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BROWNFIELDS ASSESSMENT REPORT FOR ELK MOUNTAIN LANDFILL WOODFIN, NORTH CAROLINA

January 21, 2004

Prepared For:



Land-of-Sky Regional Council

Buncombe • Henderson • Madison • Transylvania Counties, North Carolina

The Land of Sky Regional Council
Asheville, North Carolina

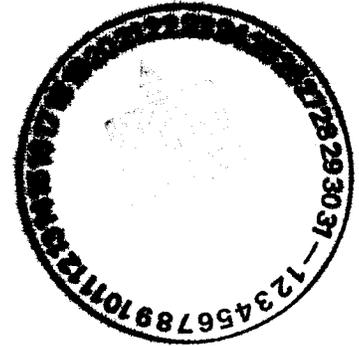
Prepared By:



Fletcher Group
ENGINEERING & ENVIRONMENTAL SOLUTIONS



07007-03-11



January 21, 2004

Ms. Beverly Williams
Brownfields Project Manager
US EPA REGION IV
61 Forsyth Street
Atlanta, GA 30303

RE: Land of Sky Brownfields Assessment Demonstration Pilot
Elk Mountain Landfill Assessment Report
Town of Woodfin, NC

Dear Ms. Williams,

On behalf of the Land of Sky Regional Council, please find enclosed two (2) copies of the Brownfields Assessment Report for the Elk Mountain Landfill located in the Town of Woodfin, NC. One copy is for your review and the second you can forward to your Technical Advisor.

It is the Land of Sky and the Town of Woodfin's strong desire to proceed with potential purchaser negotiations as soon as possible. Therefore, we would appreciate your feedback on the findings of the assessment, conclusions and recommendations at your earliest convenience.

In the meantime, please give me a call at (864) 421-9999 if you have any questions or require additional clarification associated with any of the assessment data. I'll look forward to hearing from you.

Sincerely,

FLETCHER GROUP, INC.

Kathryn W. Webb, PG
Project Manager

Enclosures (2 Copies)

Mr. Tony Duque, NC DENR w/ enclosure
Mr. Ron Townley, Land of Sky Regional Council w/ enclosure
Mr. Jason Young, Town of Woodfin w/ enclosure
Mr. Lawrence MacAlister, MacAlister Development





Fletcher Group
ENGINEERING & ENVIRONMENTAL SOLUTIONS



BROWNFIELDS ASSESSMENT REPORT

FOR
**THE ELK MOUNTAIN LANDFILL
BROWNFIELDS ASSESSMENT
WOODFIN, NORTH CAROLINA**

Prepared for
**THE LAND OF SKY REGIONAL COUNCIL
ASHEVILLE, NORTH CAROLINA**

Prepared by
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148 River Street, Suite 220
Greenville, South Carolina 29601
(864) 421-9999

Submitted:
January 21, 2004

Kathy W. Webb, P.G. No. 1328
North Carolina Registered
Environmental Consultant (REC)
Project Manager

Dianne Rosseter
Project QA Officer



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1.0 INTRODUCTION

The Land of Sky Regional Council (Council) has been awarded a US EPA Brownfields Assessment Demonstration Pilot Grant for the four county region of Buncombe, Madison, Henderson and Transylvania Counties, North Carolina. The goals of the assessment pilot are to inventory Brownfields sites within the region, conduct environmental assessments on priority sites, create remediation and redevelopment plans for selected sites, utilize community input through the process and distribute a model for Brownfields redevelopment. Through the Brownfields site inventory and prioritization process, the Council has selected to assist the Town of Woodfin, North Carolina, (hereafter Town) with the redevelopment of a property owned by the Town and formerly used as a municipal landfill by the City of Asheville. The preliminary redevelopment plans for the site include an 18-hole golf course and other amenities surrounded by a residential neighborhood.

The Town of Woodfin owns a 156-acre parcel of land on Beaverdam Creek Road in Woodfin, North Carolina (Figure 1). The City of Asheville leased the property from the mid-60's to approximately 1980 and used it as a municipal landfill. The Town of Woodfin purchased the property in 1985 and developed a 9-hole golf course in approximately 1999. The Town of Woodfin is interested in selling the property for redevelopment as a golf course community to add to the tax base, improve housing and to create job opportunities in the area. The Town of Woodfin submitted a Letter of Intent to participate in the NC DENR Brownfields Program and seeks to secure a Brownfields Agreement for the Elk Mountain Landfill Site. In response to Woodfin's Letter of Intent, NC DENR identified data gaps that preclude NC DENR from making the determination, as is required by the Brownfields Property Reuse Act of 1997 ("the Act"), that the Property is or can be made suitable for the uses to which the Town of Woodfin committed in its Letter of Intent. NC DENR documented the nature of the data gaps and requested specific additional environmental assessment activities to close those data gaps in its letter, "Preliminary Additional Environmental Assessment Request," dated July 16, 2003. The specific assessment activities requested include: delineation of the waste material, characterization of the existing cap material, and characterization of the groundwater conditions.

A Quality Assurance Project Plan (QAPP) was submitted to the US EPA and NC DENR for review on November 4, 2003. The QAPP was approved for implementation on November 21, 2003. Field assessment activities were conducted from December 17 – 22, 2003. The following is a summary report of the assessment. The assessment activities were conducted as described in the QAPP unless otherwise noted.

2.0 PROBLEM DEFINITION

The Town of Woodfin, NC, purchased the 156 acres along Beaverdam Creek Road and Beaverdam Creek in 1985 from private landowners (the Rhoades estate). The land was farmland and had been leased to the City of Asheville for a landfill. The Town purchased the property due its location in the middle of town and the likelihood that it would otherwise remain undeveloped. In 1999, the Town transformed the site into a 9-hole municipal golf course. Since that time, the golf course has been a drain on the Town's finances. Since the course opened in 1999, the average yearly loss to the Town has been roughly \$250,000. In February 2003, the Town was forced to close the course in order to reduce expenditures. At present, the Town has no plans to reopen the course and would like to sell the course to a developer capable and willing to develop the site into an 18-hole golf course and residential community. However, concerns regarding the unknown nature of the contamination on the site have made it clear to the Town that only by resolving the uncertainty and potential liability surrounding the property will they be able to secure a developer who will be able to turn the 156 acre "white elephant" into a real asset for the financially challenged community. For additional information on the Town's plans and justification for site work, please refer to the "Brownfields Letter of Intent", April 7, 2003, Town of Woodfin to NC DENR.

2.1 BACKGROUND INFORMATION

The 156 acres of property is located at the terminus of Beaverdam Creek Road, and is generally bordered on the south by Beaverdam Creek and the Southern Railway, the Metropolitan Sewerage District to the west, undeveloped property to the north and US Highway 19 & 23 to the east. Prior to the development of the 9-hole golf course, Beaverdam Creek Road crossed the property and intersected with Riverside Drive (NC Hwy. 251, which parallels the French Broad River).

Based upon historical aerial photographs, records and interviews with people knowledgeable of the site, the property was used as farmland and for landfilling. A 1975 aerial photograph shows the property being used as a landfill. In 1985 the Town purchased the property. The aerial photo information, interviews with people knowledgeable of the property and file information was used to plan appropriate assessment activities as described in the QAPP.

2.2 PURPOSE OF INVESTIGATION

It is the intention of the Town to see the 156 parcel of land turned into an 18-hole golf course with all the associated amenities, such as tennis courts and a clubhouse. In addition to the course itself, the plan calls for the construction of approximately 250 condominiums on the land surrounding the golf course. It is

also anticipated that commercial applications may be developed on some of the approximately 60 acres of land that is not part of the landfill itself. To accomplish this objective, the Town intends to satisfy the informational requirements set forth by the NC DENR Brownfields program. These informational requirements included: delineation of the waste material, characterization of the nature and thickness of the cap and characterization of the groundwater quality and flow direction. The groundwater quality data will be compared to the US EPA drinking water standards as well as the NC DENR groundwater quality standards.

3.0 SAMPLING DESIGN AND RESULTS

The following section describes the project sampling design and results. NC DENR, aerial photographs and interviews were the basis for the proposed sample locations and analyses. Visual observations and field data were used to make field decisions concerning actual sample locations. Visual observations on the presence or absence of trash were used to direct the placement of the soil borings around the landfill perimeters to document the cell footprints. The soil and trash samples were collected using direct-push soil sampling equipment. The borings were extended to the depth of the top of the trash, to refusal, or into undisturbed saprolite soil if no trash was observed. Visual observations on the depth to trash (thickness of the cap), the nature of the trash and the nature of the cover material were collected from the borings placed within trash cell areas. Following confirmation of the landfill cell areas, the locations of one (1) upgradient and three (3) downgradient permanent monitoring wells were selected. The locations of the soil borings and monitoring wells are shown on Figure 1.

3.1 LANDFILL FOOTPRINT AND CAP ASSESSMENT

On December 17 and 18, 2003, Fletcher Group installed over 50-soil borings around and within the landfill cells using direct push sampling equipment to map the landfill footprints. The landfill area footprints, based upon the soil boring data, are shown on Figure 1. Table 1 is a summary of the soil boring information: the presence or absence of trash at each location, the nature of the trash (where present), and the thickness and nature of the cover material. Shallow or exposed saprolite and bedrock were observed around the landfill perimeters. Shallow rock (refusal) was encountered at depths ranging from 1.5 feet to 20 feet in the soil borings. The thickness of the cover soil (the landfill cap) material varied from 1.5 feet to 12 feet in the soil borings. The nature of the trash observed included discolored soil, plastic, paper, and pieces of metal debris. The cover material generally consisted of silt and clay.

Two general areas of landfilled material were delineated: along a former roadway in the western area of the property, under the existing 9-hole golf course; and within a cleared area north of the access road on the eastern (otherwise undeveloped) side of the property. Around the perimeters of these landfilled areas, bedrock and/or saprolite soils were observed at the ground surface. Bedrock is also exposed within the Beaverdam Creek stream bed.

3.2 GROUNDWATER MONITORING WELL INSTALLATION, SAMPLING AND ANALYSES

Following the delineation of the landfill footprints, the locations of the four (4) permanent monitoring wells were selected. The monitoring wells were installed using direct-push equipment and pre-packed well screens.

The permanent monitoring wells were constructed with 10 foot, 0.010 slot well screens, a pre-packed sand filter material, a minimum 2 foot bentonite seal, grout from the top of the seal to the ground surface, and protective flush-mount casings set in concrete well pads (unless otherwise noted).

The location of the upgradient monitoring well (MW-1) was moved from north of the two (2) landfill areas as shown in the QAPP, to an upgradient location along Riverdam Creek, due to exposed and shallow bedrock in the area of the planned well location. Even near the creek bank, bedrock was encountered at a depth of 7 feet below the ground surface. MW-1, in its current location and with its screened interval within the saprolite, can be used to monitor the shallow groundwater upstream (upgradient) of the landfilled areas. Due to the shallow bedrock, MW-1 was constructed at a depth of 7 feet with 5 feet of screen. The well construction logs are included in Appendix A.

MW-2 was located immediately downgradient of the eastern landfill, in a position similar to that shown in the QAPP. Bedrock was encountered at a depth of 17 feet below the ground surface. Therefore, the well screen was set at a depth of 7 to 17 feet.

MW-3 was located immediately downgradient of the western landfill, outside the landfilled area, near the creek. Bedrock was encountered at a depth of 20 feet. Therefore, the well screen was set at a depth of 10 to 20 feet.

The location of MW-4 was adjusted from the south side of the landfilled area to an area where perched groundwater is known to feed a small pond. Two (2) borings near the creek were attempted in the proposed well location with refusal at 10 to 13 feet. The estimated water level in the area would be approximately 15 feet based upon MW-3 data. Therefore, the location of MW-4 was modified and it was installed to monitor the perched groundwater at a depth of 6 to 16 feet.

The monitoring wells were developed and sampled for field indicator parameters, volatile and semi-volatile organic compounds (VOCs & SVOCs), total metals, pesticides and polychlorinated biphenyls (PCBs) as requested by the NC DENR Brownfields project manager. In addition, the relative elevation of groundwater at each well location was determined for groundwater flow direction. To comply with the required sample parameters for the NC Inactive Hazardous Waste Sites assessment program, the total metals analyses included: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium and zinc; the VOC and SVOC analyses included the Target Compound List (TCL) parameters with a library search.

Table 2 is a summary of the compounds detected in the groundwater at the site. The laboratory report and chain of custody are included in Appendix B. The summary table includes a comparison to the US EPA and NC DENR health-based concentrations for groundwater ingestion. It should be noted that the planned development will include a municipal water supply and that no drinking water or irrigation wells are located on-site. MW-2 was the only well location where VOCs were detected above groundwater drinking water standards. Trichloroethene (TCE) was detected at a concentration of 31 ug/l compared to the NC Groundwater Standard of 2.8 ug/l and the US EPA drinking water standard of 5 ug/l. Vinyl chloride was detected at a concentration of 6.9 ug/l compared to the NC Groundwater Standard of 0.015 ug/l and the US EPA drinking water standard of 2 ug/l. The vinyl chloride is likely a degradation product of the TCE.

