ethylbenzene (477 μ g/L), toluene (1,540 μ g/L), and total xylenes (2,350 μ g/L) were reported in MW-2. The concentrations of benzene and toluene exceeded their maximum contaminant levels (MCLs) of 5 μ g/L and 1,000 μ g/L, respectively. No BTEX constituents were found in any of the other wells, confirming the Phase II RFI conclusions that contaminants have not migrated vertically or laterally from the source at the former facility.

The other VOCs that were detected included chloroform (18.7 μ g/L at MW-2); 1,1-dichloroethane (1.4 μ g/L at MW-3); and 2-hexanone (6.7 μ g/L at MW-3). Chloroform and 2-hexanone are common laboratory contaminants and were not detected in these wells during the Phase II RFI, and are therefore not likely a result of contaminant releases from the former facility. VOC 1,1-dichloroethane was detected in MW-3 during the Phase II RFI at a concentration of 2.2 μ g/L, and is considered a secondary contaminant within the primary BTEX plume, as also concluded in the Phase II RFI report.

PAHs. Naphthalene was the only PAH compound detected in groundwater. Naphthalene was reported at 242 μ g/L at MW-2, which exceeds its U.S. Environmental Protection Agency (EPA) Region III risk-based level of 150 μ g/L. Naphthalene was also detected in MW-2 during the Phase II RFI at 10.4 μ g/L. The increase in the concentration of naphthalene is likely due to the presence of the free product found during the supplemental sampling.

RCRA metals. Four metals were detected in the groundwater samples, including arsenic, barium, chromium, and mercury. These metals were detected above the reference background criteria and in the same wells as detected during the Phase II RFI sampling in August 1997. None of the metals exceeded its respective MCL.

Arsenic (maximum 16.4 μ g/L) was found at its highest concentration in the upgradient well MW-1, and is therefore not considered site related. This is consistent with conclusions of the Phase II RFI.

Barium (maximum 87.9 μ g/L) and mercury (maximum 0.59 μ g/L) were found at concentrations above background in well MW-4, screened at a depth of 35 to 45 feet. In other wells, barium and mercury were found at or below background. Because these metals do not migrate readily and are only present at depth, they are not likely related to any contaminant plume emanating from the facility. This is consistent with conclusions of the Phase II RFI.

Chromium (maximum 6.1 μ g/L) was found in MW-2 at a concentration only slightly above its reference background concentration of 3.6 μ g/L. This concentration is only marginally higher than that found during the Phase II RFI at MW-2 (2.4 μ g/L). Chromium was not detected in any of the other wells in the vicinity of the Former 724th TPS, and was detected at a concentration well below its MCL (100 μ g/L) and its EPA Region III risk-based level (180 μ g/L). Therefore, no further action is warranted for chromium in groundwater at the facility.

Other analytes. Alkalinity varied between 102 and 321 mg/L (lowest at the upgradient well MW-1 and highest in the deeper well MW-4). Sulfate varied between 0.18 and 11.4 mg/L (lowest at well MW-2 and highest at MW-4). These results are consistent with the results of the Phase II RFI and suggest that biodegradation is occurring, resulting in higher alkalinity and sulfate content in the downgradient wells.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations have been made based on the results of the supplemental groundwater investigation:

- 1. Concentrations of metals are similar to those found during the Phase II RFI, and therefore the supplemental sampling has verified their presence. None of the metals exceed MCLs and no further corrective action for metals in groundwater is warranted.
- 2. Free petroleum product was encountered at well MW-2 in the center of the former facility (i.e., the identified source). Free product recovery, which has been undertaken at the site, should be continued.
- 3. BTEX compounds continue to exceed MCLs in the shallow water table aquifer near the source, consistent with the results of the August 1997 sampling. There is no evidence that contamination has migrated further beyond the source, despite the presence of free product being discovered. Natural attenuation of organics through biodegradation is occurring, as suggested by the presence of higher alkalinity and sulfate in downgradient wells.
- 4. Due to the presence of free product and BTEX compounds exceeding MCLs, a Corrective Action Plan (CAP) will be required to evaluate measures to mitigate the effects of these contaminants, as recommended in the Phase II RFI report. The CAP should also address mitigation of naphthalene, which is likely associated with the free petroleum product.

5.0 ATTACHMENTS

Attached are the laboratory analytical results for the groundwater samples analyzed during the September 1998 supplemental sampling.

ATTACHMENTS

PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANK PURGING STATION (SWMU 26) FORT STEWART, GEORGIA

ANALYTICAL RESULTS FOR GROUNDWATER SUPPLEMENTAL SAMPLING (SEPTEMBER 1998)

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H. ANALYTICAL LABORATORY DATA

DEFINITIONS OF ACRONYMS AND ABBREVIATIONS

REG — Regular analysis

- **TCLP** Toxicity Characteristic Leachate Procedure (analytes listed in that procedure)
- **BG** Below ground surface (depth in feet)

QUALIFIERS FOR ORGANIC ANALYTICAL DATA

Laboratory Flags

- U— Indicates that the compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution. For a soil/sediment sample, the value must also be corrected for percent moisture.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is used only for TICs, where the identification is based on a mass spectral library search.
- **P** Used for pesticide/Aroclor target analytes when there is greater than 25% difference for detected concentrations between the two gas chromatography (GC) columns.
- C Applies to pesticide results where the identification has been confirmed by GC/MS (gas chromatography/mass spectrometry). If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag; instead use a laboratory-defined flag.
- **B** Used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for TICs as well as for positively identified target compounds.
- **E** Identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D Identifies all compounds identified in an analysis at a secondary dilution factor. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.
- A Indicates that a TIC is a suspected aldol-condensation product.

X — Other specific flags may be required to properly define the results. If used, they must be fully described and such description must be attached to the Sample Data Summary Package and the SDG narrative.

Validation Flags

- **U** Indicates that the compound was analyzed for, but was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- J Indicates that the compound was positively identified; the associated numerical value is the approximate concentration of the compound in the sample.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a "tentative identification."
- NJ Indicates that the analysis indicates the presence of a compound that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- **R** Indicates that the sample results for the compound are rejected or unusable due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the compound cannot be verified.
- = Indicates that the value has been validated and that the compound has been positively identified and the associated concentration value is accurate.

DATA QUALIFIER FLAGS FOR INORGANIC ANALYTICAL DATA

Laboratory Flags

- **B** Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit, but greater than or equal to the Instrument Detection Limit (IDL).
- U Indicates that the analyte was analyzed for but not detected.
- **E** Used when the reported value is estimated because of the presence of interference.
- M —Indicates that the duplicate injection precision was not met.
- N Indicates that the spiked sample recovery is not within control limits.
- S Indicates that the reported value was determined by the method of standard additions (MSA).
- W —Used when the post-digestion spike for furnace atomic absorption analysis is not within control limits (85 - 115%), while sample absorbance is less than 50% of spike absorbance.

- * Indicates that the duplicate analysis is not within control limits.
- + Indicates that the correlation coefficient for the MSA is less than 0.995.

