

January 22, 2002

IT-MC-CK09-0130
Project No. 796886

Mr. Ellis Pope
U.S. Army Corps of Engineers, Mobile District
Attn: CESAM-EN-GE (Pope)
109 St. Joseph Street
Mobile, AL 36602

**Contract: Contract No. DACA21-96-D-0018/CK09
Fort McClellan, Alabama**

**Subject: Site-Specific Field Sampling Plan for the Remedial Investigation at Landfill
No. 3, Parcel 80(6)**

Dear Mr. Pope:

This Site-Specific Field Sampling Plan (SFSP) serves to document IT Corporation's (IT) proposed field activities to conduct a remedial investigation (RI) at Landfill No. 3, Parcel 80(6). This SFSP is an addendum to the April 2001 Site-Specific Groundwater Monitoring Well Installation and Field Sampling Plan Attachment for Landfill No. 3 Parcel 80(6). The purpose of the RI is to delineate the nature and extent of chlorinated volatile organic compound (VOCs) in groundwater. The proposed field activities and rationales were discussed at the December 2001 Base Realignment and Closure Cleanup Team (BCT) meeting. During that meeting, the BCT agreed to the strategy described in this addendum.

Field Activities

Figure 1 shows the approximate locations of the proposed groundwater monitoring wells and off site property boundaries in the vicinity of Landfill No. 3. The property boundaries are based on property ownership maps obtained from the Calhoun County Alabama Tax Division. As shown in Figure 1, there are 18 proposed well locations. Ten (primary) wells are required to meet the data quality objectives of the investigation and eight well locations have been added as a contingency in the event that further investigations are necessary. The proposed primary well locations will be installed under this SFSP. Should the contingency well locations be determined to be necessary, they will be installed under a separate SFSP.

Five of the proposed locations (OLF-G29, OLF-G30, OLF-G31, OLF-G32, and OLF-G37) are on private property. Four proposed locations (OLF-G33, OLF-G34, OLF-G35, and OLF-G36) are within the median of Alabama State Route 21, and one proposed location (OLF-G38) is on Army property north of Landfill No. 3. The monitoring well installation rationale is outlined in Table 1 of this SFSP. The actual well locations will be selected in the field based on field conditions and site access issues.

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Wells Installed on Private and Army Properties: Monitoring wells OLF-G29, OLF-G30, OLF-G31, OLF-G32, OLF-G37 and OLF-G38 will be installed as single cased wells using hollow stem auger, rock coring, and air rotary drilling methods. Based on the estimated ground surface elevations and the goals of the field program, it is estimated that wells will be installed to depths ranging from approximately 175 to 280 feet below ground surface (bgs) (Table 1).

Soil and bedrock samples will be collected at monitoring wells OLF-G30 and OLF-G38 for the purpose describing the lithology of residuum and bedrock. The borehole at each well location will be advanced with 6 5/8-inch inside-diameter hollow-stem auger. At OLF-G30, residuum sampling will be performed continuously from ground surface to 12 feet below ground surface (bgs) and thereafter at 5-foot intervals to auger refusal. Near proposed well OLF-G38, continuous lithologic data exists from ground surface to approximately 25 feet bgs in existing well OLF-G15 (Figure 1). Therefore, the borehole for OLF-G38 will be augered to 25 feet bgs and residuum sampling will begin at 25 feet bgs and continue at 5-foot intervals to auger refusal. The residuum will be logged in accordance with ASTM Method D 2488 using the Unified Soil Classification system and screened in the field using a photoionization detector.

Upon reaching auger refusal, the augers shall be left in place and continuous bedrock sampling will be performed using a PQ (nominal 5-inch diameter) or SQ (nominal 4-inch diameter) wireline triple tube core barrel with a longitudinally split inner tube. Bedrock coring will be performed with a bit appropriate for the formation to maximize core recovery.