A total lead concentration of 0.075 mg/l was detected in MW-3, compared to the NC Groundwater Standard of 0.015 mg/l, and a US EPA drinking water treatment standard of 0.015 mg/l. The total lead concentration is likely due to sediment entrained in the groundwater sample rather than being indicative of the actual groundwater concentration.

No semi-volatile organic compounds, pesticides or PCBs were detected in the groundwater samples.

3.3 GROUNDWATER FLOW DIRECTION

The top of casing measuring point elevations for the four (4) monitoring wells were surveyed to mean sea level. The depth to the static water level collected on December 22, 2003 was subtracted from the measuring point elevations to determine the water level elevations and groundwater flow directions as shown on Figure 2. The water level in MW-4 is assumed to represent the perched groundwater elevation rather than the water table elevation. In general, the groundwater flow direction is to the south and southeast, toward Beaverdam Creek.

4.0 DATA VALIDATION AND USABILITY

The laboratory analytical data was assessed for precision, accuracy, and completeness in accordance with the QAPP, the USEPA *Contract Laboratory Program National Functional Guidelines for Organic Data Review* (EPA540/R-99/008, October 1999) *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA540/R-01/008, July 2002), and the most recently promulgated versions of the analytical methods. A summary report of findings is included in Appendix C.

Upon receipt of the laboratory analytical results, the data package was reviewed for completeness to ensure all samples were collected and the requested analyses performed. The field collection logs were reviewed and compared against the chain-of-custody (COC) documentation to ensure all collection information was properly transcribed. The chain-of-custody forms were then verified against the laboratory sample check-in documentation. All requirements for proper handling and preservation were met and all samples were properly checked-in and analyzed for the requested analytes.

Laboratory batch quality control data were then evaluated for precision, accuracy, and compliance with the data quality objectives specified in the QAPP. Based on this review, most data was found to generally be in compliance with U.S. EPA, QAPP, and method requirements and assessed as Class A (fully usable for quantitative decision-making purposes), with the minor exception of low pesticide and PCB surrogate recovery in MW-2 and MW-4.

Although some data qualification was necessary, it appears that most data quality objectives were met and the data is reportable and usable for decision-making purposes, with the qualifications specified in the summary report.

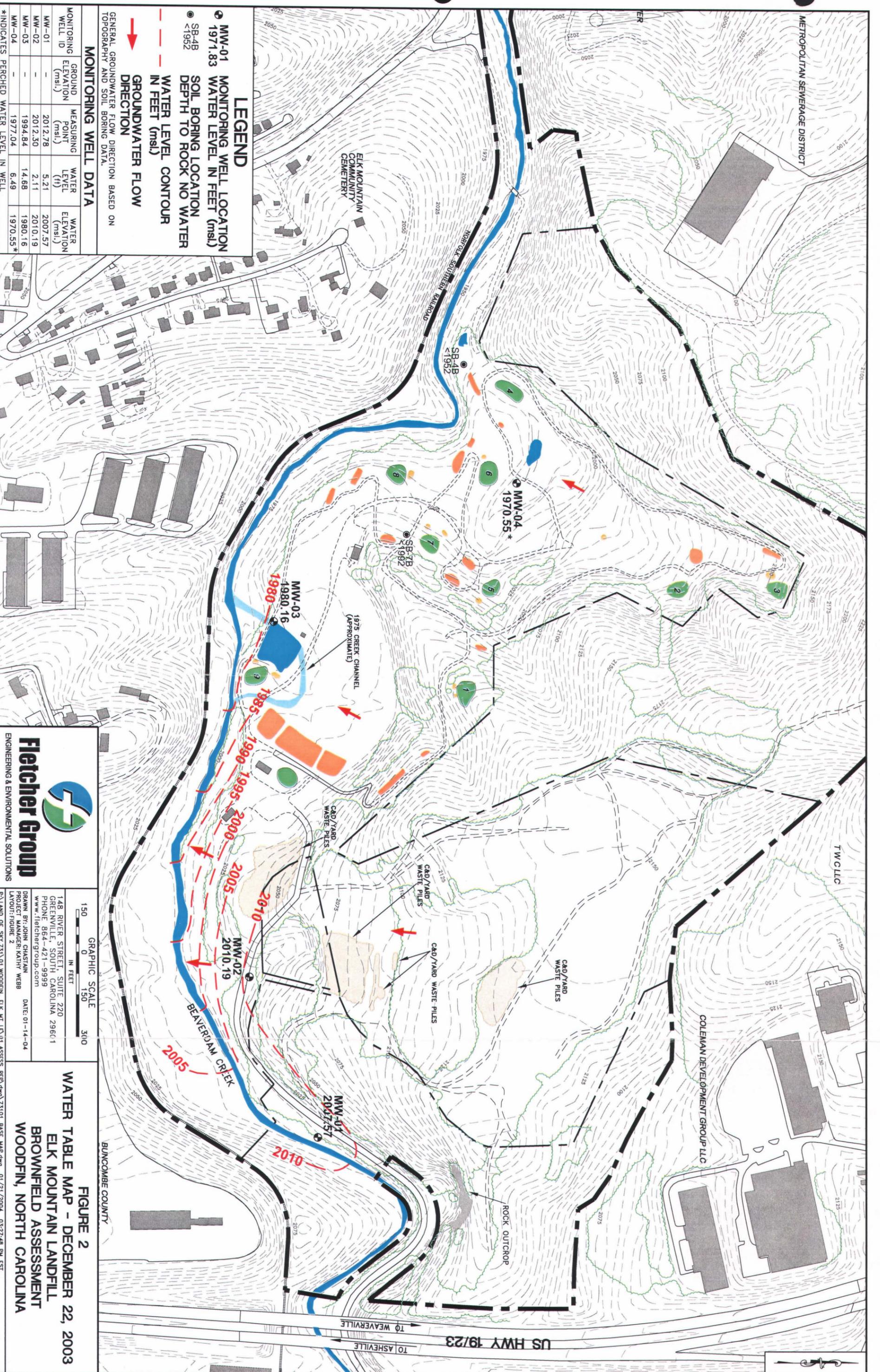
5.0 CONCLUSIONS AND RECOMMENDATIONS

The landfill footprint of two (2) landfilled areas were determined using soil borings with the surveyed locations shown on Figure 1. The landfilled footprints generally lie within the area intended to be maintained as a golf course. The minimum thickness of cover material observed was approximately 1.5 feet. In most locations, the thickness of the cover material was 2 feet or greater. The cap material generally consists of silt and clay. No areas of exposed trash (other than yard waste and construction and demolition debris) were observed. No significant subsidence features or cap erosion were observed. Therefore, the redevelopment plans should provide for maintaining the integrity of the current cap. Utilities and other features that may disturb the cap should be minimized. If the cap is disturbed as part of construction activities, it should be replaced as quickly as possible.

The groundwater flow direction at the site is to the south and southeast, toward Beaverdam Creek.

The groundwater in MW-2 contained two (2) volatile organic compounds (VOCs) at concentrations slightly greater than the North Carolina groundwater standards and the US EPA drinking water standards; trichloroethene (TCE) and vinyl chloride. Vinyl chloride is likely a biological degradation product of the TCE. TCE was detected at a concentration of 31 ug/l compared to the standards of 2.8 ug/l and 5 ug/l. Vinyl chloride was detected at a concentration of 6.9 ug/l compared to the standards of 0.015 ug/l and 2 ug/l. No drinking water wells are located on the property or will be installed as part of the development. Therefore, no health risk associated with the ingestion of the groundwater is anticipated. It is recommended that the wells be resampled on a periodic basis to monitor the natural attenuation of these two constituents.

A total lead concentration greater than the North Carolina Groundwater standard was detected in MW-3. It is likely that the total lead concentration is elevated due to entrained sediment within the sample rather than being indicative of the dissolved lead concentration in the groundwater. Therefore, it is recommended that the periodic sampling indicated above include total and dissolved lead samples from MW-3 to further assess the nature and occurrence of the lead in the groundwater in the area.



LEGEND

- MW-01 MONITORING WELL LOCATION
- 1971.83 WATER LEVEL IN FEET (msl)
- SB-4B SOIL BORING LOCATION
- <1952 DEPTH TO ROCK NO WATER
- WATER LEVEL CONTOUR
- WATER LEVEL IN FEET (msl)
- GROUNDWATER FLOW DIRECTION

GENERAL GROUNDWATER FLOW DIRECTION BASED ON TOPOGRAPHY AND SOIL BORING DATA.

MONITORING WELL DATA

MONITORING WELL ID	GROUND ELEVATION (msl.)	MEASURING POINT (msl.)	WATER LEVEL (ft)	WATER ELEVATION (msl.)
MW-01	-	2012.78	5.21	2007.57
MW-02	-	2012.30	2.11	2010.19
MW-03	-	1994.84	14.68	1980.16
MW-04	-	1977.04	6.49	1970.55*

*INDICATES PERCHED WATER LEVEL IN WELL

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DATE: 01-14-04
DRAWN BY: JOHN CHASTAIN
PROJECT MANAGER: KATHY WEBB



FIGURE 2

WATER TABLE MAP - DECEMBER 22, 2003

ELK MOUNTAIN LANDFILL
BROWNFIELD ASSESSMENT
WOODFIN, NORTH CAROLINA

US HWY 19/23
TO ASHEVILLE
TO WEAVERVILLE

BEAVERDAM CREEK

1975 CREEK CHANNEL (APPROXIMATE)

C&D YARD WASTE PILES

ROCK OUTCROP

ELK MOUNTAIN COMMUNITY CEMETERY

MOBILE SOUTHERN RAILROAD

METROPOLITAN SEWERAGE DISTRICT

TWC LLC

COLEMAN DEVELOPMENT GROUP LLC

BUNCOMBE COUNTY

Table 1
Elk Mountain Landfill, Woodfin NC
Brownfields Assessment Boring Data Summary

Boring Number	Within Landfill Yes/No	Depth of cover / boring (ft)	Soil Sample Description
SB-1A	Yes	2 / 4	Silty Clay w/ Plastic & Paper
SB-1B	No	NA / 8 Refusal	Brown Silt
SB-2A	No	NA / 12	Silt & Saprolite
SB-2B	Yes	6 / 8	Silt w/ Plastic
SB-3A	Yes	6 / 12	Silt over discolored (blue) soil
SB-3B	No	NA / 3 Refusal	Saprolite
SB-4A	Yes	4 / 6.5	Silt over Plastic & Paper
SB-4B	No	NA / 5.5 Refusal	Saprolite
SB-5A	Yes	4 / 5 Refusal	Silt over Discolored soil & Plastic
SB-5B	No	NA / 8	Clay to Saprolite
SB-6	No	NA / 16	Silt to Clay
SB-7A	Yes	2 / 4	Silt w/ Discolored soil & Plastic
SB-7B	No	NA / 8	Clay to Saprolite
SB-8A	No	NA / 2.5 Refusal	Rock & soil
SB-8B	Yes	3 / 4	Silt w/ Plastic & Glass
SB-8C	No	NA / 4	Rock & soil
SB-9A	Yes	2 / 8 Refusal	Clay over Discolored soil & Plastic
SB-9B	No	NA / 8 Refusal	Silty clay
SB-10	Yes	12 / 12	Gray Black and Red soil w/ Aluminum
SB-11A	Yes	2 / 2 Refusal	Silt over Plastic
SB-11B	No	NA / 3 Refusal	Saprolite
SB-12A	Yes	2 / 4	Silty Clay over Plastic & Glass
SB-12B	No	NA / 13 Refusal	Clayey silt
SB-13	Yes	4 / 5 Refusal	Silt over Discolored soil
SB-14A	Yes	1.5 / 1.5 Refusal	Silt over Plastic
SB-14B	No	NA / 7 Refusal	Silt & clay
SB-15	No	NA / 3 Refusal	Saprolite
SB-16	Yes	8 / 15	Silt over Wood fragments & Plastic
SB-17A	Yes	4 / 8	Fill over trash
SB-17B	No	NA / 5	Saprolite

Table 1
Elk Mountain Landfill, Woodfin NC
Brownfields Assessment Boring Data Summary

Boring Number	Within Landfill Yes/No	Depth of cover / boring (ft)	Soil Sample Description
SB-18	No	NA / 4	Native soil
SB-19	No	NA / 4 Refusal	Brown Silt
SB-20A	Yes	3.5 / 4	Silty Clay over Plastic
SB-20B	No	NA / 8	Hard clay
SB-21A	Yes	2 / 2	Silty Clay over trash
SB-21B	Yes	0.5 / 4	Silty Clay over Plastic
SB-21C	No	NA / 4	Saprolite
SB-22A	No	NA / 12	Silty clay to saprolite
SB-22B	No	NA / 3 Refusal	Saprolite
SB-22C	Yes	2 / 4	Soil over Plastic
SB-23A	No	NA / 8	Saprolite
SB-23B	Yes	4 / 8	Discolored soil to saprolite
SB-24A	Yes	2 / 4 Refusal	Silt w/ Sour Odor
SB-24B	No	NA / 4	Saprolite
SB-25A	Yes	4.5 / 5.5	Silt over Plastic & Newspaper
SB-25B	No	NA / 4	Saprolite
SB-26A	Yes	4 / 12	Silt over Mulch & fill dirt
SB-26B	No	NA / 3 Refusal	Saprolite
SB-27A	Yes	2 / 4	Silt over Mulch & Discolored soil
SB-27B	No	NA / 4	Saprolite