Validation Flags

- U Indicates that the analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- **UJ** Indicates that the compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- J Indicates that the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- **R** Indicates that the sample results for the analyte are rejected or unusable due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- = Indicates that the value has been validated and that the analyte has been positively identified and the associated concentration value is accurate.

DATA QUALIFIER FLAGS FOR RADIOCHEMICAL ANALYTICAL DATA

Laboratory Flags

- < The numerical value reported is less than the MDA.
- N The sample results are flagged to denote poor spike recovery.
- * The sample results are flagged to denote poor duplicate results.

Validation Flags

- U Indicates that the radionuclide was analyzed for, but was not detected above, the reported sample quantitation limit.
- J Indicates that the radionuclide was positively identified; the associated numerical value is the approximate concentration of the radionuclide in the sample.
- N The analysis indicates the presence of a radionuclide for which there is presumptive evidence to make a "tentative identification."
- DL The detection limit requirements were not met. The data quality objectives may not be met.
- **UI** Indicates that there is uncertain identification for gamma spectroscopy. The radionuclide peaks are detected but fail to meet the positive identification criteria.

R — Indicates that the sample results for the radionuclide are rejected or unusable due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the radionuclide cannot be verified.

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= — Indicates that the value has been validated and that the radionuclide has been positively identified and the associated concentration value is accurate.

ANALYTICAL DATA VALIDATION FLAGGING CODES

Holding Times

- A01 Extraction holding times were exceeded.
- A02 Extraction holding times were grossly exceeded.
- A03 Analysis holding times were exceeded.
- A04 Analysis holding times were grossly exceeded.
- A05 Samples were not preserved properly.
- A06 Professional judgment was used to qualify the data.

GC/MS Tuning

- B01 Mass calibration was in error, even after applying expanded criteria.
- B02 Mass calibration was not performed every 12 hours.
- B03 Mass calibration did not meet ion abundance criteria.
- B04 Professional judgment was used to qualify the data.

Initial/Continuing Calibration - Organics

- C01 Initial calibration RRF was <0.05.
- C02 Initial calibration RSD was >30%.
- C03 Initial calibration sequence was not followed as required.
- C04 Continuing calibration RRF was <0.05.
- C05 Continuing calibration %D was >25%.
- C06 Continuing calibration was not performed at the required frequency.
- C07 Resolution criteria were not met.
- C08 RPD criteria were not met.
- C09 RSD criteria were not met.
- C10 Retention time of compounds was outside windows.
- C11 Compounds were not adequately resolved.
- C12 Breakdown of endrin or DDT was >20%.
- C13 Combined breakdown of endrin/DDT was >30%.
- C14 Professional judgment was used to qualify the data.

Initial/Continuing Calibration - Inorganics

- D01 ICV or CCV were not performed for every analyte.
- D02 ICV recovery was above the upper control limit.
- D03 ICV recovery was below the lower control limit.
- D04 CCV recovery was above the upper control limit.
- D05 CCV recovery was below the lower control limit.

- D06 Standard curve was not established with the minimum number of standards.
- D07 Instrument was not calibrated daily or each time the instrument was set up.
- D08 Correlation coefficient was <0.995.
- D09 Mid range cyanide standard was not distilled.
- D10 Professional judgment was used to qualify the data.

ICP and Furnace Requirements

- E01 Interference check sample recovery was outside the control limit.
- E02 Duplicate injections were outside the control limit.
- E03 Post digestion spike recovery was outside the control limit.
- E04 MSA was required but not performed.
- E05 Correlation coefficient was <0.995.
- E06 MSA spikes were not at the correct concentration.
- E07 Serial dilution criteria were not met.
- E08 Professional judgment was used to qualify the data.

<u>Blanks</u>

- F01 Sample data were qualified as a result of the method blank.
- F02 Sample data were qualified as a result of the field blank.
- F03 Sample data were qualified as a result of the equipment rinsate.
- F04 Sample data were qualified as a result of the trip blank.
- F05 Gross contamination exists.
- F06 Concentration of the contaminant was detected at a level below the CRQL.
- F07 Concentration of the contaminant was detected at a level less than the action limit, but greater than the CRQL.
- F08 Concentration of the contaminant was detected at a level that exceeds the action level.
- F09 No laboratory blanks were analyzed.
- F10 Blank had a negative value >2 's the IDL.
- F11 Blanks were not analyzed at required frequency.
- F12 Professional judgment was used to qualify the data.

Surrogate/Radiological Chemical Recovery

- G01 Surrogate/radiological chemical recovery was above the upper control limit.
- G02 Surrogate/radiological chemical recovery was below the lower control limit.
- G03 Surrogate recovery was <10%.
- G04 Surrogate/radiological chemical recovery was zero.
- G05 Surrogate/radiological chemical recovery was not present.
- G06 Professional judgment was used to qualify the data.
- G07 Radiological chemical recovery was <20%.
- G08 Radiological chemical recovery was >150%.

Matrix Spike/Matrix Spike Duplicate

- H01 MS/MSD recovery was above the upper control limit.
- H02 MS/MSD recovery was below the lower control limit.
- H03 MS/MSD recovery was <10%.
- H04 MS/MSD pairs exceed the RPD limit.
- H05 No action was taken on MS/MSD results.

- H06 Professional judgment was used to qualify the data.
- H07 Radiological MS/MSD recovery was <20%.
- H08 Radiological MS/MSD recovery was >160%.
- H09 Radiological MS/MSD samples were not analyzed at the required frequency.

Matrix Spike

- I01 MS recovery was above the upper control limit.
- I02 MS recovery was below the lower control limit.
- I03 MS recovery was <30%.
- I04 No action was taken on MS data.
- I05 Professional judgment was used to qualify the data.

Laboratory Duplicate

- J01 Duplicate RPD/radiological duplicate error ration (DER) was outside the control limit.
- J02 Duplicate sample results were $>5 \times$ the CRDL.
- J03 Duplicate sample results were <5 × the CRDL.
- J04 Professional judgment was used to qualify the data.
- J05 Duplicate was not analyzed at the required frequency.

Internal Area Summary

- K01 Area counts were outside the control limits.
- K02 Extremely low area counts or performance was exhibited by a major drop off.
- K03 IS retention time varied by more than 30 seconds.
- K04 Professional judgment was used to qualify the data.

Pesticide Cleanup Checks

- L01 10% recovery was obtained during either check.
- L02 Recoveries during either check were >120%.
- L03 GPC Cleanup recoveries were outside the control limits.
- L04 Florisil cartridge cleanup recoveries were outside the control limits.
- L05 Professional judgment was used to qualify the data.

Target Compound Identification

- M01 Incorrect identifications were made.
- M02 Qualitative criteria were not met.
- M03 Cross contamination occurred.
- M04 Confirmatory analysis was not performed.
- M05 No results were provided.
- M06 Analysis occurred outside 12 hr GC/MS window.
- M07 Professional judgment was used to qualify the data.
- M08 The %D between the two pesticide/PCB column checks was >25%.