If broken rock zones, washout zones or other conditions are encountered that inhibit core barrel advancement, the coring will be discontinued, the borehole reamed with air rotary methods, and temporary steel casing will be advanced to the broken rock zone. The borehole will then be advanced to the target depth (Table 1) with the core barrel. Rock cores will be described in accordance with methods outlined in USACE South Atlantic Division Manual DM 1110-1-1 (July 1998) and placed in core boxes provided by the drilling subcontractor.

Upon reaching the well target depth, the coring tools will be removed and the borehole will be reamed using air or water rotary drilling methods with a 7 7/8-inch diameter bit. An air compressor fitted with an in-line organic compound filter shall be used. If necessary, potable water may also be used as a lubricant. The field geologist shall document the volume of water introduced into the borehole. If circulation is lost during rotary drilling/reaming, at the discretion of the site manager, the borehole may be advanced using air rotary methods with an eccentric bit and simultaneous casing advancement (ODEX® or equivalent). All drill spoils will be directed into roll off boxes or other suitable containers via a diverter and an appropriate length of high-pressure discharge hose. Drill spoils shall not be permitted to blow uncontrolled from the borehole.

Lithologic sampling will not be performed at wells OLF-G29, OLF-G31, OLF-G32, and OLF-G37. At these locations, the boreholes will be advanced with rotary drilling methods to the target depth (Table 1).

Upon reaching the monitoring well target depth, the drilling tools shall be removed and well materials consisting of 4-inch ID, 15-foot long, 0.010-inch continuous wrap, polyvinyl chloride (PVC) well screen, attached to flush threaded 4-inch ID, schedule 80 PVC riser will be installed. At the discretion of the IT Site Manager, a 5-foot length of to flush threaded 4-inch ID, schedule 80 PVC pipe may be attached to the bottom of the screen to serve as a sump. Stainless steel centralizers shall be used at approximately 50-foot intervals at the discretion of the field geologist. After the screen and riser are lowered into the borehole, filter pack material will be installed around the well screen. The filter pack material shall consist of 20/40 silica sand. The filter pack material shall be tremied into place from the bottom of the well screen to approximately 5-feet above the top of the well screen. A fine sand seal, consisting of 30/70 silica sand, approximately 5-feet thick, will be tremied on top of the filter pack material. A bentonite seal, approximately 5-feet thick, will be tremied from the top of the fine sand seal to the top of bedrock. After a minimum of 8 hours, the remaining annular space will be grouted with a bentonite-cement mixture and tremied from the top of the bentonite seal to ground surface.

Wells Installed in Median of Alabama State Route 21: Monitoring wells OLF-G33, OLF-G34, OLF-G35, and OLF-G36 are proposed to be installed in the median of Alabama State Route 21 at depths ranging from approximately 175 to 250 feet bgs (Table 1). Based on Alabama Department of Transportation (ALDOT) requirements, the drill rig and investigative derived waste (IDW) shall be removed from the median of Alabama State Route 21 at the end of each work day. Therefore to reduce IDW, the four wells proposed in the median shall be installed using a combination of sonic and rock coring drilling methods. Well installation will be performed following methodology outlined in Section 4.2.1.3 of the April 2001 Site-Specific Groundwater Monitoring Well Installation and Field Sampling Plan Attachment for Landfill No. 3, Parcel 80(6). Wells OLF-G33 and OLF-G34 will be installed as single cased wells and wells OLF-G35 and OLF-G36 will be installed as double cased wells. Continuous lithologic sampling will be performed in well OLF-G34 and require PQ or SQ coring from approximately 100 feet to 250 feet bgs. The well installation rationale is included in Table 1 of this SFSP.

During installation of median wells, one lane of Alabama State Route 21 will be closed and the traffic control plan and signage previously furnished to IT by ALDOT will be strictly observed. Lane closure signs will be placed every 500 feet to a distance of 1500 feet from where the lane will be closed. A flashing arrow sign and orange safety cones will be used to divert traffic into a single lane. No flagman or police will be required except for when equipment is being moved into the median. While working near the median crossovers, both sides of the crossovers will be blocked off with cones.