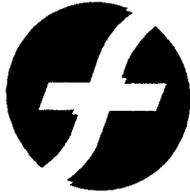
NF = Not Found

NA = Not Applicable

Table 2
Elk Mountain Landfill, Woodfin NC
Brownfields Assessment Groundwater Data Summary, December 2003

Well	Compound	Concentration Detected	NC	
			Groundwater Standard	Federal MCL
MW-1	cis-1,2-Dichloroethene	21 ug/L	70 ug/L	70 ug/L
	Copper	0.0090 mg/L	1.0 mg/L	(1.0 mg/L)
	Zinc	0.030 mg/L	2.1 mg/L	(5 mg/l)
MW-2	cis-1,2-Dichloroethene	51 ug/L	70 ug/L	70 ug/L
	Trichloroethene	31 ug/L	2.8 ug/L	5 ug/L
	Vinyl chloride	6.9 ug/L	0.015 ug/L	2 ug/L
	Phenol	24 ug/L	300 ug/L	NA
	Chromium	0.0069 mg/L	0.05 mg/L	0.10 mg/L
	Copper	0.0094 mg/L	1.0 mg/L	(1.0 mg/L)
MW-3	Chromium	0.016 mg/L	0.05 mg/L	0.10 mg/L
	Copper	0.018 mg/L	1.0 mg/L	1.0 mg/L
	Lead	0.075 mg/L	0.015 mg/L	(0.015 mg/L)
	Zinc	0.27 mg/L	2.1 mg/L	(5 mg/l)
MW-4	Copper	0.0060 mg/L	1.0 mg/L	(1.0 mg/L)

() Secondary MCL or treatment standard



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X Coordinate: 935670.67

Y Coordinate: 706788.55

Datum: MEAN SEA LEVEL

Measuring Point: 2012.78'

Borehole Dia.: 1.00in

Elevation: 2012.78'

Static Water Level: 5.21'

Conductor Casing:
 type: dia: 0.00in fm: 0.00' to: 0.00'

Blank Casing:
 type: dia: 1.00in fm: 0.0' to: 3.00'

Screens:
 type: Slotted size: 0.010in dia: 0.75in fm: 3.00' to: 7.00'

Annular Fill:
 type: Grout fm: 0.00' to: 1.00'
 type: Bentonite fm: 1.00' to: 2.00'
 type: Sand Pack (generic) fm: 2.00' to: 7.00'

Site Id: MW-01

Project Number:

Project Name: LAND OF SKY

Location: ELK MOUNTAIN LANDFILL

Date(s): 12/18/03 - 12/18/03

Logged By: KW

Consulting Firm: FGI

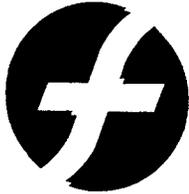
Contractor: PROBE TECHNOLOGY

Drilling Method: DIRECT PUSH

Permit No.: 2738

Remarks:

Elevation (ft)	Depth (ft)	Sample No.	Blow Count	USCS Code	Recovery	Graphic Log	Material Description	Well Construction MP. EL. 2012.78
2010							Refusal (Bedrock) at 7 feet.	
10								
2000								
20								
1990								
30								
1980								
40								
1970								
50								
1960								



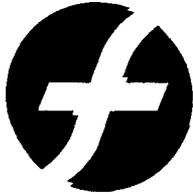
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X Coordinate: 935103.59	Y Coordinate: 706544.33
Datum: MEAN SEA LEVEL	Measuring Point: 2012.30'
Borehole Dia.: 1.00in	Elevation: 2012.30'
Static Water Level: 2.11'	
Conductor Casing: type: dia: 0.00in fm: 0.00' to: 0.00'	
Blank Casing: type: dia: 1.00in fm: 0.0' to: 7.00'	
Screens: type: Slotted size: 0.010in dia: 0.75in fm: 7.00' to: 17.00'	
Annular Fill: type: Grout fm: 0.00' to: 3.00' type: Bentonite fm: 3.00' to: 5.00' type: Sand Pack (generic) fm: 5.00' to: 17.00'	
Remarks:	

Site Id: MW-02	Project Number:
Project Name: LAND OF SKY	
Location: ELK MOUNTAIN LANDFILL	
Date(s): 12/18/03 - 12/18/03	Logged By: KW
Consulting Firm: FGI	Contractor: PROBE TECHNOLOGY
Drilling Method: DIRECT PUSH	Permit No.: 2738

Elevation (ft)	Depth (ft)	Sample No.	Blow Count	USCS Code	Recovery	Graphic Log	Material Description	Well Construction MP. EL. 2012.30
2010							Refusal (Bedrock) at 17 feet.	
1960	50							



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X Coordinate: 933845.94 Y Coordinate: 706630.51

Datum: MEAN SEA LEVEL Measuring Point: 1994.84'

Borehole Dia.: 1.00in Elevation: 1994.84'

Static Water Level: 14.68'

Conductor Casing:
 type: dia: 0.00in fm: 0.00' to: 0.00'

Blank Casing:
 type: dia: 1.00in fm: 0.0' to: 10.00'

Screens:
 type: Slotted size: 0.010in dia: 0.75in fm: 10.00' to: 20.00'

Annular Fill:
 type: Grout fm: 0.00' to: 6.00'
 type: Bentonite fm: 6.00' to: 8.00'
 type: Sand Pack (generic) fm: 8.00' to: 20.00'

Site Id: MW-03

Project Number:

Project Name: LAND OF SKY

Location: ELK MOUNTAIN LANDFILL

Date(s): 12/18/03 - 12/18/03

Logged By: KW

Consulting Firm: FGI

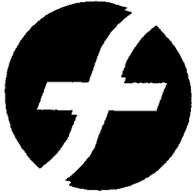
Contractor: PROBE TECHNOLOGY

Drilling Method: DIRECT PUSH

Permit No.: 2738

Remarks:

Elevation (ft)	Depth (ft)	Sample No.	Blow Count	USCS Code	Recovery	Graphic Log	Material Description	Well Construction MP. EL. 1994.84
1990	10						Refusal (Bedrock) at 20 feet.	
1980	20							
1970	30							
1960	40							
1950	50							
1940								



Fletcher Group

ENGINEERING & ENVIRONMENTAL SOLUTIONS
 148 River Street, Suite 220
 Greenville, South Carolina 29601
 864-421-9999
 www.fletchergroup.com

X Coordinate: 933350.30	Y Coordinate: 707495.26
Datum: MEAN SEA LEVEL	Measuring Point: 1977.04'
Borehole Dia.: 1.00in	Elevation: 1977.04'
Static Water Level: 6.49'	
Conductor Casing: type: dia: 0.00in fm: 0.00' to: 0.00'	
Blank Casing: type: dia: 1.00in fm: 0.0' to: 6.00'	
Screens: type: Slotted size: 0.010in dia: 0.75in fm: 6.00' to: 16.00'	
Annular Fill: type: Grout fm: 0.00' to: 3.00' type: Bentonite fm: 3.00' to: 5.00' type: Sand Pack (generic) fm: 5.00' to: 16.00'	
Remarks:	

Site Id: MW-04	Project Number:
Project Name: LAND OF SKY	
Location: ELK MOUNTAIN LANDFILL	
Date(s): 12/18/03 - 12/18/03	Logged By: KW
Consulting Firm: FGI	Contractor: PROBE TECHNOLOGY
Drilling Method: DIRECT PUSH	Permit No.: 2738

Elevation (ft)	Depth (ft)	Sample No.	Blow Count	USCS Code	Recovery	Graphic Log	Material Description	Well Construction MP. EL. 1977.04
1970	10						Soft to 16 feet, perched water present.	
1960	20						Refusal (Bedrock) at 20 feet, dry, no water at 20 feet.	
1950	30							
1940	40							
1930	50							
1920								

Report of Analysis

The Fletcher Group
INNOVATE
148 River Street, Suite 220
Greenville, SC 29601
Attention: Kathy Webb

REC'D JAN 13 2004

Project Name: **Land of Sky**
Project Number: ~~431.01~~ ^{731.01}
Lot Number: **EL23024**
Date Completed: **01/06/2004**


Lisa Cochran
Project Manager

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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.



SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

Case Narrative The Fletcher Group Lot Number: EL23024

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative.

Sample receipt, sample analysis, and data review have been performed in accordance with Shealy's Quality Assurance Management Plan and Standard Operating Procedures. Any data qualifiers associated with sample analysis are footnoted on the analytical results page(s) or are discussed below.

Sample Summary
The Fletcher Group
Lot Number: EL23024

<u>Sample Number</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>
001	MW-1	Aqueous	12/22/2003 1330
002	MW-2	Aqueous	12/22/2003 1505
003	MW-3	Aqueous	12/22/2003 1545
004	MW-4	Aqueous	12/22/2003 1645

(4 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

The Fletcher Group

Lot Number: EL23024

<u>Sample</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Q</u>	<u>Units</u>
001	MW-1	Aqueous	cis-1,2-Dichloroethene	8260B	21		ug/L
001	MW-1	Aqueous	None Detected	8260B			ug/L
001	MW-1	Aqueous		8270C	0.0		ug/L
001	MW-1	Aqueous	Copper	6010B	0.0090		mg/L
001	MW-1	Aqueous	Zinc	6010B	0.030		mg/L
002	MW-2	Aqueous	cis-1,2-Dichloroethene	8260B	51		ug/L
002	MW-2	Aqueous	Trichloroethene	8260B	31		ug/L
002	MW-2	Aqueous	Vinyl chloride	8260B	6.9		ug/L
002	MW-2	Aqueous	None Detected	8260B			ug/L
002	MW-2	Aqueous	None Detected	8270C			ug/L
002	MW-2	Aqueous	Phenol	8270C	24		ug/L
002	MW-2	Aqueous	Chromium	6010B	0.0069		mg/L
002	MW-2	Aqueous	Copper	6010B	0.0094		mg/L
003	MW-3	Aqueous	None Detected	8260B			ug/L
003	MW-3	Aqueous	None Detected	8270C			ug/L
003	MW-3	Aqueous	Chromium	6010B	0.016		mg/L
003	MW-3	Aqueous	Copper	6010B	0.018		mg/L
003	MW-3	Aqueous	Lead	6010B	0.075		mg/L
003	MW-3	Aqueous	Zinc	6010B	0.27		mg/L
004	MW-4	Aqueous	None Detected	8260B			ug/L
004	MW-4	Aqueous	None Detected	8270C			ug/L
004	MW-4	Aqueous	Copper	6010B	0.0060		mg/L

(22 detections)

Volatile Organic Compounds by GC/MS

Client: **The Fletcher Group**

Laboratory ID: **EL23024-001**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1330**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1717	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	21		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS (continued)

Client: The Fletcher Group

Laboratory ID: EL23024-001

Description: MW-1

Matrix: Aqueous

Date Sampled: 12/22/2003 1330

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1717	RED		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Library Search

Client: **The Fletcher Group**

Laboratory ID: **EL23024-001**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1330**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1717	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
None Detected		8260B				ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Library Search

Client: **The Fletcher Group**

Laboratory ID: **EL23024-001**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1330**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2236	DC		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
		8270C	0.0			ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS

Client: The Fletcher Group

Laboratory ID: EL23024-001

Description: MW-1

Matrix: Aqueous

Date Sampled: 12/22/2003 1330

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2236	DC	12/24/2003 1430	12793

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270C	ND		5.4	ug/L	1
Acenaphthylene	208-96-8	8270C	ND		5.4	ug/L	1
Anthracene	120-12-7	8270C	ND		5.4	ug/L	1
Benzo(a)anthracene	56-55-3	8270C	ND		5.4	ug/L	1
Benzo(a)pyrene	50-32-8	8270C	ND		5.4	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270C	ND		5.4	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270C	ND		5.4	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270C	ND		5.4	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270C	ND		5.4	ug/L	1
Butyl benzyl phthalate	85-68-7	8270C	ND		11	ug/L	1
Carbazole	86-74-8	8270C	ND		5.4	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270C	ND		5.4	ug/L	1
4-Chloroaniline	106-47-8	8270C	ND		5.4	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270C	ND		5.4	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270C	ND		5.4	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270C	ND		5.4	ug/L	1
2-Chloronaphthalene	91-58-7	8270C	ND		5.4	ug/L	1
2-Chlorophenol	95-57-8	8270C	ND		5.4	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270C	ND		5.4	ug/L	1
Chrysene	218-01-9	8270C	ND		5.4	ug/L	1
Di-n-butyl phthalate	84-74-2	8270C	ND		5.4	ug/L	1
Di-n-octylphthalate	117-84-0	8270C	ND		5.4	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270C	ND		5.4	ug/L	1
Dibenzofuran	132-64-9	8270C	ND		5.4	ug/L	1
1,2-Dichlorobenzene	95-50-1	8270C	ND		5.4	ug/L	1
1,3-Dichlorobenzene	541-73-1	8270C	ND		5.4	ug/L	1
1,4-Dichlorobenzene	106-46-7	8270C	ND		5.4	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270C	ND		27	ug/L	1
2,4-Dichlorophenol	120-83-2	8270C	ND		5.4	ug/L	1
Diethylphthalate	84-66-2	8270C	ND		5.4	ug/L	1
Dimethyl phthalate	131-11-3	8270C	ND		5.4	ug/L	1
2,4-Dimethylphenol	105-67-9	8270C	ND		5.4	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270C	ND		27	ug/L	1
2,4-Dinitrophenol	51-28-5	8270C	ND		27	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270C	ND		11	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270C	ND		11	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270C	ND		5.4	ug/L	1
Fluoranthene	206-44-0	8270C	ND		5.4	ug/L	1
Fluorene	86-73-7	8270C	ND		5.4	ug/L	1
Hexachlorobenzene	118-74-1	8270C	ND		5.4	ug/L	1
Hexachlorobutadiene	87-68-3	8270C	ND		5.4	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270C	ND		27	ug/L	1
Hexachloroethane	67-72-1	8270C	ND		5.4	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS (continued)