Compound Quantitation and Reported CRQLs

- N01 Quantitation limits were affected by large off-scale peaks.
- N02 MDLs reported by the laboratory exceeded corresponding CRQLs.
- N03 Professional judgment was used to qualify the data.

Tentatively Identified Compounds (TICs)

- O01 Compound was suspected laboratory contaminant and was not detected in the blank.
- O02 TIC result was not above 10 × the level found in the blank.
- O03 Professional judgment was used to qualify analytical data.

Laboratory Control Samples (LCSs)

- P01 LCS recovery was above upper control limit.
- P02 LCS recovery was below lower control limit.
- P03 LCS recovery was <50%.
- P04 No action was taken on the LCS data.
- P05 LCS was not analyzed at required frequency.
- P06 Radiological LCS recovery was <50% for aqueous samples; <40% for solid samples.
- P07 Radiological LCS recovery was >150% for aqueous samples; >160% for solid samples.
- P08 Professional judgment was used to qualify the data.

Field Duplicate

- Q01 No action was taken on the basis of field duplicate RPDs.
- Q02 Radiological field duplicate error ratio (DER) was outside the control limit.
- Q03 Duplicate sample results were $>5 \times$ the CRDL.
- Q04 Duplicate sample results were <5 × the CRDL.

Radiological Calibration

- R01 Efficiency calibration criteria were not met.
- R02 Energy calibration criteria were not met.
- R03 Resolution calibration criteria were not met
- R04 Background determination criteria were not met.
- R05 Quench curve criteria were not met.
- R06 Absorption curve criteria were not met.
- R07 Plateau curve criteria were not met.
- R08 Professional judgment was used to qualify the data.

Radiological Calibration Verification

- S01 Efficiency verification criteria were not met.
- S02 Energy verification criteria were not met.
- S03 Resolution verification criteria were not met
- S04 Background verification criteria were not met.
- S05 Cross-talk verification criteria were not met.
- S06 Professional judgment was used to qualify the data.

Radionuclide Quantitation

- T01 Detection limits were not met.
- T02 Analytical uncertainties were not met and/or not reported.
- T03 Inappropriate aliquot sizes were used.
- T04 Professional judgment was used to qualify the data.

System Performance

- V01 High background levels or a shift in the energy calibration were observed.
- V02 Extraneous peaks were observed.
- V03 Loss of resolution was observed.
- V04 Peak-tailing or peak splitting that may result in inaccurate quantitation were observed.

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V05 Professional judgment was used to qualify the data.

Location: SWMU-26 Station: 26-MW1

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Samp Type		Result	Units		lualifiers ab Data	Validation Code	
REG	Alkalinity, Total	102	MG/L		=		
Samp Туре		Result	Units		lualifiers ab Data	Validation Code	
REG	Sulfate	1.39	MG/L		=		-
Samp	e			a	ualifiers	Validation	
Туре		Result	Units		ab Data	Code	
REG REG	Arsenic Barium		UG/L		=		-
REG	Cadmium		UG/L UG/L	8 U	J U		
REG	Chromium		UG/L	В	Ū	F06	
REG	Lead		UG/L	U	U		
REG	Mercury		UG/L	U	U		
REG REG	Selenium Silver		UG/L UG/L	B B	บ บ	F06 F06	
Sampi Type		Result	Units	Q	ualifier s ab Data	Validation Code	
REG	2-Chloronaphthalene		UG/L	U	U	* *******	-
REG	Acenaphihene		UG/L	U	U		
REG REG	Acenaphthylene Anthracene		UG/L	U	U		
REG	Benzo(a)anthracene		UG/L UG/L	U U	U U		
REG	Benzo(a)pyrene		UG/L	Ŭ	Ű		
REG	Benzo(b)fluoranthene		UG/L	Ŭ	Ŭ		
REG	Benzo(g,h,i)perylene	10.5		Ū	Ū		
REG	Benzo(k)fluoranthene	10.5	UG/L	U	U		
REG	Chrysene	10.5		U	U		
REG REG	Dibenzo(a,h)anthracene Fluoranthene	10.5		U	U		
REG	Fluorene	10.5 10.5		ย บ	U U		
REG	Indeno(1,2,3-cd)pyrene	10.5		U	U		
REG	Naphthalene	10.5		Ŭ	Ŭ		
REG REG	Phenanthrene Pyrene	10.5	UG/L	Ú	U		
	-	10.5	0012	U	U		
Sample Type	Volatile Organics	Result	Units	Qu La	alifiers b Data	Validation Code	
REG	1,1,1-Trichloroelhane		UG/L	U	U		
REG	1,1,2,2-Tetrachloroethane	5	UG/L	U	U		
REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	5 5	UG/L UG/L	U U	U U		
REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	5 5 5	UG/L UG/L UG/L	U U U	U U U		
REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	5 5 5	UG/L UG/L	U U	U U		
REG REG REG REG REG REG	1, 1, 2, 2-Tetrachloroethane 1, 1, 2-Trichloroethane 1, 1-Dichloroethane 1, 1-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloroethane	5 5 5 5	UG/L UG/L UG/L UG/L	U U U U	ม ม ม ม		
REG REG REG REG REG REG REG	1, 1, 2, 2-Tetrachloroethane 1, 1, 2-Trichloroethane 1, 1-Dichloroethane 1, 1-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloropropane	5 5 5 5 5 5	UG/L UG/L UG/L UG/L UG/L UG/L UG/L		U U U U U U		
REG REG REG REG REG REG REG	1, 1, 2, 2-Tetrachloroethane 1, 1, 2-Trichloroethane 1, 1-Dichloroethane 1, 1-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloroethane 1, 2-Dichloropropane 1, 3-cis-Dichloropropene	5 5 5 5 5 5 5 5	UG/L UG/L UG/L UG/L UG/L UG/L UG/L		U U U U U U U U		
REG REG REG REG REG REG REG REG	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,3-cis-Dichloropropane 1,3-trans-Dichloropropane	5 5 5 5 5 5 5 5 5 5 5 5 5 5	UG/L UG/L UG/L UG/L UG/L UG/L UG/L UG/L		U U U U U U U U U	C04 C04	
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Ft Stewart SWMU-26 Supplemental Sampling (Sept 98)

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Location: SWMU-26 Station: 26-MW1