Should a vehicle accident occur in the vicinity of the median wells during well installation activities, IT shall furnish an accident report and letter to ALDOT and state in the report whether signs were properly in place.

Monitoring Well Completion: Monitoring wells installed under this SFSP shall be completed with flush to grade well covers using an 8- or 12-inch steel flush-mount, bolt-down, traffic bearing, monitoring well cover. The flush mount cover will be installed in a minimum 3-foot by 3-foot square, 4-inch thick, concrete pad. The pad will be sloped away from the well and constructed flush with the ground surface. A brass identification tag will be installed on the north side of the concrete pad to serve as a well marker. A lockable water-tight well cap provided by the drilling subcontractor will be installed atop the well casing.

Well Development: Newly installed monitoring wells will be developed in accordance with procedures outlined in the April 2001 Site-Specific Groundwater Monitoring Well Installation and Field Sampling Plan Attachment for Landfill No. 3, Parcel 80(6) and the 2000 Installation-Wide Sampling and Analysis Plan (SAP) .

Borehole Geophysical Logging: Borehole geophysical logging including dipmeter logging, natural gamma ray logging, resistivity logging and caliper logging will be completed on select monitoring well boreholes to aid in correlation of lithology. The locations and intervals are included in Table 1. Borehole geophysical logging will be performed upon completion of drilling the borehole but prior to installation of well materials in accordance with procedures outlined in Section 4.2.1.4 of the April 2001 Site-Specific Groundwater Monitoring Well Installation and Field Sampling Plan Attachment for Landfill No. 3, Parcel 80(6).

Groundwater Sampling: Following well completion and development activities, IT will sample the newly installed and existing monitoring wells at Landfill No. 3, and two City of Weaver water supply wells for VOCs. Groundwater sample designations and QA/QC sample quantities are listed in Table 2. Groundwater sampling will follow sample methodology outlined in the April 2001 Site-Specific Groundwater Monitoring Well Installation and Field Sampling Plan Attachment for Landfill No. 3 Parcel 80(6) and Section 4.9.1.4 of the SAP. The groundwater samples will be analyzed for VOCs using EPA SW-846 Method 8260B as presented in Table 3. Equipment decontamination procedures will follow methodology presented in Section 4.10.1.2 of the SAP. As determined by the IT Site Manager, low-flow sampling methodology outlined in the August 7, 2000 letter report from IT to USACE may be followed.

Surveying: Monitoring well locations and elevations will be surveyed following methodology outlined in Section 4.4 of the April 2001 Site-Specific Groundwater Monitoring Well Installation and Field Sampling Plan Attachment for Landfill No. 3, Parcel 80(6) and Section 4.17 of the SAP.

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Investigative Derived Waste: IDW generated during well installation and sampling will be managed in accordance with procedures outlined in Appendix D of the SAP. As previously stated, investigative derived waste shall be removed from the median well sites at the end of each day.

Health and Safety: Work conducted during the RI at Landfill No. 3, Parcel 80(6), will be performed in accordance with the Site-Specific Safety and Health Plan Attachment presented with the April 2001 Site-Specific Groundwater Monitoring Well Installation and Field Sampling Plan Attachment for Landfill No. 3, Parcel 80(6). After the median wells have been installed, "Men at Work" signs shall be posted in both directions along the median during well development and well sampling activities.

Schedule

IT is prepared to initiate field activities at Landfill No. 3, Parcel 80(6) during the week of January 28, 2002.

If you have questions, or need further information, please contact me at (770) 663-1429 or Josh Jenkins at (770) 667-7795.