Client: **The Fletcher Group**

Laboratory ID: **EL23024-001**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1330**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2236	DC	12/24/2003 1430	12793

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Indeno(1,2,3-c,d)pyrene	193-39-5	8270C	ND		5.4	ug/L	1
Isophorone	78-59-1	8270C	ND		5.4	ug/L	1
2-Methylnaphthalene	91-57-6	8270C	ND		5.4	ug/L	1
2-Methylphenol	95-48-7	8270C	ND		5.4	ug/L	1
3 & 4-Methylphenol	106-44-5	8270C	ND		11	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270C	ND		5.4	ug/L	1
N-Nitrosodiphenylamine	86-30-6	8270C	ND		5.4	ug/L	1
Naphthalene	91-20-3	8270C	ND		5.4	ug/L	1
2-Nitroaniline	88-74-4	8270C	ND		11	ug/L	1
3-Nitroaniline	99-09-2	8270C	ND		11	ug/L	1
4-Nitroaniline	100-01-6	8270C	ND		11	ug/L	1
Nitrobenzene	98-95-3	8270C	ND		5.4	ug/L	1
2-Nitrophenol	88-75-5	8270C	ND		11	ug/L	1
4-Nitrophenol	100-02-7	8270C	ND		27	ug/L	1
Pentachlorophenol	87-86-5	8270C	ND		27	ug/L	1
Phenanthrene	85-01-8	8270C	ND		5.4	ug/L	1
Phenol	108-95-2	8270C	ND		5.4	ug/L	1
Pyrene	129-00-0	8270C	ND		5.4	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8270C	ND		5.4	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270C	ND		5.4	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270C	ND		5.4	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		77	30-130
2-Fluorobiphenyl		79	30-130
2-Fluorophenol		76	30-130
Nitrobenzene-d5		88	30-130
Phenol-d5		72	30-130
Terphenyl-d14		79	30-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

PCBs by GC

Client: **The Fletcher Group**

Laboratory ID: **EL23024-001**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1330**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8082	1	12/31/2003 1800	MTR	12/26/2003 1445	12808

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082	ND		0.26	ug/L	1
Aroclor 1221	11104-28-2	8082	ND		0.26	ug/L	1
Aroclor 1232	11141-16-5	8082	ND		0.26	ug/L	1
Aroclor 1242	53469-21-9	8082	ND		0.26	ug/L	1
Aroclor 1248	12672-29-6	8082	ND		0.26	ug/L	1
Aroclor 1254	11097-69-1	8082	ND		0.26	ug/L	1
Aroclor 1260	11096-82-5	8082	ND		0.26	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		50	10-110
Tetrachloro-m-xylene		80	30-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Organochlorine Pesticides by GC

Client: The Fletcher Group

Laboratory ID: EL23024-001

Description: MW-1

Matrix: Aqueous

Date Sampled: 12/22/2003 1330

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081A	1	01/02/2004 1403	MTR	12/26/2003 1445	12808

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aldrin	309-00-2	8081A	ND		0.026	ug/L	1
alpha-BHC	319-84-6	8081A	ND		0.026	ug/L	1
beta-BHC	319-85-7	8081A	ND		0.026	ug/L	1
delta-BHC	319-86-8	8081A	ND		0.026	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081A	ND		0.026	ug/L	1
alpha-Chlordane	5103-71-9	8081A	ND		0.026	ug/L	1
gamma-Chlordane	5103-74-2	8081A	ND		0.026	ug/L	1
4,4'-DDD	72-54-8	8081A	ND		0.026	ug/L	1
4,4'-DDE	72-55-9	8081A	ND		0.026	ug/L	1
4,4'-DDT	50-29-3	8081A	ND		0.026	ug/L	1
Dieldrin	60-57-1	8081A	ND		0.026	ug/L	1
Endosulfan I	959-98-8	8081A	ND		0.026	ug/L	1
Endosulfan II	33213-65-9	8081A	ND		0.026	ug/L	1
Endosulfan sulfate	1031-07-8	8081A	ND		0.026	ug/L	1
Endrin	72-20-8	8081A	ND		0.026	ug/L	1
Endrin aldehyde	7421-93-4	8081A	ND		0.026	ug/L	1
Endrin ketone	53494-70-50	8081A	ND		0.026	ug/L	1
Heptachlor	76-44-8	8081A	ND		0.026	ug/L	1
Heptachlor epoxide	1024-57-3	8081A	ND		0.026	ug/L	1
Methoxychlor	72-43-5	8081A	ND		0.10	ug/L	1
Toxaphene	8001-35-2	8081A	ND		0.26	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		56	10-110
Tetrachloro-m-xylene		81	30-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Metals

Client: **The Fletcher Group**

Laboratory ID: **EL23024-001**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1330**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	4	12/29/2003 1842	KM	12/29/2003 1139	12828
1	3005A	6010B	1	12/31/2003 1845	FTS	12/30/2003 1310	12845

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Antimony	7440-36-0	6010B	ND		0.0050	mg/L	1
Arsenic	7440-38-2	6010B	ND		0.0050	mg/L	1
Beryllium	7440-41-7	6010B	ND		0.0040	mg/L	1
Cadmium	7440-43-9	6010B	ND		0.0020	mg/L	1
Chromium	7440-47-3	6010B	ND		0.0050	mg/L	1
Copper	7440-50-8	6010B	0.0090		0.0050	mg/L	1
Lead	7439-92-1	6010B	ND		0.0030	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00040	mg/L	1
Nickel	7440-02-0	6010B	ND		0.040	mg/L	1
Selenium	7782-49-2	6010B	ND		0.0050	mg/L	1
Silver	7440-22-4	6010B	ND		0.0050	mg/L	1
Thallium	7440-28-0	6010B	ND		0.010	mg/L	1
Zinc	7440-66-6	6010B	0.030		0.020	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: The Fletcher Group

Laboratory ID: EL23024-002

Description: MW-2

Matrix: Aqueous

Date Sampled: 12/22/2003 1505

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1740	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoforn	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	51		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	31		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	6.9		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS (continued)

Client: The Fletcher Group

Laboratory ID: EL23024-002

Description: MW-2

Matrix: Aqueous

Date Sampled: 12/22/2003 1505

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1740	RED		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Library Search

Client: **The Fletcher Group**

Laboratory ID: **EL23024-002**

Description: **MW-2**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1505**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1740	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
None Detected		8260B				ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Library Search

Client: The Fletcher Group

Laboratory ID: EL23024-002

Description: MW-2

Matrix: Aqueous

Date Sampled: 12/22/2003 1505

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2303	DC		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
None Detected		8270C				ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS

Client: The Fletcher Group

Laboratory ID: EL23024-002

Description: MW-2

Matrix: Aqueous

Date Sampled: 12/22/2003 1505

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2303	DC	12/24/2003 1430	12793

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270C	ND		5.3	ug/L	1
Acenaphthylene	208-96-8	8270C	ND		5.3	ug/L	1
Anthracene	120-12-7	8270C	ND		5.3	ug/L	1
Benzo(a)anthracene	56-55-3	8270C	ND		5.3	ug/L	1
Benzo(a)pyrene	50-32-8	8270C	ND		5.3	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270C	ND		5.3	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270C	ND		5.3	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270C	ND		5.3	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270C	ND		5.3	ug/L	1
Butyl benzyl phthalate	85-68-7	8270C	ND		11	ug/L	1
Carbazole	86-74-8	8270C	ND		5.3	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270C	ND		5.3	ug/L	1
4-Chloroaniline	106-47-8	8270C	ND		5.3	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270C	ND		5.3	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270C	ND		5.3	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270C	ND		5.3	ug/L	1
2-Chloronaphthalene	91-58-7	8270C	ND		5.3	ug/L	1
2-Chlorophenol	95-57-8	8270C	ND		5.3	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270C	ND		5.3	ug/L	1
Chrysene	218-01-9	8270C	ND		5.3	ug/L	1
Di-n-butyl phthalate	84-74-2	8270C	ND		5.3	ug/L	1
Di-n-octylphthalate	117-84-0	8270C	ND		5.3	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270C	ND		5.3	ug/L	1
Dibenzofuran	132-64-9	8270C	ND		5.3	ug/L	1
1,2-Dichlorobenzene	95-50-1	8270C	ND		5.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8270C	ND		5.3	ug/L	1
1,4-Dichlorobenzene	106-46-7	8270C	ND		5.3	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270C	ND		26	ug/L	1
2,4-Dichlorophenol	120-83-2	8270C	ND		5.3	ug/L	1
Diethylphthalate	84-66-2	8270C	ND		5.3	ug/L	1
Dimethyl phthalate	131-11-3	8270C	ND		5.3	ug/L	1
2,4-Dimethylphenol	105-67-9	8270C	ND		5.3	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270C	ND		26	ug/L	1
2,4-Dinitrophenol	51-28-5	8270C	ND		26	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270C	ND		11	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270C	ND		11	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270C	ND		5.3	ug/L	1
Fluoranthene	206-44-0	8270C	ND		5.3	ug/L	1
Fluorene	86-73-7	8270C	ND		5.3	ug/L	1
Hexachlorobenzene	118-74-1	8270C	ND		5.3	ug/L	1
Hexachlorobutadiene	87-68-3	8270C	ND		5.3	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270C	ND		26	ug/L	1
Hexachloroethane	67-72-1	8270C	ND		5.3	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS (continued)

Client: The Fletcher Group

Laboratory ID: EL23024-002

Description: MW-2

Matrix: Aqueous

Date Sampled: 12/22/2003 1505

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2303	DC	12/24/2003 1430	12793

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Indeno(1,2,3-c,d)pyrene	193-39-5	8270C	ND		5.3	ug/L	1
Isophorone	78-59-1	8270C	ND		5.3	ug/L	1
2-Methylnaphthalene	91-57-6	8270C	ND		5.3	ug/L	1
2-Methylphenol	95-48-7	8270C	ND		5.3	ug/L	1
3 & 4-Methylphenol	106-44-5	8270C	ND		11	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270C	ND		5.3	ug/L	1
N-Nitrosodiphenylamine	86-30-6	8270C	ND		5.3	ug/L	1
Naphthalene	91-20-3	8270C	ND		5.3	ug/L	1
2-Nitroaniline	88-74-4	8270C	ND		11	ug/L	1
3-Nitroaniline	99-09-2	8270C	ND		11	ug/L	1
4-Nitroaniline	100-01-6	8270C	ND		11	ug/L	1
Nitrobenzene	98-95-3	8270C	ND		5.3	ug/L	1
2-Nitrophenol	88-75-5	8270C	ND		11	ug/L	1
4-Nitrophenol	100-02-7	8270C	ND		26	ug/L	1
Pentachlorophenol	87-86-5	8270C	ND		26	ug/L	1
Phenanthrene	85-01-8	8270C	ND		5.3	ug/L	1
Phenol	108-95-2	8270C	24		5.3	ug/L	1
Pyrene	129-00-0	8270C	ND		5.3	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8270C	ND		5.3	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270C	ND		5.3	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270C	ND		5.3	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		90	30-130
2-Fluorobiphenyl		79	30-130
2-Fluorophenol		74	30-130
Nitrobenzene-d5		83	30-130
Phenol-d5		82	30-130
Terphenyl-d14		81	30-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

PCBs by GC

Client: **The Fletcher Group**

Laboratory ID: **EL23024-002**

Description: **MW-2**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1505**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8082	1	12/31/2003 1813	MTR	12/26/2003 1445	12808

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082	ND		0.27	ug/L	1
Aroclor 1221	11104-28-2	8082	ND		0.27	ug/L	1
Aroclor 1232	11141-16-5	8082	ND		0.27	ug/L	1
Aroclor 1242	53469-21-9	8082	ND		0.27	ug/L	1
Aroclor 1248	12672-29-6	8082	ND		0.27	ug/L	1
Aroclor 1254	11097-69-1	8082	ND		0.27	ug/L	1
Aroclor 1260	11096-82-5	8082	ND		0.27	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		0.0	10-110
Tetrachloro-m-xylene		70	30-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Organochlorine Pesticides by GC

Client: **The Fletcher Group**

Laboratory ID: **EL23024-002**

Description: **MW-2**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1505**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081A	1	01/02/2004 1415	MTR	12/26/2003 1445	12808