	Sampl Type		d Sample Type: Gra	Units	Qu	alifiers	Validation	Collected: 09/2	
					Lat	o Data	Code		
	REG	Tetrachloroethene		UG/L	U	U			
	REG	Toluene		UG/L	U	U			
	REG	Trichloroethene		UG/L	U	U			
	REG	Vinyl Chloride		UG/L	U	U			
	REG	Xylenes, Total	5	UG/L	U	U			
264122		0.0 - 0.0 FT Fleid San	nple Type: Fleid Du	plicate	Mat	rix: Grou	indwater	Collected: 09/2	1/9
	Sampie Type	e Alkalinity	Result	Units	Qui Lab	alifiers Data	Validation Code		
	REG	Alkalinity, Total	103	MG/L		=		_	
	Sample				-	lifiers	Validation		
	Type	Common Anions	Result	Units	Lab		Code		
	REG	Sulfate	1.28	MG/L		=			
	Sample Type	Metals	Result	Units	Qua Lab	lifiers Data	Validation Code		
	REG	Arsenic	13.8	UG/L	• •••••••	=			
	REG	Barium		UG/L	В	J			
	REG	Cadmium		UG/L	U	U			
	REG	Chromium		UG/L	в	U	F06		
	REG	Lead	1,5	UG/L	U	U			
	REG	Mercury	0.1	UG/L	U	U			
	REG	Selenium	4.4	UG/L	В	U	F06		
	REG	Silver	2	UG/L	U	U			
	Sample Type	Polynuclear Aromatic Hydrocarbons	Result	Units	Qua Lab	lifiers Data	Validation Code		
	REG	2-Chioronaphthalene	10.5	UG/L	U	U			
	REG	Acenaphthene	10.5	UG/L	U	U			
	REG	Acenaphihylene		UG/L	Ū	Ū			
	REG	Anthracene		UG/L	Ū	Ū			
	REG	Benzo(a)anlhracene		UG/L	Ū	Ū			
	REG	Benzo(a)pyrene		UG/L	Ū	Ū			
	REG	Benzo(b)/luoranthene		UG/L	Ū	Ŭ			
	REG	Benzo(g,h,i)perylene		UG/L	Ū	Ŭ			
	REG	Benzo(k)fluoranthene		UG/L	Ū	Ū			
	REG	Chrysene		UG/L	Ū	Ū			
	REG	Dibenzo(a,h)anthracene	10.5		Ŭ	Ŭ			
	REG	Fluoranthene		UG/L	บั	Ŭ			
	REG	Fluorene	10.5		Ŭ	Ŭ			
	REG	Indeno(1,2,3-cd)pyrene		UG/L	Ŭ	Ŭ			
	REG	Naphthalene	10.5		Ŭ	Ŭ			
	REG	Phenanthrene	10.5		Ű	Ŭ			
	REG	Pyrene		UG/L	U	U			
	Sample Type	Volatile Organics	Result	Units	Qual Lab	ifiers Data	Validation		
	REG	1,1,1-Trichloroethane		UG/L		Data U	Code		
	REG	1,1,2,2-Tetrachloroethane		UG/L					
	REG	1,1,2-Trichloroethane		UG/L	U U	U U			
	REG	1,1-Dichloroethane		UG/L	U	U			
	REG	1,1-Dichloroethene		UG/L UG/L	U	UU			
	REG	1,2-Dichloroethane							
		•		UG/L	U	U			
		1,2-Dichloroethene		UG/L	U	U			
		1,2-Dichloropropane		UG/L	U	U			
		1,3-cis-Dichloropropene		UG/L	U	U			
		1,3-trans-Dichloropropene		UG/L	U	U			
		2-Butanone		UG/L	U	R	C01,C04		
		2-Hexanone		UG/L	U	U			
	REG	4-Methyl-2-pentanone	10 1	UG/L	U	U			
				UG/L	U	U			
	REG	Acetone	10 0		0	•			
	REG	Acetone Benzene		UG/L	Ŭ	Ŭ			
	REG REG		5						
	REG REG REG	Benzene	5 5	JG/L	U	U			

Location: SWMU-26 Station: 26-MW1

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264122	(0.0 - 0.0 FT	Field Sample Type: Field Du	plicate	Matri	x: Groun	dwater	Collected: 09/21/98
	Sample Type		Result	Units	Qual Lab	lifiers Data	Validation Code	
	REG	Carbon Disulfide	5	UG/L	U	U		
	REG	Carbon Tetrachloride	5	UG/L	U	U		
	REG	Chiorobenzene	5	UG/L	U	U		
	REG	Chloroelhane	10	UG/L	U	U		
	REG	Chloroform	5	UG/L	U	U		
	REG	Chloromethane	10	UG/L	U	U		
	REG	Dibromochloromethane	5	UG/L	U	U		
	REG	Ethylbenzene	5	UG/L	U	U		
	REG	Methylene Chloride	5	UG/L	U	U		
	REG	Styrene	5	UG/L	Ú	Ū		
	REG	Tetrachloroelhene	5	UG/L	Ū	Ū		
	REG	Toluene	2	UG/L	Ū	Ū		
	REG	Trichloroethene		UG/L	Ū	Ū		
	REG	Vinyl Chloride		UG/L	Ũ	Ū		
	REG	Xylenes, Total		UG/L	Ũ	Ŭ		

Location: SWMU-26 Station: 26-MW2

264212

Sample Type	ə Alkalinity	Result	Units		Qualifie _ab l	ers Data	Validation Code		
REG	Alkalinity, Total	145	MG/L		=======================================			-	
Sample Type	Common Anions	Result	Units		Qualifie .ab [ers Data	Validation Code		
REG	Sulfate	0.18	MG/L	J	J			-	
Sample Type	Metals	Result	Units		Qualifie .ab [ers Data	Validation Code		
REG	Arsenic	4.3	UG/L	B	J			-	
REG	Barium	16.3	UG/L	В	J				
REG	Cadmium	1.1	UG/L	U	Ð				
REG	Chromium	6.1	UG/L	В	J				
REG	Lead		UG/L	Ū	Ū				
REG	Mercury	0.15	UG/L	В	J				
REG	Selenium	7.7	UG/L		U		F07		
REG	Silver	2	UG/L	Ų	Ű				
Sample Type	Polynuclear Aromatic Hydrocarbons	Result	Units	-	tualifie ab C	rs)ata	Validation Code		
REG	2-Chloronaphthalene	400	UG/L	υ	Ų			•	
REG	Acenaphlhene	400	UG/L	U	U				
REG	Acenaphthylene	400	UG/L	U	U				
REG	Anthracene	400	UG/L	U	U				
REG	Benzo(a)anthracene	400	UG/L	U	U				
REG	Benzo(a)pyrene	400	UG/L	U	U				
REG	Benzo(b)fluoranthene	400	UG/L	V	U				
REG	Benzo(g,h,i)perylene	400	UG/L	U	U				
REG	Benzo(k)fluoranthene	400	UG/L	U	U				
REG	Chrysene	400	UG/L	U	U				
REG	Dibenzo(a,h)anthracene	400	UG/L	U	U				
REG	Fluoranthene	400	UG/L	U	U				
REG	Fluorene		UG/L	U	U				
REG	indeno(1,2,3-cd)pyrene	400	UG/L	U	U				
REG	Naphthalene	242	UG/L	J	J				
REG	Phenanthrene	400	UG/L	U	U				
REG	Pyrene	400	UG/L	U	U				
Sample Type	Volatile Organics	Result	Units		ualifie ab D	rs ata	Validation Code		
REG	1,1,1-Trichloroelhane	100	UG/L	U	U				
REG	1,1,2,2-Tetrachloroethane		UG/L	Ŭ	Ŭ				
REG	1,1,2-Trichloroethane		UG/L	ŭ	Ŭ				
REG	1,1-Dichloroethane	100		Ŭ	Ŭ				