Sincerely,

Jeanne A. Yacoub, P.E.
Project Manager

Attachments

Distribution:

Lisa Holstein, FTMC (7 copies, 1 CD)
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Table 1
Monitoring Well Installation Rationale
Remedial Investigation
Landfill No. 3, Parcel 80(6)
Fort McClellan, Calhoun County, Alabama

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Well Designation	Sample Media	Well Location Rationale
OLF-G29	Groundwater	Permanent bedrock monitoring well to be placed approximately 900 feet west-southwest of existing bedrock monitoring well OLF-G23. Groundwater sample data will further delineate the northwest horizontal extent of ground water contamination. The monitoring well location will be used to establish the local groundwater flow direction, site-specific geology, and provide information on groundwater quality between Landfill No. 3 and the City of Weaver potable water wells. OLF-G29 will be drilled and installed using air rotary drilling techniques after the proposed deeper adjacent well OLF-G30 is installed. Anticipated depth of OLF-G29 is 225 feet below ground surface but may be modified based on actual field conditions. The well construction will consist of 4 inch ID Schedule 80 PVC with 15 feet of screen. No geophysical logging is proposed.
OLF-G30	Groundwater	Permanent bedrock monitoring well to be placed adjacent to OLF-G29 approximately 900 feet west-southwest of existing bedrock monitoring well OLF-G23. Groundwater sample data will further delineate the northwest horizontal and vertical extent of groundwater contamination. The monitoring well location will be used to establish the local groundwater flow direction, site-specific geology, and provide information on groundwater quality between Landfill No. 3 and the City of Weaver potable water wells. OLF-G30 will be drilled using a combination of hollow stem auger drilling, rock coring and air rotary techniques. The hollow stem auger will be used in conjunction with split spoon sampling continuously to 12 feet bgs and at five foot intervals from 12 feet bgs until bedrock is encountered. When bedrock is encountered continuous coring is anticipated to a target depth of 300 feet bgs but may be modified based on actual field conditions. When the target depth is reached the borehole will be reamed using air rotary techniques and the permanent 4-inch ID, Schedule 80 PVC well with 15 feet of screen will be installed. Geophysical logging is proposed from ground surface to the bottom of the borehole.
OLF-G31	Groundwater	Permanent bedrock monitoring well to be placed approximately 950 feet northwest of existing bedrock monitoring well OLF-G23. Groundwater sample data will further delineate the northwest horizontal extent of ground water contamination. The monitoring well location will be used to establish the local groundwater flow direction, site-specific geology, and provide information on groundwater quality between Landfill No. 3 and the City of Weaver potable water wells. OLF-G31 will be drilled and installed using air rotary techniques to the approximate depth of 225 feet below ground surface but may be modified based on actual field conditions. The well construction will consist of 4-inch ID Schedule 80 PVC with 15 feet of screen. No geophysical logging is proposed.
OLF-G32	Groundwater	Permanent bedrock monitoring well to be placed adjacent to OLF-G31 approximately 950 feet northwest of existing bedrock monitoring well OLF-G23. Groundwater sample data will further delineate the northwest horizontal extent of groundwater contamination. The monitoring well location will be used to establish a local groundwater flow direction, site-specific geology, and provide information on groundwater quality between Landfill No. 3 and the City of Weaver potable water wells. OLF-G32 will be drilled and installed using air rotary techniques to the anticipated depth of 300 feet below ground surface but may be modified based on actual field conditions. The well construction will consist of 4-inch ID Schedule 80 PVC with 15 feet of screen. Geophysical logging is proposed from ground surface to the bottom of the borehole.
OLF-G33	Groundwater	Permanent bedrock monitoring well to be placed approximately 600 feet north-northeast of existing bedrock monitoring well OLF-G23. Groundwater sample data will further delineate the north-northwest horizontal extent of groundwater contamination. The monitoring well location will be used to establish the local groundwater flow direction, site-specific geology, and provide information on groundwater quality in the bedrock. OLF-G33 will be drilled using a combination of roto sonic and/or air rotary drilling techniques. Anticipated depth of OLF-G33 is 180 feet below ground surface but may be modified based on actual field conditions. The well construction will consist of 4-inch ID Schedule 80 PVC with 15 feet of screen. No geophysical logging is proposed.
OLF-G34	Groundwater	Permanent bedrock monitoring well to be placed adjacent to OLF-G33 approximately 600 feet north-northeast of existing bedrock monitoring well OLF-G23. Groundwater sample data will further delineate the north-northwest horizontal extent of Landfill No. 3 contamination. The monitoring well location will be used to establish a local groundwater flow direction, site-specific geology, and provide information on groundwater quality in the bedrock. OLF-G34 will be sampled continuously with a roto sonic drill to the top of bedrock and then continuously cored to a total anticipated depth of 260 feet below ground surface but may be modified based on actual field conditions. The well construction will consist of 4-inch ID Schedule 80 PVC with 15 feet of screen. Geophysical logging is proposed from ground surface to the bottom of the borehole.