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aldrin	309-00-2	8081A	ND		0.027	ug/L	1
alpha-BHC	319-84-6	8081A	ND		0.027	ug/L	1
beta-BHC	319-85-7	8081A	ND		0.027	ug/L	1
delta-BHC	319-86-8	8081A	ND		0.027	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081A	ND		0.027	ug/L	1
alpha-Chlordane	5103-71-9	8081A	ND		0.027	ug/L	1
gamma-Chlordane	5103-74-2	8081A	ND		0.027	ug/L	1
4,4'-DDD	72-54-8	8081A	ND		0.027	ug/L	1
4,4'-DDE	72-55-9	8081A	ND		0.027	ug/L	1
4,4'-DDT	50-29-3	8081A	ND		0.027	ug/L	1
Dieldrin	60-57-1	8081A	ND		0.027	ug/L	1
Endosulfan I	959-98-8	8081A	ND		0.027	ug/L	1
Endosulfan II	33213-65-9	8081A	ND		0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081A	ND		0.027	ug/L	1
Endrin	72-20-8	8081A	ND		0.027	ug/L	1
Endrin aldehyde	7421-93-4	8081A	ND		0.027	ug/L	1
Endrin ketone	53494-70-50	8081A	ND		0.027	ug/L	1
Heptachlor	76-44-8	8081A	ND		0.027	ug/L	1
Heptachlor epoxide	1024-57-3	8081A	ND		0.027	ug/L	1
Methoxychlor	72-43-5	8081A	ND		0.11	ug/L	1
Toxaphene	8001-35-2	8081A	ND		0.27	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		5.7	10-110
Tetrachloro-m-xylene		66	30-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Metals

Client: **The Fletcher Group**

Laboratory ID: **EL23024-002**

Description: **MW-2**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1505**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/29/2003 1843	KM	12/29/2003 1139	12828
1	3005A	6010B	1	12/31/2003 1851	FTS	12/30/2003 1310	12845

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Antimony	7440-36-0	6010B	ND		0.0050	mg/L	1
Arsenic	7440-38-2	6010B	ND		0.0050	mg/L	1
Beryllium	7440-41-7	6010B	ND		0.0040	mg/L	1
Cadmium	7440-43-9	6010B	ND		0.0020	mg/L	1
Chromium	7440-47-3	6010B	0.0069		0.0050	mg/L	1
Copper	7440-50-8	6010B	0.0094		0.0050	mg/L	1
Lead	7439-92-1	6010B	ND		0.0030	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00010	mg/L	1
Nickel	7440-02-0	6010B	ND		0.040	mg/L	1
Selenium	7782-49-2	6010B	ND		0.0050	mg/L	1
Silver	7440-22-4	6010B	ND		0.0050	mg/L	1
Thallium	7440-28-0	6010B	ND		0.010	mg/L	1
Zinc	7440-66-6	6010B	ND		0.020	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **The Fletcher Group**

Laboratory ID: **EL23024-003**

Description: **MW-3**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1545**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1802	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS (continued)

Client: The Fletcher Group

Laboratory ID: EL23024-003

Description: MW-3

Matrix: Aqueous

Date Sampled: 12/22/2003 1545

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1802	RED		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Library Search

Client: **The Fletcher Group**

Laboratory ID: **EL23024-003**

Description: **MW-3**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1545**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1802	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
None Detected		8260B				ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Library Search

Client: The Fletcher Group

Laboratory ID: EL23024-003

Description: MW-3

Matrix: Aqueous

Date Sampled: 12/22/2003 1545

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2330	DC		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
None Detected		8270C				ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS

Client: **The Fletcher Group**

Laboratory ID: **EL23024-003**

Description: **MW-3**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1545**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2330	DC	12/24/2003 1430	12793

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270C	ND		5.3	ug/L	1
Acenaphthylene	208-96-8	8270C	ND		5.3	ug/L	1
Anthracene	120-12-7	8270C	ND		5.3	ug/L	1
Benzo(a)anthracene	56-55-3	8270C	ND		5.3	ug/L	1
Benzo(a)pyrene	50-32-8	8270C	ND		5.3	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270C	ND		5.3	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270C	ND		5.3	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270C	ND		5.3	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270C	ND		5.3	ug/L	1
Butyl benzyl phthalate	85-68-7	8270C	ND		10	ug/L	1
Carbazole	86-74-8	8270C	ND		5.3	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270C	ND		5.3	ug/L	1
4-Chloroaniline	106-47-8	8270C	ND		5.3	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270C	ND		5.3	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270C	ND		5.3	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270C	ND		5.3	ug/L	1
2-Chloronaphthalene	91-58-7	8270C	ND		5.3	ug/L	1
2-Chlorophenol	95-57-8	8270C	ND		5.3	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270C	ND		5.3	ug/L	1
Chrysene	218-01-9	8270C	ND		5.3	ug/L	1
Di-n-butyl phthalate	84-74-2	8270C	ND		5.3	ug/L	1
Di-n-octylphthalate	117-84-0	8270C	ND		5.3	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270C	ND		5.3	ug/L	1
Dibenzofuran	132-64-9	8270C	ND		5.3	ug/L	1
1,2-Dichlorobenzene	95-50-1	8270C	ND		5.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8270C	ND		5.3	ug/L	1
1,4-Dichlorobenzene	106-46-7	8270C	ND		5.3	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270C	ND		26	ug/L	1
2,4-Dichlorophenol	120-83-2	8270C	ND		5.3	ug/L	1
Diethylphthalate	84-66-2	8270C	ND		5.3	ug/L	1
Dimethyl phthalate	131-11-3	8270C	ND		5.3	ug/L	1
2,4-Dimethylphenol	105-67-9	8270C	ND		5.3	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270C	ND		26	ug/L	1
2,4-Dinitrophenol	51-28-5	8270C	ND		26	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270C	ND		10	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270C	ND		10	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270C	ND		5.3	ug/L	1
Fluoranthene	206-44-0	8270C	ND		5.3	ug/L	1
Fluorene	86-73-7	8270C	ND		5.3	ug/L	1
Hexachlorobenzene	118-74-1	8270C	ND		5.3	ug/L	1
Hexachlorobutadiene	87-68-3	8270C	ND		5.3	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270C	ND		26	ug/L	1
Hexachloroethane	67-72-1	8270C	ND		5.3	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS (continued)

Client: The Fletcher Group

Laboratory ID: EL23024-003

Description: MW-3

Matrix: Aqueous

Date Sampled: 12/22/2003 1545

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2330	DC	12/24/2003 1430	12793

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Indeno(1,2,3-c,d)pyrene	193-39-5	8270C	ND		5.3	ug/L	1
Isophorone	78-59-1	8270C	ND		5.3	ug/L	1
2-Methylnaphthalene	91-57-6	8270C	ND		5.3	ug/L	1
2-Methylphenol	95-48-7	8270C	ND		5.3	ug/L	1
3 & 4-Methylphenol	106-44-5	8270C	ND		10	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270C	ND		5.3	ug/L	1
N-Nitrosodiphenylamine	86-30-6	8270C	ND		5.3	ug/L	1
Naphthalene	91-20-3	8270C	ND		5.3	ug/L	1
2-Nitroaniline	88-74-4	8270C	ND		10	ug/L	1
3-Nitroaniline	99-09-2	8270C	ND		10	ug/L	1
4-Nitroaniline	100-01-6	8270C	ND		10	ug/L	1
Nitrobenzene	98-95-3	8270C	ND		5.3	ug/L	1
2-Nitrophenol	88-75-5	8270C	ND		10	ug/L	1
4-Nitrophenol	100-02-7	8270C	ND		26	ug/L	1
Pentachlorophenol	87-86-5	8270C	ND		26	ug/L	1
Phenanthrene	85-01-8	8270C	ND		5.3	ug/L	1
Phenol	108-95-2	8270C	ND		5.3	ug/L	1
Pyrene	129-00-0	8270C	ND		5.3	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8270C	ND		5.3	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270C	ND		5.3	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270C	ND		5.3	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		83	30-130
2-Fluorobiphenyl		74	30-130
2-Fluorophenol		76	30-130
Nitrobenzene-d5		86	30-130
Phenol-d5		68	30-130
Terphenyl-d14		41	30-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

PCBs by GC

Client: **The Fletcher Group**

Laboratory ID: **EL23024-003**

Description: **MW-3**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1545**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8082	1	12/31/2003 1826	MTR	12/26/2003 1445	12808

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082	ND		0.26	ug/L	1
Aroclor 1221	11104-28-2	8082	ND		0.26	ug/L	1
Aroclor 1232	11141-16-5	8082	ND		0.26	ug/L	1
Aroclor 1242	53469-21-9	8082	ND		0.26	ug/L	1
Aroclor 1248	12672-29-6	8082	ND		0.26	ug/L	1
Aroclor 1254	11097-69-1	8082	ND		0.26	ug/L	1
Aroclor 1260	11096-82-5	8082	ND		0.26	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		11	10-110
Tetrachloro-m-xylene		61	30-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Organochlorine Pesticides by GC

Client: **The Fletcher Group**

Laboratory ID: **EL23024-003**

Description: **MW-3**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1545**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081A	1	01/02/2004 1427	MTR	12/26/2003 1445	12808

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aldrin	309-00-2	8081A	ND		0.026	ug/L	1
alpha-BHC	319-84-6	8081A	ND		0.026	ug/L	1
beta-BHC	319-85-7	8081A	ND		0.026	ug/L	1
delta-BHC	319-86-8	8081A	ND		0.026	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081A	ND		0.026	ug/L	1
alpha-Chlordane	5103-71-9	8081A	ND		0.026	ug/L	1
gamma-Chlordane	5103-74-2	8081A	ND		0.026	ug/L	1
4,4'-DDD	72-54-8	8081A	ND		0.026	ug/L	1
4,4'-DDE	72-55-9	8081A	ND		0.026	ug/L	1
4,4'-DDT	50-29-3	8081A	ND		0.026	ug/L	1
Dieldrin	60-57-1	8081A	ND		0.026	ug/L	1
Endosulfan I	959-98-8	8081A	ND		0.026	ug/L	1
Endosulfan II	33213-65-9	8081A	ND		0.026	ug/L	1
Endosulfan sulfate	1031-07-8	8081A	ND		0.026	ug/L	1
Endrin	72-20-8	8081A	ND		0.026	ug/L	1
Endrin aldehyde	7421-93-4	8081A	ND		0.026	ug/L	1
Endrin ketone	53494-70-50	8081A	ND		0.026	ug/L	1
Heptachlor	76-44-8	8081A	ND		0.026	ug/L	1
Heptachlor epoxide	1024-57-3	8081A	ND		0.026	ug/L	1
Methoxychlor	72-43-5	8081A	ND		0.11	ug/L	1
Toxaphene	8001-35-2	8081A	ND		0.26	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		12	10-110
Tetrachloro-m-xylene		58	30-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Metals

Client: **The Fletcher Group**

Laboratory ID: **EL23024-003**

Description: **MW-3**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1545**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	4	12/29/2003 1846	KM	12/29/2003 1139	12828
1	3005A	6010B	1	12/31/2003 1857	FTS	12/30/2003 1310	12845
2	3005A	6010B	1	01/05/2004 1255	FTS	12/30/2003 1310	12845

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Antimony	7440-36-0	6010B	ND		0.0050	mg/L	1
Arsenic	7440-38-2	6010B	ND		0.0050	mg/L	2
Beryllium	7440-41-7	6010B	ND		0.0040	mg/L	1
Cadmium	7440-43-9	6010B	ND		0.0020	mg/L	1
Chromium	7440-47-3	6010B	0.016		0.0050	mg/L	1
Copper	7440-50-8	6010B	0.018		0.0050	mg/L	1
Lead	7439-92-1	6010B	0.075		0.0030	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00040	mg/L	1
Nickel	7440-02-0	6010B	ND		0.040	mg/L	1
Selenium	7782-49-2	6010B	ND		0.0050	mg/L	1
Silver	7440-22-4	6010B	ND		0.0050	mg/L	1
Thallium	7440-28-0	6010B	ND		0.010	mg/L	1
Zinc	7440-66-6	6010B	0.27		0.020	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **The Fletcher Group**

Laboratory ID: **EL23024-004**

Description: **MW-4**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1645**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1825	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS (continued)

Client: The Fletcher Group

Laboratory ID: EL23024-004

Description: MW-4

Matrix: Aqueous

Date Sampled: 12/22/2003 1645

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1825	RED		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Library Search

Client: The Fletcher Group

Laboratory ID: EL23024-004

Description: MW-4

Matrix: Aqueous

Date Sampled: 12/22/2003 1645

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2003 1825	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
None Detected		8260B				ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Library Search

Client: The Fletcher Group

Laboratory ID: EL23024-004

Description: MW-4

Matrix: Aqueous

Date Sampled: 12/22/2003 1645

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2358	DC		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
None Detected		8270C				ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS

Client: **The Fletcher Group**

Laboratory ID: **EL23024-004**

Description: **MW-4**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1645**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2358	DC	12/24/2003 1430	12793