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Location: SWMU-26 Station: 26-MW2

264212	0	0.0 - 0.0 FT	Field Sample Type: Gra	ь M	latrix: Gr	oundwa	iter	Collected: 09/20/9
	Sample Type	Volatile Organics	Result	Units	Qua Lab	liflers Data	Validation Code	
	REG	1,1-Dichloroelhene	100	UG/L	<u> </u>	υ	· · · · · · · · · · · · · · · · · · ·	
	REG	1,2-Dichloroethane		UG/L	Ū	Ū		
	REG	1,2-Dichloroethene	100	UG/L	บ	Ū		
	REG	1,2-Dichloropropane	100	UG/L	Ū	Ū		
	REG	1,3-cis-Dichloropropene		UG/L	Ū	Ū		
	REG	1,3-trans-Dichloropropene	100	UG/L	Ū	Ū		
	REG	2-Butanone	200	UG/L	Ū	R	C01,C04	
	REG	2-Hexanone	200	UG/L	Ū	U		
	REG	4-Methyl-2-pentanone	200	UG/L	Ú	U		
	REG	Acetone	200	UG/L	U	Ú		
	REG	Benzene	1350	UG/L		=		
	REG	Bromodichloromethane	100	UG/L	U	U		
	REG	Bromoform	100	UG/L	Ű	Ú		
	REG	Bromomelhane	200	UG/L	U	UJ	C05	
	REG	Carbon Disulfide	100	UG/L	U	Ų		
	REG	Carbon Tetrachloride	100	UG/L	U	U		
	REG	Chlorobenzene	100	UG/L	U	U		
	REG	Chloroethane	200	UG/L	U	U		
	REG	Chloroform	18.7	UG/L	J	J		
	REG	Chloromethane	200	UG/L	Ú	Ü		
	REG	Dibromochloromethane		UG/L	U	Ú		
	REG	Ethylbenzene	477	UG/L		=		
	REG	Melhylene Chloride	100	UG/L	JB	U	F01,F06	
	REG	Styrene	100	UG/L	U	U		
	REG	Tetrachloroethene	100	UG/L	U	U		
	REG	Toluene	1540	UG/L		=		
	REG	Trichloroethene	100	UG/L	U	U.		
	REG	Vinyl Chloride	40	UG/L	U	U		
	REG	Xylenes, Total	2350	UG/L		=		

Location: SWMU-26 Station: 26-MW3

Dibenzo(a,h)anlhracene

REG

264312

Sample Type	Alkalinity	Result	Units	Qua Lab	lifiers Data	Validation Code	
REG	Alkalinity, Total	247	MG/L	·	=		_
Sample Type	Common Anions	Result	Units	Qua Lab	lifiers Data	Validation Code	
REG	Sulfate	3.83	MG/L		=	·	_
Sample Type	Metals	Result	Units	Qua Lab	lifiers Data	Validation Code	
REG	Arsenic	4	UG/L	<u> </u>	U		_
REG	Barium		UG/L	B	Ĵ		
REG	Cadmium		UG/L	Ū	Ũ		
REG	Chromium		UG/L	B	Ū	F06	
REG	Lead	1.5	UG/L	Ŭ	Ū		
REG	Mercury		UG/L	Ū	Ū		
REG	Selenium	2.8	UG/L	8	U	F06	
REG	Silver	2.2	UG/L	В	U	F06	
Sample				Qual	lifiers	Validation	
Туре	Polynuclear Aromatic Hydrocarbons	Result	Units	Lab	Data	Code	
REG	2-Chloronaphthalene	10	UG/L	U	U	·	_
	Acenaphthene		UG/L	U	U		
	Acenaphthylene		UG/L	U	U		
	Anthracene		UG/L	U	U		
REG	Benzo(a)anthracene		UG/L	U	U		
	Benzo(a)pyrene		UG/L	U	U		
	Benzo(b)fluoranlhene		UG/L	U	U		
	Benzo(g,h,i)perylene		UG/L	U	U		
	Benzo(k)fluoranthene		UG/L	U	U		
	Chrysene		UG/L	U	U		
DEO	C1		1100				

10 UG/L

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Location: SWMU-26 Station: 26-MW3

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4312	0	0.0 - 0.0 FT Fleid S	ample Type: Gr	ab	М	atrix: (Groundwa	ater	Collected: 09/21/9
	Sample Type	Polynuclear Aromatic Hydrocarbons	Result	U	Jnits	Qu La	alifiers b Data	Validation Code	·····
	REG	Fluoranthene		n TT	IG/L	U	U		_
	REG	Fluorene			IG/L	Ŭ	ŭ		
	REG	Indeno(1,2,3-cd)pyrene			G/L	Ŭ	Ŭ		
	REG	Naphthalene			IG/L	Ū	Ū		
	REG	Phenanthrene	1	υc	G/L	Ű	Ū		
	REG	Pyrene	10	0 0	G/L	U	Ū		
	Sample					Qu	alifiers	Validation	
	Туре	Volatile Organics	Result	U	Inits	La		Code	
	REG	1,1,1-Trichloroelhane			G/L	U	U		_
	REG	1,1,2,2-Tetrachloroethane			G/L	U	U		
	REG	1,1,2-Trichloroethane			G/L	U	U		
	REG	1,1-Dichloroethane			G/L	J	J		
	REG	1,1-Dichloroethene			G/L	U	U		
	REG	1,2-Dichloroethane			G/L	U	U		
	REG	1,2-Dichloroethene		U U		U	U		
	REG	1,2-Dichloropropane		00		U	บ		
	REG	1,3-cis-Dichloropropene		U		U	U		
	REG	1,3-trans-Dichloropropene		U		U	U		
	REG	2-Butanone		U		U	R	C01,C04	
	REG	2-Hexanone		UC		J	J	C05	
		4-Methyl-2-pentanone		ŲQ		U	U		
		Acetone		UC		U	U		
		Benzene		UC		U	U		
	REG	Bromodichloromethane		ŲQ		U	U		
		Bromoform		UC		U	U		
		Bromomethane	10	UC	g/L	U	UJ	C05	
		Carbon Disulfide	5	UG	G/L	U	U		
		Carbon Tetrachloride	5	UG	3/L	U	U		
		Chlorobenzene	5	UG	3/L	U	U		
		Chloroethane	10	UC	G/L	U	U		
	REG	Chloroform	5	UG	3/L	U	U		
	REG	Chloromethane	10	UG	3/L	U	U		
	REG	Dibromochloromethane	5	UG	G/L	U	U		
	REG	Ethylbenzene	5	UG	G/L	U	U		
	REG	Melhylene Chloride	5	UG	G/L	U	U		
	REG	Styrene	5	UG	G/L	U	U		
	REG	Tetrachloroethene	5	UG	S/L	U	U		
	REG	Toluene	2	UG	3/L	U	U		
	REG	Trichloroethene	5	ŪĠ	ЭЛL	Ū	Ū		
	REG	Vinyl Chloride		UG		Ū	Ū		
	REG	Xylenes, Total		ŪĞ		Ū	Ū		