Table 1
Monitoring Well Installation Rationale
Remedial Investigation
Landfill No. 3, Parcel 80(6)
Fort McClellan, Calhoun County, Alabama

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Well Designation	Sample Media	Well Location Rationale
OLF-G35	Groundwater	Permanent bedrock monitoring well to be placed adjacent to existing bedrock monitoring well OLF-G23. Groundwater sample data will further delineate the vertical extent of the contamination detected in OLF-G23. The monitoring well location will be used to establish a local groundwater flow direction, site-specific geology, and provide information on groundwater quality in the bedrock. Anticipated depth of OLF-G35 is 250 feet below ground surface with permanent eight inch steel casing installed to a depth of 190 feet below ground surface but may be modified based on actual field conditions. The well construction will consist of 4-inch ID Schedule 80 PVC with 15 feet of screen. Geophysical logging is proposed from 175 feet bgs to the bottom of the borehole.
OLF-G36	Groundwater	Permanent bedrock monitoring well to be placed adjacent to existing bedrock monitoring well OLF-G22. Groundwater sample data will further delineate the vertical extent of the contamination detected in OLF-G22. The monitoring well location will be used to establish a local groundwater flow direction, site-specific geology, and provide information on groundwater quality in the bedrock. Anticipated depth of OLF-G36 is 250 feet below ground surface with permanent eight inch carbon steel casing installed to a depth of 190 feet below ground surface but may be modified based on actual field conditions. The well construction will consist of 4-inch ID Schedule 80 PVC with 15 feet of screen. Geophysical logging is proposed from 175 feet bgs to the bottom of the borehole.
OLF-G37	Groundwater	Permanent bedrock monitoring well to be placed approximately 800 feet west-southwest of existing bedrock monitoring well OLF-G22. Groundwater sample data will further delineate the western horizontal extent of ground water contamination. The monitoring well location will be used to establish the local groundwater flow direction, site-specific geology, and provide information on groundwater quality between Landfill No. 3 and the City of Weaver potable water wells. OLF-G37 will be drilled and installed using air rotary techniques to the anticipated depth of 195 feet below ground surface but may be modified based on actual field conditions. The well construction will consist of 4-inch ID Schedule 80 PVC with 15 feet of screen. Geophysical logging is proposed from ground surface to the bottom of the borehole.
OLF-G38	Groundwater	Permanent bedrock monitoring well to be placed adjacent to existing residuum monitoring well OLF-G15. Groundwater sample data will further delineate the vertical extent of the contamination north of Landfill No. 3. The monitoring well location will be used to establish the local groundwater flow direction, site-specific geology, and provide information on groundwater quality in the bedrock. OLF-G38 will be drilled using a combination of hollow stem auger drilling, rock coring, and air rotary techniques. The hollow stem auger will be used allow collection of split spoon samples at 5-foot intervals starting at 25 feet below ground surface. When bedrock is encountered continuous rock coring will be performed to an anticipated depth of 175 feet below ground surface but may be modified based on actual field conditions. When the target depth is reached the borehole will be reamed using air rotary techniques and a permanent Schedule 80 PVC, 4-inch ID monitor well with 15 feet of screen will be set. Geophysical logging is proposed from ground surface to the bottom of the borehole.