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270C	ND		5.3	ug/L	1
Acenaphthylene	208-96-8	8270C	ND		5.3	ug/L	1
Anthracene	120-12-7	8270C	ND		5.3	ug/L	1
Benzo(a)anthracene	56-55-3	8270C	ND		5.3	ug/L	1
Benzo(a)pyrene	50-32-8	8270C	ND		5.3	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270C	ND		5.3	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270C	ND		5.3	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270C	ND		5.3	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270C	ND		5.3	ug/L	1
Butyl benzyl phthalate	85-68-7	8270C	ND		11	ug/L	1
Carbazole	86-74-8	8270C	ND		5.3	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270C	ND		5.3	ug/L	1
4-Chloroaniline	106-47-8	8270C	ND		5.3	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270C	ND		5.3	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270C	ND		5.3	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270C	ND		5.3	ug/L	1
2-Chloronaphthalene	91-58-7	8270C	ND		5.3	ug/L	1
2-Chlorophenol	95-57-8	8270C	ND		5.3	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270C	ND		5.3	ug/L	1
Chrysene	218-01-9	8270C	ND		5.3	ug/L	1
Di-n-butyl phthalate	84-74-2	8270C	ND		5.3	ug/L	1
Di-n-octylphthalate	117-84-0	8270C	ND		5.3	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270C	ND		5.3	ug/L	1
Dibenzofuran	132-64-9	8270C	ND		5.3	ug/L	1
1,2-Dichlorobenzene	95-50-1	8270C	ND		5.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8270C	ND		5.3	ug/L	1
1,4-Dichlorobenzene	106-46-7	8270C	ND		5.3	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270C	ND		26	ug/L	1
2,4-Dichlorophenol	120-83-2	8270C	ND		5.3	ug/L	1
Diethylphthalate	84-66-2	8270C	ND		5.3	ug/L	1
Dimethyl phthalate	131-11-3	8270C	ND		5.3	ug/L	1
2,4-Dimethylphenol	105-67-9	8270C	ND		5.3	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270C	ND		26	ug/L	1
2,4-Dinitrophenol	51-28-5	8270C	ND		26	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270C	ND		11	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270C	ND		11	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270C	ND		5.3	ug/L	1
Fluoranthene	206-44-0	8270C	ND		5.3	ug/L	1
Fluorene	86-73-7	8270C	ND		5.3	ug/L	1
Hexachlorobenzene	118-74-1	8270C	ND		5.3	ug/L	1
Hexachlorobutadiene	87-68-3	8270C	ND		5.3	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270C	ND		26	ug/L	1
Hexachloroethane	67-72-1	8270C	ND		5.3	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS (continued)

Client: The Fletcher Group

Laboratory ID: EL23024-004

Description: MW-4

Matrix: Aqueous

Date Sampled: 12/22/2003 1645

Date Received: 12/23/2003

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	12/31/2003 2358	DC	12/24/2003 1430	12793

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Indeno(1,2,3-c,d)pyrene	193-39-5	8270C	ND		5.3	ug/L	1
Isophorone	78-59-1	8270C	ND		5.3	ug/L	1
2-Methylnaphthalene	91-57-6	8270C	ND		5.3	ug/L	1
2-Methylphenol	95-48-7	8270C	ND		5.3	ug/L	1
3 & 4-Methylphenol	106-44-5	8270C	ND		11	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270C	ND		5.3	ug/L	1
N-Nitrosodiphenylamine	86-30-6	8270C	ND		5.3	ug/L	1
Naphthalene	91-20-3	8270C	ND		5.3	ug/L	1
2-Nitroaniline	88-74-4	8270C	ND		11	ug/L	1
3-Nitroaniline	99-09-2	8270C	ND		11	ug/L	1
4-Nitroaniline	100-01-6	8270C	ND		11	ug/L	1
Nitrobenzene	98-95-3	8270C	ND		5.3	ug/L	1
2-Nitrophenol	88-75-5	8270C	ND		11	ug/L	1
4-Nitrophenol	100-02-7	8270C	ND		26	ug/L	1
Pentachlorophenol	87-86-5	8270C	ND		26	ug/L	1
Phenanthrene	85-01-8	8270C	ND		5.3	ug/L	1
Phenol	108-95-2	8270C	ND		5.3	ug/L	1
Pyrene	129-00-0	8270C	ND		5.3	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8270C	ND		5.3	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270C	ND		5.3	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270C	ND		5.3	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		88	30-130
2-Fluorobiphenyl		89	30-130
2-Fluorophenol		74	30-130
Nitrobenzene-d5		92	30-130
Phenol-d5		83	30-130
Terphenyl-d14		64	30-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

PCBs by GC

Client: **The Fletcher Group**

Laboratory ID: **EL23024-004**

Description: **MW-4**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1645**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8082	1	12/31/2003 1839	MTR	12/26/2003 1445	12808

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082	ND		0.26	ug/L	1
Aroclor 1221	11104-28-2	8082	ND		0.26	ug/L	1
Aroclor 1232	11141-16-5	8082	ND		0.26	ug/L	1
Aroclor 1242	53469-21-9	8082	ND		0.26	ug/L	1
Aroclor 1248	12672-29-6	8082	ND		0.26	ug/L	1
Aroclor 1254	11097-69-1	8082	ND		0.26	ug/L	1
Aroclor 1260	11096-82-5	8082	ND		0.26	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		0.0	10-110
Tetrachloro-m-xylene		67	30-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Organochlorine Pesticides by GC

Client: **The Fletcher Group**

Laboratory ID: **EL23024-004**

Description: **MW-4**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1645**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081A	1	01/02/2004 1439	MTR	12/26/2003 1445	12808

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aldrin	309-00-2	8081A	ND		0.026	ug/L	1
alpha-BHC	319-84-6	8081A	ND		0.026	ug/L	1
beta-BHC	319-85-7	8081A	ND		0.026	ug/L	1
delta-BHC	319-86-8	8081A	ND		0.026	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081A	ND		0.026	ug/L	1
alpha-Chlordane	5103-71-9	8081A	ND		0.026	ug/L	1
gamma-Chlordane	5103-74-2	8081A	ND		0.026	ug/L	1
4,4'-DDD	72-54-8	8081A	ND		0.026	ug/L	1
4,4'-DDE	72-55-9	8081A	ND		0.026	ug/L	1
4,4'-DDT	50-29-3	8081A	ND		0.026	ug/L	1
Dieldrin	60-57-1	8081A	ND		0.026	ug/L	1
Endosulfan I	959-98-8	8081A	ND		0.026	ug/L	1
Endosulfan II	33213-65-9	8081A	ND		0.026	ug/L	1
Endosulfan sulfate	1031-07-8	8081A	ND		0.026	ug/L	1
Endrin	72-20-8	8081A	ND		0.026	ug/L	1
Endrin aldehyde	7421-93-4	8081A	ND		0.026	ug/L	1
Endrin ketone	53494-70-50	8081A	ND		0.026	ug/L	1
Heptachlor	76-44-8	8081A	ND		0.026	ug/L	1
Heptachlor epoxide	1024-57-3	8081A	ND		0.026	ug/L	1
Methoxychlor	72-43-5	8081A	ND		0.10	ug/L	1
Toxaphene	8001-35-2	8081A	ND		0.26	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		0.0	10-110
Tetrachloro-m-xylene		66	30-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Metals

Client: **The Fletcher Group**

Laboratory ID: **EL23024-004**

Description: **MW-4**

Matrix: **Aqueous**

Date Sampled: **12/22/2003 1645**

Date Received: **12/23/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/29/2003 1848	KM	12/29/2003 1139	12828
1	3005A	6010B	1	12/31/2003 1903	FTS	12/30/2003 1310	12845
2	3005A	6010B	1	01/05/2004 1301	FTS	12/30/2003 1310	12845

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Antimony	7440-36-0	6010B	ND		0.0050	mg/L	1
Arsenic	7440-38-2	6010B	ND		0.0050	mg/L	1
Beryllium	7440-41-7	6010B	ND		0.0040	mg/L	1
Cadmium	7440-43-9	6010B	ND		0.0020	mg/L	1
Chromium	7440-47-3	6010B	ND		0.0050	mg/L	1
Copper	7440-50-8	6010B	0.0060		0.0050	mg/L	1
Lead	7439-92-1	6010B	ND		0.0030	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00010	mg/L	1
Nickel	7440-02-0	6010B	ND		0.040	mg/L	1
Selenium	7782-49-2	6010B	ND		0.0050	mg/L	2
Silver	7440-22-4	6010B	ND		0.0050	mg/L	1
Thallium	7440-28-0	6010B	ND		0.010	mg/L	1
Zinc	7440-66-6	6010B	ND		0.020	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BLK1229

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 6DEC2903

Matrix: (soil/water) WATER

Lab Sample ID: BLK1229

Sample wt/vol: _____ (g/mL) ML

Lab File ID: BLK1229A

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 12/29/03

GC Column: RTX-624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

75-71-8-----	Dichlorodifluoromethane	5.000	U
74-87-3-----	Chloromethane	5.000	U
75-01-4-----	Vinyl chloride	2.000	U
74-83-9-----	Bromomethane	5.000	U
75-00-3-----	Chloroethane	5.000	U
75-69-4-----	Trichlorofluoromethane	5.000	U
107-02-8-----	Acrolein	50.000	U
75-35-4-----	1,1-Dichloroethene	5.000	U
75-09-2-----	Methylene chloride	5.000	U
107-13-1-----	Acrylonitrile	50.000	U
1634-04-4-----	tert-Butyl methyl ether (MTBE)	5.000	U
156-60-5-----	trans-1,2-Dichloroethene	5.000	U
75-34-3-----	1,1-Dichloroethane	5.000	U
78-93-3-----	2-Butanone (MEK)	10.000	U
67-66-3-----	Chloroform	5.000	U
74-97-5-----	Bromochloromethane	5.000	U
71-55-6-----	1,1,1-Trichloroethane	5.000	U
56-23-5-----	Carbon tetrachloride	5.000	U
107-06-2-----	1,2-Dichloroethane	5.000	U
71-43-2-----	Benzene	5.000	U
79-01-6-----	Trichloroethene	5.000	U
78-87-5-----	1,2-Dichloropropane	5.000	U
75-27-4-----	Bromodichloromethane	5.000	U
110-75-8-----	2-Chloroethylvinyl ether	10.000	U
10061-01-5-----	cis-1,3-Dichloropropene	5.000	U
108-88-3-----	Toluene	5.000	U
10061-02-6-----	trans-1,3-Dichloropropene	5.000	U
79-00-5-----	1,1,2-Trichloroethane	5.000	U
127-18-4-----	Tetrachloroethene	5.000	U
124-48-1-----	Dibromochloromethane	5.000	U
106-93-4-----	1,2-Dibromoethane (EDB)	5.000	U
108-90-7-----	Chlorobenzene	5.000	U
100-41-4-----	Ethylbenzene	5.000	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BLK1229

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 6DEC2903

Matrix: (soil/water) WATER

Lab Sample ID: BLK1229

Sample wt/vol: _____ (g/mL) ML

Lab File ID: BLK1229A

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 12/29/03

GC Column: RTX-624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

108-38-3-----m+p-Xylenes	5.000	U
95-47-6-----o-Xylene	5.000	U
75-25-2-----Bromoform	5.000	U
79-34-5-----1,1,2,2-Tetrachloroethane	5.000	U
541-73-1-----1,3-Dichlorobenzene	5.000	U
106-46-7-----1,4-Dichlorobenzene	5.000	U
95-50-1-----1,2-Dichlorobenzene	5.000	U
91-20-3-----Naphthalene	5.000	U
67-64-1-----Acetone	20.000	U
75-05-8-----Acetonitrile	50.000	U
74-88-4-----Methyl iodide	5.000	U
75-15-0-----Carbon disulfide	5.000	U
107-05-1-----Allyl chloride	5.000	U
108-05-4-----Vinyl acetate	5.000	U
107-12-0-----Propionitrile	50.000	U
156-59-2-----cis-1,2-Dichloroethene	5.000	U
126-98-7-----Methacrylonitrile	5.000	U
80-62-6-----Methyl methacrylate	5.000	U
74-95-3-----Dibromomethane	5.000	U
108-10-1-----4-Methyl-2-pentanone	10.000	U
97-63-2-----Ethyl methacrylate	5.000	U
591-78-6-----2-Hexanone	10.000	U
630-20-6-----1,1,1,2-Tetrachloroethane	5.000	U
100-42-5-----Styrene	5.000	U
96-18-4-----1,2,3-Trichloropropane	5.000	U
110-57-6-----trans-1,4-Dichloro-2-butene	5.000	U
100-44-7-----Benzyl chloride	5.000	U
96-12-8-----1,2-Dibromo-3-chloropropane	5.000	U
78-83-1-----Isobutyl alcohol	50.000	U
95-63-6-----1,2,4-Trimethylbenzene	5.000	U
108-67-8-----1,3,5-Trimethylbenzene	5.000	U
108-20-3-----Diisopropyl ether (IPE)	5.000	U
123-91-1-----1,4-Dioxane	250.000	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BLK1229

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 6DEC2903

Matrix: (soil/water) WATER

Lab Sample ID: BLK1229

Sample wt/vol: _____ (g/mL) ML

Lab File ID: BLK1229A

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 12/29/03

GC Column: RTX-624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

563-58-6-----	1,1-Dichloropropene	5.000	U
142-28-9-----	1,3-Dichloropropane	5.000	U
594-20-7-----	2,2-Dichloropropane	5.000	U
1330-20-7-----	Xylenes (total)	5.000	U