264412

Location: SWMU-26 Station: 26-MW4

2	0	.0 - 0.0 FT	Field Sample Type: Gra	b M	latrix: Gr	oundwa	ater	Collected: 09/19/98
	Sample Type	Alkalinity	Result	Units	Qual Lab	ifier s Data	Validation Code	
	REG	Alkalinity, Total	321	MG/L		=	·	
	Sample Type	Common Anions	Result	Units	Qual Lab	ifiers Data	Validation Code	
	REG	Sulfate	11.4	MG/L		E		_
	Sample Type	Metals	Result	Units	Qual Lab	ifiers Data	Validation Code	
	REG	Arsenic	4	UG/L	U	U	• •	
	REG	Barium	87.9	UG/L	В	J		
	REG	Cadmium	1.1	UG/L	U	U		
	REG	Chromium	2.2	UG/L	в	U	F06	
	REG	Lead	1.5	UG/L	U	U		
	REG	Mercury	0.59	UG/L		=		
	REG	Selenium	3.5	UG/L	В	U	F06	
	REG	Silver	6	UG/L	В	U	F06	

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Ft Stewart SWMU-26 Supplemental Sampling (Sept 98)

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Sample Type	Polynuclear Aromatic Hydrocarbons	Result	Units	Qualifiers Lab Data		Validation Code
		Nesuk	Unita	Lau	Data	COUR
REG	2-Chloronaphlhaiene	10.4	UG/L	U	U	
REG	Acenaphthene	10.4	UG/L	U	U	
REG	Acenaphlhylene	10.4	UG/L	U	U	
REG	Anthracene	10.4	UG/L	U	U	
REG	Benzo(a)anthracene	10.4	UG/L	U	U	
REG	Benzo(a)pyrene	10.4	UG/L	U	U	
REG	Benzo(b)fluoranthene	10.4	UG/L	U	U	
REG	Benzo(g,h,i)perylene	10.4	UG/L	U	U	
REG	Benzo(k)fluoranthene	10.4	UG/L	U	U	
REG	Chrysene	10.4	UG/L	U	U	
REG	Dibenzo(a,h)anthracene	10.4	UG/L	U	U	
REG	Fluoranthene	10.4	UG/L	U	U	
REG	Fluorene	10.4	UG/L	U	U	
REG	Indeno(1,2,3-cd)pyrene	10.4	UG/L	U	U	
REG	Naphthalene	10.4	UG/L	U	U	
REG	Phenanthrene	10.4	UG/L	U	U	
REG	Pyrene	10.4	UG/L	U	U	

Sample Type	Volatile Organics	Result	Units	Qual Lab	lifiers Data	Validation Code
REG	1,1,1-Trichloroethane	5	UG/L	<u>U</u>	U	
REG	1.1.2.2-Tetrachloroethane		UG/L	Ŭ	Ŭ	
REG	1.1.2-Trichloroethane		UG/L	Ū	Ŭ	
REG	1,1-Dichloroethane		UG/L	Ū	Ū	
REG	1.1-Dichloroethene	5	UG/L	Ū	Ū	
REG	1.2-Dichloroelhane	5	UG/L	Ū	Ū	
REG	1,2-Dichloroethene	5	UG/L	U	U	
REG	1,2-Dichloropropane	5	UG/L	U	U	
REG	1 3-cis-Dichloropropene	5	UG/L	U	U	
REG	1,3-trans-Dichloropropene	5	UG/L	U	U	
REG	2-Butanone	10	UG/L	U	R	C01.C04
REG	2-Hexanone	10	UG/L	U	U	
REG	4-Melhyl-2-pentanone	10	UG/L	U	U	
REG	Acetone	10	UG/L	U	U	
REG	Benzene	5	UG/L	U	U	
REG	Bromodichloromethane	5	UG/L	U	U	
REG	Bromoform	5	UG/L	U	U	
REG	Bromomethane	10	UG/L	U	UJ	C05
REG	Carbon Disulfide	5	UG/L	U	U	
REG	Carbon Tetrachloride	5	UG/L	U	U	
REG	Chiorobenzene	5	UG/L	U	U	
REG	Chloroethane	10	UG/L	U	U	
REG	Chloroform	5	UG/L	U	U	
REG	Chloromethane	10	UG/L	U	U	
REG	Dibromochloromethane	5	UG/L	U	U	
REG	Ethylbenzene	5	UG/L	U	U	
REG	Methylene Chloride	5	UG/L	U	U	
REG	Styrene	5	UG/L	U	U	
REG	Tetrachloroethene	5	UG/L	U	U	
REG	Toluene	2	UG/L	U	U	
REG	Trichloroethene	5	UG/L	U	U	
REG	Vinyl Chloride	2	UG/L	U	U	
REG	Xylenes, Total	5	UG/L	U	U	

APPENDIX I

PHASE II RCRA FACILITY INVESTIGATION FORMER 724th TANK PURGING STATION (SWMU 26) FORT STEWART, GEORGIA

TOXICITY DATA FOR HUMAN HEALTH CHEMICALS OF POTENTIAL CONCERN
98-177P(DOC)/112098

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Chemical	CSF0	ð c	CSFi 1/mc/lic/1	2	1011	RfDo	6		Target	RDi			Target
	1/11/12/12/U	Rel	1/mg/kg/a	Kei	WOE	mg/kg/d	Ref	UF-MF	Organs	mg/kg/d	R.	UF-MF	Organs
1,1-Dichloroethane						1.00E-01	H						
1,2-Dichloroethane					B2				termine and the second s				
2-Butanone						6.00E-01	-	3 000	Develon	2 86E 01		2 000	
2-Hexanone								2222		10-700-7	-	000.0	Develop.
Acetone						1 00E-01		0001	Tiver bidness				
Anthracene				ļ		3 00E-01	-	3 000	No offacte				
Arsenic	1.50E+00	-	1.51E+01	Ţ		3.00E-04		3	Skin				
Barium						7.00E-02			Circ Oirc				
Benzene	2.90E-02		2.90E-02	-	4		ĺ	,					
Beno(a)pyrene	7.30E+00	I			B2								
Benzo(b)fluoranthene	7.30E-01	ല			B2								
Cadmium-food			6.30E+00	-		1.00E-03		10	Kidnev				
Cadmium-water			6.30E+00	-		5.00E-04		10	Develop				
Chloroform	6.10E-03	I	8.10E-02	I	B2	1.00E-02		1.000	Liver				
Chloromethane	1.30E-02	Н	6.00E-03	н	B2								
Chromium VI			4.10E+01	H		3.00E-03	I	300	Clinical	3.00E-05	-	60	Recn
Ethylbenzene						1.00E-01	L	1,000	Kidney, liver	2.90E-01		300	Develon
Mercury (inorganic)										8.60E-05	-	20%	NN NN
Methylene chloride	7.50E-03	Ĭ	1.65E-03	I	B2	6.00E-02		100	Liver	8.60E-01	· <u>-</u>		215
Naphthalene						2.00E-02		3.000	Clinical	9.00E-04			
Pyrene						3.00E-02		3,000	Kidnev		•		
Selenium						5.00E-03	L	3	Clinical				
Silver						5.00E-03	L	3	Skin				
Styrene						2.00E-01	I	1,000	Heme, liver	2.86E-01	-	30	SNS
loluene						2.00E-01	I	1.000	Liver kidnev	1 14F-01	_	300	NN
Xylenes						2.00E+00		100	Clinical		•		215
												_	

Table I-1. Summary of Toxicity Data for Human Health Chemicals of Potential Concern

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CSFo - Oral cancer slope factor.