Table 2
Groundwater Sample Designations and QA/QC Sample Quantities
Remedial Investigation
Landfill No. 3, Parcel 80(6)
Fort McClellan, Calhoun County, Alabama

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Sample Location	Sample Designation	Sample Matrix	Sample Depth (ft)	QA/QC Samples			Analytical Suite
				Field Duplicates	Field Splits	MS/MSD	
OLF-G01	OLF-G01-GW-PE3057-REG	Groundwater	a				VOCs
OLF-G02	OLF-G02-GW-PE3058-REG	Groundwater	a				VOCs
OLF-G03	OLF-G03-GW-PE3059-REG	Groundwater	a	OLF-G03-GW-PE3060-FD			VOCs
OLF-G04	OLF-G04-GW-PE3061-REG	Groundwater	a				VOCs
OLF-G05	OLF-G05-GW-PE3062-REG	Groundwater	a				VOCs
OLF-G06	OLF-G06-GW-PE3063-REG	Groundwater	a				VOCs
OLF-G07	OLF-G07-GW-PE3064-REG	Groundwater	a			OLF-G07-GW-PE3064-MS/MSD	VOCs
OLF-G08	OLF-G08-GW-PE3065-REG	Groundwater	a				VOCs
OLF-G09	OLF-G09-GW-PE3066-REG	Groundwater	a				VOCs
OLF-G10	OLF-G10-GW-PE3067-REG	Groundwater	a				VOCs
OLF-G11	OLF-G11-GW-PE3068-REG	Groundwater	a				VOCs
OLF-G12	OLF-G12-GW-PE3069-REG	Groundwater	a				VOCs
OLF-G13	OLF-G13-GW-PE3070-REG	Groundwater	a				VOCs
OLF-G14	OLF-G14-GW-PE3071-REG	Groundwater	a				VOCs
OLF-G15	OLF-G15-GW-PE3072-REG	Groundwater	a			OLF-G15-GW-PE3072-MS/MSD	VOCs
OLF-G16	OLF-G16-GW-PE3073-REG	Groundwater	a				VOCs
OLF-G17	OLF-G17-GW-PE3074-REG	Groundwater	a				VOCs
OLF-G18	OLF-G18-GW-PE3075-REG	Groundwater	a				VOCs

Table 2
Groundwater Sample Designations and QA/QC Sample Quantities
Remedial Investigation
Landfill No. 3, Parcel 80(6)
Fort McClellan, Calhoun County, Alabama

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Sample Location	Sample Designation	Sample Matrix	Sample Depth (ft)	QA/QC Samples			Analytical Suite
				Field Duplicates	Field Splits	MS/MSD	
OLF-G19	OLF-G19-GW-PE3076-REG	Groundwater	a				VOCs
OLF-G20	OLF-G20-GW-PE3077-REG	Groundwater	a				VOCs
OLF-G21	OLF-G21GW-PE3078-REG	Groundwater	a				VOCs
OLF-G22	OLF-G22-GW-PE3079-REG	Groundwater	a				VOCs
OLF-G23	OLF-G23-GW-PE3080-REG	Groundwater	a	OLF-G23-GW-PE3081-FD			VOCs
OLF-G24	OLF-G24-GW-PE3082-REG	Groundwater	a				VOCs
OLF-G25	OLF-G25-GW-PE3083-REG	Groundwater	a				VOCs
OLF-G26	OLF-G26-GW-PE3084-REG	Groundwater	a	OLF-G26-GW-PE3085-FD			VOCs
OLF-G27	OLF-G27-GW-PE3086-REG	Groundwater	a				VOCs
OLF-G28	OLF-G28-GW-PE3087-REG	Groundwater	a				VOCs
OLF-G29	OLF-G29-GW-PE3088-REG	Groundwater	a				VOCs
LF4-MW1	LF4-MW1--GW-PE3089-REG	Groundwater	a				VOCs
OLF-G30	OLF-G30-GW-PE3090-REG	Groundwater	a				VOCs
OLF-G31	OLF-G31-GW-PE3091-REG	Groundwater	a				VOCs
OLF-G32	OLF-G32-GW-PE3092-REG	Groundwater	a	OLF-G32-GW-PE3101-REG			VOCs
OLF-G33	OLF-G33-GW-PE3093-REG	Groundwater	a				VOCs
OLF-G34	OLF-G34-GW-PE3094-REG	Groundwater	a				VOCs