FORM I VOA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 6DEC2903

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 (BFB) #	OTHER	TOT OUT
	=====	=====	=====	=====	=====	=====
01	BLK1229LCS	108	103	108		0
02	BLK1229LCSD	106	101	107		0
03	BLK1229	102	97	101		0
04						
05						
06						
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28						

QC LIMITS

SMC1 (DCE) = 1,2-Dichloroethane-d4 (70-130)

SMC2 (TOL) = Toluene-d8 (70-130)

SMC3 (BFB) = Bromofluorobenzene (70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 6DEC2903

Matrix Spike - Sample No.: BLK1229

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50.000	0.000	55.610	111	70-130
Methylene chloride	50.000	0.000	52.870	106	70-130
trans-1,2-Dichloroethen	50.000	0.000	53.462	107	70-130
1,1-Dichloroethane	50.000	0.000	60.100	120	70-130
Chloroform	50.000	0.000	55.540	111	70-130
1,1,1-Trichloroethane	50.000	0.000	58.826	118	70-130
Carbon tetrachloride	50.000	0.000	60.325	121	70-130
1,2-Dichloroethane	50.000	0.000	58.336	117	70-130
Benzene	50.000	0.000	53.664	107	70-130
Trichloroethene	50.000	0.000	56.464	113	70-130
1,2-Dichloropropane	50.000	0.000	54.041	108	70-130
Bromodichloromethane	50.000	0.000	59.669	119	50-150
cis-1,3-Dichloropropene	50.000	0.000	55.256	110	70-130
Toluene	50.000	0.000	54.199	108	70-130
trans-1,3-Dichloroprope	50.000	0.000	57.958	116	70-130
1,1,2-Trichloroethane	50.000	0.000	56.327	113	70-130
Tetrachloroethene	50.000	0.000	52.951	106	70-130
Dibromochloromethane	50.000	0.000	53.107	106	50-150
Chlorobenzene	50.000	0.000	55.810	112	70-130
Ethylbenzene	50.000	0.000	54.894	110	70-130
Bromoform	50.000	0.000	47.785	96	50-150
1,1,2,2-Tetrachloroetha	50.000	0.000	59.646	119	70-130
1,3-Dichlorobenzene	50.000	0.000	51.913	104	70-130
1,4-Dichlorobenzene	50.000	0.000	56.659	113	70-130
1,2-Dichlorobenzene	50.000	0.000	58.187	116	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 6DEC2903

Matrix Spike - Sample No.: BLK1229

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD	%	QC LIMITS	
			REC #	RPD #	RPD	REC.
1,1-Dichloroethene	50.000	52.586	105	6	20	70-130
Methylene chloride	50.000	53.083	106	0	20	70-130
trans-1,2-Dichloroethen	50.000	51.279	102	3	20	70-130
1,1-Dichloroethane	50.000	59.512	119	1	20	70-130
Chloroform	50.000	55.609	111	1	20	70-130
1,1,1-Trichloroethane	50.000	58.601	117	1	20	70-130
Carbon tetrachloride	50.000	59.104	118	2	20	70-130
1,2-Dichloroethane	50.000	58.123	116	0	20	70-130
Benzene	50.000	52.899	106	2	20	70-130
Trichloroethene	50.000	56.225	112	0	20	70-130
1,2-Dichloropropane	50.000	53.596	107	1	20	70-130
Bromodichloromethane	50.000	58.744	117	2	20	50-150
cis-1,3-Dichloropropene	50.000	53.865	108	2	20	70-130
Toluene	50.000	52.502	105	3	20	70-130
trans-1,3-Dichloroprope	50.000	57.313	115	1	20	70-130
1,1,2-Trichloroethane	50.000	55.899	112	0	20	70-130
Tetrachloroethene	50.000	52.286	104	1	20	70-130
Dibromochloromethane	50.000	52.113	104	2	20	50-150
Chlorobenzene	50.000	55.876	112	0	20	70-130
Ethylbenzene	50.000	54.134	108	2	20	70-130
Bromoform	50.000	46.912	94	2	20	50-150
1,1,2,2-Tetrachloroetha	50.000	58.328	117	3	20	70-130
1,3-Dichlorobenzene	50.000	51.249	102	1	20	70-130
1,4-Dichlorobenzene	50.000	56.316	113	1	20	70-130
1,2-Dichlorobenzene	50.000	57.578	115	1	20	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 25 outside limits

Spike Recovery: 0 out of 50 outside limits

COMMENTS:



GC/MS SEMIVOLATILES

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EQ12793-001

Lab Name: SHEALY ENVIRONMENTAL Contract: _____
 Lab Code: SHEALY Case No.: _____ SAS No.: _____ SDG No.: 12793
 Matrix: (soil/water) AQUEOUS Lab Sample ID: EQ12793-001
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0101A06
 Level: (low/med) LOW Date Received: _____
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/24/03
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/01/04
 Injection Volume: _____ (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
62-75-9	N-Nitrosodimethylamine	5.0000	U
108-95-2	Phenol	5.0000	U
111-44-4	bis(2-Chloroethyl) ether	5.0000	U
95-57-8	2-Chlorophenol	5.0000	U
541-73-1	1,3-Dichlorobenzene	5.0000	U
106-46-7	1,4-Dichlorobenzene	5.0000	U
95-50-1	1,2-Dichlorobenzene	5.0000	U
95-48-7	o-Cresol	5.0000	U
108-60-1	bis(2-Chloroisopropyl) ether	5.0000	U
106-44-5	m+p-Cresol	10.0000	U
621-64-7	n-Nitroso-di-n-propylamine	5.0000	U
67-72-1	Hexachloroethane	5.0000	U
98-95-3	Nitrobenzene	5.0000	U
78-59-1	Isophorone	5.0000	U
88-75-5	2-Nitrophenol	10.0000	U
105-67-9	2,4-Dimethylphenol	5.0000	U
65-85-0	Benzoic acid	250.0000	U
111-91-1	bis(2-Chloroethoxy) methane	5.0000	U
120-83-2	2,4-Dichlorophenol	5.0000	U
120-82-1	1,2,4-Trichlorobenzene	5.0000	U
91-20-3	Naphthalene	5.0000	U
106-47-8	4-Chloroaniline	5.0000	U
87-68-3	Hexachlorobutadiene	5.0000	U
59-50-7	4-Chloro-3-methylphenol	5.0000	U
91-57-6	2-Methylnaphthalene	5.0000	U
77-47-4	Hexachlorocyclopentadiene	25.0000	U
88-06-2	2,4,6-Trichlorophenol	5.0000	U
95-95-4	2,4,5-Trichlorophenol	5.0000	U
91-58-7	2-Chloronaphthalene	5.0000	U
90-13-1	1-Chloronaphthalene	5.0000	U
88-74-4	2-Nitroaniline	10.0000	U
131-11-3	Dimethylphthalate	5.0000	U
606-20-2	2,6-Dinitrotoluene	10.0000	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EQ12793-001

Lab Name: SHEALY ENVIRONMENTAL Contract:
 Lab Code: SHEALY Case No.: SAS No.: SDG No.: 12793
 Matrix: (soil/water) AQUEOUS Lab Sample ID: EQ12793-001
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0101A06
 Level: (low/med) LOW Date Received: _____
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/24/03
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/01/04
 Injection Volume: _____ (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

208-96-8-----	Acenaphthylene	5.0000	U
99-09-2-----	3-Nitroaniline	10.0000	U
83-32-9-----	Acenaphthene	5.0000	U
51-28-5-----	2,4-Dinitrophenol	25.0000	U
100-02-7-----	4-Nitrophenol	25.0000	U
121-14-2-----	2,4-Dinitrotoluene	10.0000	U
132-64-9-----	Dibenzofuran	5.0000	U
134-62-3-----	Deet	10.0000	U
84-66-2-----	Diethylphthalate	5.0000	U
7005-72-3-----	4-Chlorophenylphenylether	5.0000	U
86-73-7-----	Fluorene	5.0000	U
100-01-6-----	4-Nitroaniline	10.0000	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25.0000	U
122-39-4-----	Diphenylamine	5.0000	U
86-30-6-----	n-Nitrosodiphenylamine (1)	5.0000	U
103-33-3-----	Azobenzene	5.0000	U
101-55-3-----	4-Bromophenylphenylether	5.0000	U
118-74-1-----	Hexachlorobenzene	5.0000	U
87-86-5-----	Pentachlorophenol	25.0000	U
85-01-8-----	Phenanthrene	5.0000	U
120-12-7-----	Anthracene	5.0000	U
86-74-8-----	Carbazole	5.0000	U
84-74-2-----	Di-n-butylphthalate	5.0000	U
206-44-0-----	Fluoranthene	5.0000	U
92-87-5-----	Benzidine	25.0000	U
129-00-0-----	Pyrene	5.0000	U
85-68-7-----	Butylbenzylphthalate	10.0000	U
119-93-7-----	3,3'-Dimethylbenzidine	25.0000	U
51-03-6-----	Pip	25.0000	U
91-94-1-----	3,3'-Dichlorobenzidine	5.0000	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	5.0000	U
56-55-3-----	Benzo(a)Anthracene	5.0000	U
218-01-9-----	Chrysene	5.0000	U

(1) - Cannot be separated from Diphenylamine
FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EQ12793-001

Lab Name: SHEALY ENVIRONMENTAL Contract: _____
 Lab Code: SHEALY Case No.: _____ SAS No.: _____ SDG No.: 12793
 Matrix: (soil/water) AQUEOUS Lab Sample ID: EQ12793-001
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0101A06
 Level: (low/med) LOW Date Received: _____
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/24/03
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/01/04
 Injection Volume: _____ (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/L Q

117-84-0-----	Di-n-octylphthalate	5.0000	U
205-99-2-----	Benzo (b) fluoranthene	5.0000	U
207-08-9-----	Benzo (k) fluoranthene	5.0000	U
50-32-8-----	Benzo (a) pyrene	5.0000	U
193-39-5-----	Indeno (1,2,3-c,d) pyrene	5.0000	U
53-70-3-----	Dibenzo (a,h) anthracene	5.0000	U
191-24-2-----	Benzo (g,h,i) perylene	5.0000	U

FORM I SV

FORM 2
AQUEOUS SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12793

	CLIENT SAMPLE NO.	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	S7 #	S8 #	TOT OUT
01	EL23027-001M	77	78	98	81	91	78			0
02	EL23027-001M	91	88	104	90	102	84			0
03	EQ12793-001	82	77	98	90	69	77			0
04	EQ12793-001L	78	79	86	87	92	94			0
05										
06										
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QC LIMITS

S1 (2FP) = 2-Fluorophenol (30-130)
 S2 (PHL) = Phenol-d5 (30-130)
 S3 (NBZ) = Nitrobenzene-d5 (30-130)
 S4 (FBP) = 2-Fluorobiphenyl (30-130)
 S5 (TBP) = 2,4,6-Tribromophenol (30-130)
 S6 (TPH) = Terphenyl-d14 (30-130)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogate diluted out

FORM 3
AQUEOUS SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12793

Matrix Spike - Sample No.: EQ12793-001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Phenol	100.0000	0.0000	68.6393	69	30-130
2-Chlorophenol	100.0000	0.0000	73.1391	73	30-130
1,4-Dichlorobenzene	100.0000	0.0000	68.8129	69	30-130
n-Nitroso-di-n-prop. (1)	100.0000	0.0000	81.9650	82	30-130
1,2,4-Trichlorobenzene	100.0000	0.0000	85.5703	86	30-130
4-Chloro-3-methylphenol	100.0000	0.0000	93.9373	94	30-130
Acenaphthene	100.0000	0.0000	88.2608	88	30-130
4-Nitrophenol	500.0000	0.0000	609.3773	122	10-130
2,4-Dinitrotoluene	200.0000	0.0000	206.8409	103	30-130
Pentachlorophenol	500.0000	0.0000	443.7943	89	30-130
Pyrene	100.0000	0.0000	94.7405	95	30-130

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM 3
 AQUEOUS SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12793

Matrix Spike - Sample No.: EL23027-001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Phenol	204.0816	0.0000	151.2515	74	30-130
2-Chlorophenol	204.0816	0.0000	153.1173	75	30-130
1,4-Dichlorobenzene	204.0816	3.3319	149.7377	72	30-130
n-Nitroso-di-n-prop. (1)	204.0816	0.0000	193.6872	95	30-130
1,2,4-Trichlorobenzene	204.0816	0.0000	161.5384	79	30-130
4-Chloro-3-methylphenol	204.0816	0.0000	185.3324	91	30-130
Acenaphthene	204.0816	0.0000	175.8424	86	30-130
4-Nitrophenol	1020.408	0.0000	1238.2994	121	10-130
2,4-Dinitrotoluene	408.1632	0.0000	415.4037	102	30-130
Pentachlorophenol	1020.408	0.0000	971.6205	95	30-130
Pyrene	204.0816	0.0000	175.1292	86	30-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Phenol	200.0000	160.6567	80	6	40	30-130
2-Chlorophenol	200.0000	176.2503	88	14	40	30-130
1,4-Dichlorobenzene	200.0000	163.8406	80	9	40	30-130
n-Nitroso-di-n-prop. (1)	200.0000	196.9662	98	2	40	30-130
1,2,4-Trichlorobenzene	200.0000	199.7243	100	21	40	30-130
4-Chloro-3-methylphenol	200.0000	209.0842	104	12	40	30-130
Acenaphthene	200.0000	195.5509	98	10	40	30-130
4-Nitrophenol	1000.000	1307.1513	131*	5	40	10-130
2,4-Dinitrotoluene	400.0000	418.5275	105	1	40	30-130
Pentachlorophenol	1000.000	984.1001	98	1	40	30-130
Pyrene	200.0000	177.3538	89	1	40	30-130