CSFi - Inhalation cancer slope factor

Ref - Source of information: I - IRIS; H - Heat; E - Environmental Protection Agency National Center for Environmental Assessment Regional Support provisional value.

WOE - Cancer weight of evidence classification.

RfDo - Oral reference dose.

RfDi - Inhalation reference dose. UF-MF - Product of the uncertainty and modifying factors. Target Organs - Phimary organ system affected by non-carcinogenic chemical.

Circ - Circulatory system.

Repord. - Reproductive system. Resp - Respiratory system. None - No target organ specified.

Climical - Endpoints included clinical effects such as change in body weight, enzyme levels, etc. Effects cannot be associated with any specific organ system. CNS - Central nervous system. Develop - Developmental toxicity. GI - Gastrointentestial system. Heme - Hematopoietic system. Immune - Immune system.

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4-5

FEGEND



Figure 4.3. Geologic Cross-Section B-B'





Figure 4.4. Water Table Contour Map (August 1997)

LEGEND

MW-05	WELL NUMBER	
51.73	ELEVATION (NGVD)	1929) SEA LEVEL

Creek. Hydraulic gradient within the water table is approximately 0.01 foot/foot at the site, and approximately 0.0083 foot/foot between the site and Mill Creek.

Monitoring well MW-4 is screened within the surficial aquifer at a depth of 35 to 45 feet. Water levels in wells MW-2 and MW-4 were compared to estimate vertical hydraulic gradients at the site. Water levels in MW-4 were 2.87 feet lower than in MW-2, indicating a downward hydraulic gradient of 0.082 foot/foot. The downward gradient measured in MW-2 and MW-4 may indicate that the clayey sand layers encountered across the site may act as a semi-confining unit, restricting downward migration of groundwater.

4'1 ECOLOGY

Approximately 7.8 square miles of the 436.8 square miles at FSMR comprise the garrison area. The remainder is used for ranges and training areas (approximately 11 percent) or held as non-use areas.

Eighty-four percent of the land is forested (approximately 367.2 square miles). Sixty-six percent of the forest area is pine with the major species including the slash pine, loblolly pine, and longleaf pine. Thirty-four percent of the forest is composed of river bottom lands and swamps whose major species include the tupelo, other gum trees, water oak, and bald cypress trees. The open range and training areas comprise 11 percent of the base and consist of grasses, shrubs, and scrub tree (oak) growth.

Aquatic habitats on FSMR include a number of natural or man-made ponds and lakes, the Canoochee River, Canoochee Creek and tributaries, and a number of bottom land swamps and pools. The Ogeechee River borders the installation along its northeast boundary. Organic detritus content is high, and dark coloring of the water is not unusual. Dense growths of aquatic vegetation are also typical, especially during the summer months.

Both terrestrial and aquatic fauna are abundant in the unimproved areas of FSMR. Major game species found on the installation include white-tailed deer, feral hog, wild turkey, rabbit, aquirrel, and bobwhite in addition to numerous other mammal, bird, reptile, and amphibian species (Environmental Science and Engineering 1982). Dominant fish include bluegill, largemouth bass, crappie, sunfish, channel catfish, minnows, and shiners. Three federally listed threatened or endangered species reside at FSMR: the American bald eagle, Eastern indigo snake, and the redendangered species reside at FSMR: the American bald eagle, Eastern indigo snake, and the redcockaded woodpecker.

4'8 WELEOBOFOGX

Fort Stewart has a humid, subtropical climate with long, hot summers. Average temperatures range from 50°F in the winter to 80°F in the summer. Average annual precipitation is 48 inches, with slightly over half falling from June through September. Prolonged drought is rare in the area, but severe local storms (tornadoes and hurricanes) do occur. Under normal conditions, wind speeds rarely exceed 5 knots, but gusty winds of over 25 knots may occur during summer thunderstorms (Geraghty and Miller 1992).



Figure 5.2. Results of VOC Analyses in Subsurface Soil (0 to 15 feet deep)

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S-12, and S-13. Results of BTEX analyses on the direct-push soil samples surrounding this area of contamination are less than their average detection in background samples, thereby bounding the zone of contamination. Vertically, the contamination extends from the ground surface to the water table, typically up to 6 feet deep in that area.

Acetone was detected in several of the direct-push soil samples located around the fringe of the BTEX-contaminated area. However, acetone was detected in only three of the direct-push soil samples at concentrations above its average detection in background samples.

silusa gnilqma Sampling Results

Discrete subsurface soil samples were collected from four of the five monitoring well boreholes. The samples were analyzed for VOCs, PAHs, RCRA metals, and total organic carbon. Table 5.4 summarizes analytical results for the discrete subsurface soil samples and Figures 5.2 (VOCs) and 5.3 (non-BTEX) show their distribution.

lone potosibai vlasta	better tob to a othe					
carbon (mg/kg)						
Total organic	002'2	1,100	08 <i>L</i> 'E	451	19,200	520
-		үүләң10	84/8ш) รəşkүv	(.		
Silver	0.46		61.0	14.0	0.29	L1.0
muinələ2	1,12	۷9'0	[.[0.62	5.0
Mercury	\$0.0		0.04	£0.0		
Lead	01.11	L'#	9.5	41	6'1	14.0
Chromium	09.11	4.3	<i>b</i> .2	٤.8	6.21	
muimbeD	0.24		1		0.44	
Barium	00'71	4 .8	12.4	6°L	13'3	1.1
Arsenic	\$.04	95.0				
	• • • • • • • • •	BCRA I	(84/8ш) ՏլՍԼӘ	(
Pyrene	00.0		952			
Naphthalene	00.0	······	091't			
Benzo(a)pyrene	00.0		L'8			
Anthracene	00.0		098'T			
**************************************	uə <u>s</u>	guo sinniovin	unoduloj vilu	וקו (אצארא)		
Xylenes, Total	00.0		4'430	84	8	
Ethylbenzene	00.0		0SL	LI	z	
Soluene	00.0	09.2	968	40	LZ	3'30
Benzene	00.0			48		
2-Butanone	00.0			Ş		
Acetone	00.0	8.01		LZ	97	
· · · · · · · · · · · · · · · · · · ·	1	ungiO slitnlo ^V	punodutoy ə	(हेभू/हेर्त) s	•	
Depth (feet)	Criteria	£ 6 01 2	2 to 5	12 to 14.5	44.5 to 45.5	7 01 C
GI alqma2	Background	51115	515195	561412	561414	71217
Station	Reference	I-WM	2-WM	14-WM	12-WM	S-WM

01-S

Table 5.4. Summary of Analytical Results for Subsurface Soil Samples, Former 724th Tanker Purging Station, Fort Stewart

Blank indicates analyte not detected. Bold indicates concentration greater than reference background criteria.