Table 2
Groundwater Sample Designations and QA/QC Sample Quantities
Remedial Investigation
Landfill No. 3, Parcel 80(6)
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Sample Location	Sample Designation	Sample Matrix	Sample Depth (ft)	QA/QC Samples			Analytical Suite
				Field Duplicates	Field Splits	MS/MSD	
OLF-G35	OLF-G35-GW-PE3095-REG	Groundwater	a				VOCs
OLF-G36	OLF-G36-GW-PE3096-REG	Groundwater	a			OLF-G36-GW-PE3096-MS/MSD	VOCs
OLF-G37	OLF-G37-GW-PE3097-REG	Groundwater	a				VOCs
OLF-G38	OLF-G38-GW-PE3098-REG	Groundwater	a				VOCs
Weaver #2	WEAVER#2-GW-PE3099-REG	Groundwater	a				VOCs
Weaver #3	WEAVER#3-GW-PE3100-REG	Groundwater	a				VOCs

Table 3

**Analytical Samples
Remedial Investigation
Landfill No. 3, Parcel 80(6)
Fort McClellan, Calhoun County, Alabama**

Parameters	Analysis Method	Sample Matrix	TAT Needed	Field Samples			QA/QC Samples ^a				EMAX	QA Lab	
				No. of Sample Points	No. of Events	No. of Field Samples	Field Dups (10%)	Splits w/ QA Lab (5%)	MS/MSD (5%)	Trip Blank (1/ship)	Eq. Rinse (1/wk/matrix)	Total No. Analysis	Total No. Analysis
Landfill No. 3, Parcels 80(6): 41 groundwater samples													
VOC	8260B	water		41	1	41	4		3	1	1	53	0

Landfill No. 3, Parcel 80(6) Subtotal:				41	4	0	3	1	1	53	0
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^aField duplicate, QA split, and MS/MSD samples were calculated as a percentage of the field samples collected per site and were rounded to the nearest whole number. Trip blank samples will be collected in association with water matrix samples for VOC analysis only. Assumed four field samples per day to estimate trip blanks. Equipment blanks will be collected once per event whenever sampling equipment is field decontaminated and re-used. They will be repeated weekly for sampling events that are anticipated to last more than 1 week. Assumed 20 field samples will be collected per week to estimate number of equipment blanks.

Ship samples to: EMAX Laboratories, Inc.
1835 205th Street
Torrance, CA 90501
Attn: Sample Receiving/Elizabeth McIntyre
Tel: 424-618-8889
Fax: 424-618-0818

MS/MSD - Matrix spike/matrix spike duplicate.
QA/QC - Quality assurance/quality control.
TAT - Turn around time.
wk - Week.
Dups - Duplicates.
No. - Number.
ASTM- American Society for Testing and Materials.

Eq. Rinse - Equipment rinse blank.
SVOC - Semivolatile organic compound.
VOC - Volatile organic compound.
TCL - Target compound list.
TAL - Target analyte list.

DWG. NO.: ...pind3.dgn
 PROJ. NO.: 774845
 INITIATOR: J. JENKINS
 PROJ. MGR.: J. YACOLUB
 DRAFT. CHK. BY: J. JENKINS
 ENGR. CHK. BY: J. JENKINS
 DATE LAST REV.:
 DRAWN BY:
 STARTING DATE: 02/26/01
 DRAWN BY: D. BOMAR

12/11/01
 03:22:55 PM
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