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The direct-push groundwater sampling results, together with the results of the groundwater sampling from monitoring wells, clearly delineate the area of residual BTEX groundwater contamination, as shown on Figures 5.4 through 5.6. Groundwater samples taken several hundred feet south and west of the TPS showed mainly acetone detections (maximum 59.0 μ g/L) but no BTEX compounds the approximately 100 feet wide by 160 feet long, extending from the area of the excavated soils removed in August 1996 to the north and west (Figure 5.5). The plume dimensions are consistent with the westward direction of groundwater flow inferred from the water table contours presented on Figure 4-4. Results of BTEX analyses on the direct-push groundwater samples there some action of an election of groundwater flow inferred from the water table contours presented on the election of groundwater flow inferred from the area of the excavated soils removed mains the section of groundwater flow inferred from the area of the excavated soils removed area to be a figure 4-4. Results of BTEX analyses on the direct-push groundwater samples thereby bounding the plume area are less than the average detection limit for the background samples, thereby bounding the zone of the less than the average detection limit for the background samples, thereby bounding the zone of the less than the average detection limit for the background samples, thereby bounding the zone of the less than the average detection limit for the background samples, thereby bounding the zone of the less than the average detection limit for the background samples, thereby bounding the zone of the less than the average detection limit for the background samples, thereby bounding the zone of the less than the average detection limit for the background samples, thereby bounding the conton.

Vertically, the extent of contamination was investigated using results from five vertical profile push probes (GP-1, GP-2, LN-2, LE-2, and LS-2), as well as one deep well (MW-4). Results for BTEX analyses in groundwater below 20 feet deep are shown on Figure 5.6. A cross-section showing the vertical extent of BTEX contamination (as indicated by benzene) is presented on Figure 5.7. Contamination extends from the water table to a depth of approximately 20 feet below the water table. However, isolated areas of BTEX in groundwater were found in some direct-push samples (GP-1 at 32 to 37 feet and LE-2 at 40 to 42 feet), which may indicate smaller zones of contamination at depths up to 40 feet. These zones do not appear to comprise a contiguous plume, however, and may reflect relict or residual BTEX contamination in the clayey layers at that depth. However, this contamination may not confirmed in monitoring well MW-4, which is screened at a depth of 35 to 40 feet. Vertical was not confirmed in monitoring well MW-4, which is screened at a depth of 35 to 40 feet. Vertical migration of contamination can occur due to the downward hydraulic gradient indicated at monitoring migration of contamination can occur due to the downward hydraulic gradient indicated at monitoring wells MW-2 and MW-4.

Other non-BTEX VOCs were also detected in the direct-push groundwater samples, and are reported in Appendix G and shown on Figures 5.4 and 5.5. Of these, 1,1-dichloroethane is notable because it was detected at a maximum value of 125 µg/L at GP-1, which also exhibited the maximum levels of BTEX contamination in groundwater. VOC 1,1-dichloroethane was also detected in LW-1 and is, therefore, considered a secondary contaminant associated with the primary BTEX plume.

Acetone, 2-butanone, and 2-hexanone were also detected. Acetone was detected at stations GP-2, LN-1, LN-2, LE-2, LS-1, and LS-2, with a maximum value of 1450 μ g/L in the vertical profile GP-2 at a depth of 30 to 34 feet, but was not found consistently in other samples at that depth. VOC 2-hexanone was found in two samples from LS-2 at concentrations of 3.2 μ g/L. There also were single detections of 2-butanone (2.8 μ g/L) at LS-2 and chloromethane (27.7 μ g/L) at GP-1.

5.4.2 Groundwater Monitoring Well Sampling Results

Groundwater contamination was evaluated using the results from water samples taken from five permanent monitoring wells installed during the Phase II field work at the site. These samples were analyzed for VOCs, PAHs, RCRA metals, and other natural attenuation parameters. Both filtered and presented in this section. Table 5.6 summarizes the analytical results for groundwater samples is monitoring wells. Figure 5.4 shows their distribution near Mill Creek, and Figures 5.5 and 5.6 show their distribution at the Former 724th TPS site. This assessment presents Phase II contaminant data only, because no groundwater samples were collected during the Phase I investigation.

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Figure F.2. Location Map for Background Sample Stations - SWMUs 14, 17, 18, 26, 31, 32, 34, and 35,



DEPARTMENT OF THE ARMY HEADQUARTERS, 3D INFANTRY DIVISION (MECHANIZED) AND FORT STEWART Directorate of Public Works 1557 Frank Cochran Drive Fort Stewart, Georgia 31314-4928

Express Mailed 1/24/98

REPLY TO ATTENTION OF NOV 24 1998

Directorate of Public Works

CERTIFIED MAIL

Georgia Environmental Protection Division Attention: Mr. Bruce Khaleghi 205 Butler Street, Southeast Suite 1162 Atlanta, Georgia 30334

Dear Mr. Khaleghi:

Fort Stewart is pleased to receive the Georgia Environmental Protection Division's (GA EPD) correspondence dated September 24, 1998, in reference to the <u>Final Phase II RCRA Facility</u> <u>Investigation (RFI) Report for the Former 724th Tanker Purging</u> <u>Station [Solid Waste Management Unit (SWMU) 26]</u>, dated March 1998; Fort Stewart; EPA ID No. GA9 210 020 872.

In response to the comments received from GA EPD, Fort Stewart has revised the RFI report and enclosed four copies of the <u>Revised</u> <u>Final Phase II RCRA Facility Investigation Report for the Former</u> <u>724th Tanker Purging Station [Solid Waste Management Unit (SWMU)</u> <u>26], dated November 1998. Fort Stewart agrees to comply with the</u> comments listed in the referenced correspondence with the exception of Comment #11 (Toxicity Profiles are enclosed under Appendix I rather than in Section 7.0 for informational purposes). A formal response to comments table is provided as an enclosure (i.e., within the front pocket of each Revised Final RFI Report).

In accordance with the Federal Code of Regulations, Section 270.11(d), the following certification is provided by the Installation:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact Ms. Melanie Little or Ms. Tressa Rutland, Directorate of Public Works Environmental Branch, at (405) 364-8461 or (912) 767-7919, respectively, should questions arise regarding the response to comments and/or the Revised Final Phase II RFI Report.

Sincerely,

for Ovidio E. Perez Colonel, U.S., Army Director, Public Works

Enclosures

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