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 1 out of 22 outside limits

COMMENTS:



FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EQ12808-001

Lab Name: SHEALY ENVIRONMENTAL Contract:
 Lab Code: SHEALY Case No.: SAS No.: SDG No.: 12808
 Matrix: (soil/water) WATER Lab Sample ID: EQ12808-001
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 014F1501
 % Moisture: _____ decanted: (Y/N) _____ Date Received: _____
 Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 12/26/03
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/02/04
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.0250	U
319-84-6	alpha-BHC	0.0250	U
319-85-7	beta-BHC	0.0250	U
319-86-8	delta-BHC	0.0250	U
58-89-9	gamma-BHC (Lindane)	0.0250	U
72-54-8	4,4'-DDD	0.0250	U
72-55-9	4,4'-DDE	0.0250	U
50-29-3	4,4'-DDT	0.0250	U
60-57-1	Dieldrin	0.0250	U
959-98-8	Endosulfan I	0.0250	U
33213-65-9	Endosulfan II	0.0250	U
1031-07-8	Endosulfan sulfate	0.0250	U
72-20-8	Endrin	0.0250	U
7421-93-4	Endrin Aldehyde	0.0250	U
76-44-8	Heptachlor	0.0250	U
1024-57-3	Heptachlor Epoxide	0.0250	U
72-43-5	Methoxychlor	0.1000	U
8001-35-2	Toxaphene	0.2500	U
53494-70-50	Endrin Ketone	0.0250	U
5103-74-2	gamma-Chlordane	0.0250	U
5103-71-9	alpha-Chlordane	0.0250	U

FORM 2
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12808

GC Column(1): CLPPESTICIDES II ID: 0.32 (mm)

	CLIENT	S1	S2	S3	S4	S5	S6	TOT
	SAMPLE NO.	%REC #	OUT					
	=====	=====	=====	=====	=====	=====	=====	=====
01	EQ12808-001	87	107					0
02	EQ12808-001L	84	101					0
03	EL24022-001	87	87					0
04	EL24022-001M	81	82					0
05	EL24022-001M	98	104					0
06								
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ADVISORY
QC LIMITS

S1 = Decachlorobiphenyl (DC (10-110))
S2 = 2,4,5,6-Tetrachloro-m- (30-120)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12808

Matrix Spike - Sample No.: EQ12808-001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Aldrin	0.1000	0.0000	0.0882	88	50-130
gamma-BHC (Lindane)	0.1000	0.0000	0.1026	103	50-130
4,4'-DDT	0.5000	0.0000	0.4668	93	50-130
Dieldrin	0.1000	0.0000	0.0917	92	50-130
Endrin	0.5000	0.0000	0.4749	95	50-130
Heptachlor	0.1000	0.0000	0.0959	96	50-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 6 outside limits

COMMENTS: _____

FORM 3
WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12808

Matrix Spike - Sample No.: EL24022-001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aldrin	0.2325	0.0000	0.1620	70	50-130
gamma-BHC (Lindane)	0.2325	0.0000	0.1960	84	50-130
4,4'-DDT	1.1627	0.0000	0.9978	86	50-130
Dieldrin	0.2325	0.0000	0.2007	86	50-130
Endrin	1.1627	0.0000	1.1348	98	50-130
Heptachlor	0.2325	0.0000	0.2106	90	50-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Aldrin	0.2222	0.2140	96	29	30	50-130
gamma-BHC (Lindane)	0.2222	0.2292	103	14	30	50-130
4,4'-DDT	1.1111	1.2157	109	19	30	50-130
Dieldrin	0.2222	0.2508	113	22	30	50-130
Endrin	1.1111	1.2286	110	20	30	50-130
Heptachlor	0.2222	0.2615	118	22	30	50-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limits

Spike Recovery: 0 out of 12 outside limits

COMMENTS:

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EQ12808-001

Lab Name: SHEALY ENVIRONMENTAL Contract:
 Lab Code: SHEALY Case No.: SAS No.: SDG No.: 12808
 Matrix: (soil/water) WATER Lab Sample ID: EQ12808-001
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 008F0901
 % Moisture: _____ decanted: (Y/N) _____ Date Received: _____
 Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 12/26/03
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/31/03
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2-----	PCB 1016	0.2500	U
11104-28-2-----	PCB 1221	0.2500	U
11141-16-5-----	PCB 1232	0.2500	U
53469-21-9-----	PCB 1242	0.2500	U
12672-29-6-----	PCB 1248	0.2500	U
11097-69-1-----	PCB 1254	0.2500	U
11096-82-5-----	PCB 1260	0.2500	U

FORM 2
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12808

GC Column(1): DB-XLB

ID: 0.32 (mm)

	CLIENT	S1	S2	S3	S4	S5	S6	TOT
	SAMPLE NO.	%REC #	OUT					
	=====	=====	=====	=====	=====	=====	=====	=====
01	EQ12808-001	71	86					0
02	EQ12808-001L	69	86					0
03	EL24022-002	60	62					0
04	EL24022-002M	54	75					0
05	EL24022-002M	57	68					0
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								

ADVISORY
QC LIMITS

S1 = Decachlorobiphenyl (DC (10-110))
S2 = 2,4,5,6-Tetrachloro-m- (30-120)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12808

Matrix Spike - Sample No.: EQ12808-001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
PCB 1016	2.5000	0.0000	2.1426	86	50-130
PCB 1260	2.5000	0.0000	2.2049	88	50-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM 3
WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SHEALY ENVIRONMENTAL

Contract:

Lab Code: SHEALY

Case No.:

SAS No.:

SDG No.: 12808

Matrix Spike - Sample No.: EL24022-002

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
PCB 1016	6.0975	0.0000	12.3574	203*	50-130
PCB 1260	6.0975	0.0000	4.1188	68	50-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
PCB 1016	5.3191	10.6781	201*	12	30	50-130
PCB 1260	5.3191	4.1630	78	4	30	50-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 2 out of 4 outside limits

COMMENTS:



PREPARATION BLANK SUMMARY

Client: The Fletcher Group

SDG No.: EL23024

Contract: _____

Lab Code: SHEALY

Case No.: _____

SAS No.: _____

Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	MDL	CRDL	M	Analysis Date	Analysis Time	Run
EQ12845-001			WATER					Batch Number:	12845	
	Antimony	-0.0003	<0.0050	U	0.0050	0.0050	P	12/31/2003	15:13	I3EL31A
	Arsenic	0.0005	<0.0050	U	0.0050	0.0050	P	12/31/2003	15:13	I3EL31A
	Beryllium	0.0000	<0.0040	U	0.0040	0.0040	P	12/31/2003	15:13	I3EL31A
	Cadmium	-0.0003	<0.0020	U	0.0020	0.0020	P	12/31/2003	15:13	I3EL31A
	Chromium	0.0005	<0.0050	U	0.0050	0.0050	P	12/31/2003	15:13	I3EL31A
	Copper	0.0019	<0.0050	U	0.0050	0.0050	P	12/31/2003	15:13	I3EL31A
	Lead	-0.0002	<0.0030	U	0.0030	0.0030	P	12/31/2003	15:13	I3EL31A
	Nickel	0.0002	<0.0400	U	0.0400	0.0400	P	12/31/2003	15:13	I3EL31A
	Selenium	-0.0057	<0.0050	U	0.0050	0.0050	P	12/31/2003	15:13	I3EL31A
	Silver	-0.0005	<0.0050	U	0.0050	0.0050	P	12/31/2003	15:13	I3EL31A
	Thallium	-0.0026	<0.0100	U	0.0100	0.0100	P	12/31/2003	15:13	I3EL31A
	Zinc	0.0115	<0.0200	U	0.0200	0.0200	P	12/31/2003	15:13	I3EL31A

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MATRIX SPIKE SUMMARY

Client: The Fletcher Group Level: LOW SDG No.: EL23024
 Contract: _____ Lab Code: SHEALY Case No.: _____ SAS No.: _____
 Matrix: WATER Sample ID: EL24022-004 Client ID: EL24022-004S
 Percent Solids for Sample: 0.00 Spiked ID: EL24022-004MS Percent Solids for Spike Sample: 0.00
 Batch Number: 12845

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/L	75 - 125	0.4175		0.0050	U	0.40	104		P
Arsenic	mg/L	75 - 125	0.4548		0.0050	U	0.40	114		P
Beryllium	mg/L	75 - 125	2.0694		0.0040	U	2.00	103		P
Cadmium	mg/L	75 - 125	0.4192		0.0020	U	0.40	105		P
Chromium	mg/L	75 - 125	2.0800		0.0086		2.00	104		P
Copper	mg/L	75 - 125	2.0686		0.0096		2.00	103		P
Lead	mg/L	75 - 125	0.4252		0.0030	U	0.40	106		P
Nickel	mg/L	75 - 125	2.1452		0.0400	U	2.00	107		P
Selenium	mg/L	75 - 125	0.4564		0.0050	U	0.40	114		P
Silver	mg/L	75 - 125	0.4275		0.0050	U	0.40	107		P
Thallium	mg/L	75 - 125	0.8674		0.0100	U	0.80	108		P
Zinc	mg/L	75 - 125	2.2395		0.0509		2.00	109		P

MATRIX SPIKE DUPLICATE SUMMARY

Client: The Fletcher Group Level: LOW SDG No.: EL23024
 Contract: _____ Lab Code: SHEALY Case No.: _____ SAS No.: _____
 Matrix: WATER Sample ID: EL24022-004 Client ID: EL24022-004SD
 Percent Solids for Sample: 0.00 Spiked ID: EL24022-004MD Percent Solids for Spike Sample: 0.00
 Batch Number: 12845

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/L	75 - 125	0.4221		0.0050	U	0.40	106		P
Arsenic	mg/L	75 - 125	0.4491		0.0050	U	0.40	112		P
Beryllium	mg/L	75 - 125	2.0230		0.0040	U	2.00	101		P
Cadmium	mg/L	75 - 125	0.4093		0.0020	U	0.40	102		P
Chromium	mg/L	75 - 125	2.0347		0.0086		2.00	101		P
Copper	mg/L	75 - 125	2.0245		0.0096		2.00	101		P
Lead	mg/L	75 - 125	0.4323		0.0030	U	0.40	108		P
Nickel	mg/L	75 - 125	2.0930		0.0400	U	2.00	105		P
Selenium	mg/L	75 - 125	0.4451		0.0050	U	0.40	111		P
Silver	mg/L	75 - 125	0.4197		0.0050	U	0.40	105		P
Thallium	mg/L	75 - 125	0.8463		0.0100	U	0.80	106		P
Zinc	mg/L	75 - 125	2.1898		0.0509		2.00	107		P

DUPLICATE SAMPLE SUMMARY

Client: The Fletcher Group Level: LOW SDG No.: EL23024
Contract: _____ Lab Code: SHEALY Case No.: _____ SAS No.: _____
Matrix: WATER Sample ID: EL24022-004MS Client ID: EL24022-004SD
Percent Solids for Sample: 0.00 Duplicate ID: EL24022-004MD Percent Solids for Duplicate: 0.00
Batch Number: 12845

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	mg/L	0 - 20	0.4175		0.4221		1.1		P
Arsenic	mg/L	0 - 20	0.4548		0.4491		1.3		P
Beryllium	mg/L	0 - 20	2.0694		2.0230		2.3		P
Cadmium	mg/L	0 - 20	0.4192		0.4093		2.4		P
Chromium	mg/L	0 - 20	2.0800		2.0347		2.2		P
Copper	mg/L	0 - 20	2.0686		2.0245		2.2		P
Lead	mg/L	0 - 20	0.4252		0.4323		1.7		P
Nickel	mg/L	0 - 20	2.1452		2.0930		2.5		P
Selenium	mg/L	0 - 20	0.4564		0.4451		2.5		P
Silver	mg/L	0 - 20	0.4275		0.4197		1.8		P
Thallium	mg/L	0 - 20	0.8674		0.8463		2.5		P
Zinc	mg/L	0 - 20	2.2395		2.1898		2.2		P

DUPLICATE SAMPLE SUMMARY

Client: The Fletcher Group Level: LOW SDG No.: EL23024
 Contract: _____ Lab Code: SHEALY Case No.: _____ SAS No.: _____
 Matrix: WATER Sample ID: EQ12845-002 Client ID: LCSD
 Percent Solids for Sample: 0.00 Duplicate ID: EQ12845-003 Percent Solids for Duplicate: 0.00
 Batch Number: 12845

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	mg/L	0 - 20	0.4275		0.4235		0.9		P
Arsenic	mg/L	0 - 20	0.4482		0.4489		0.2		P
Beryllium	mg/L	0 - 20	2.0403		2.0552		0.7		P
Cadmium	mg/L	0 - 20	0.4116		0.4144		0.7		P
Chromium	mg/L	0 - 20	2.0352		2.0460		0.5		P
Copper	mg/L	0 - 20	2.0250		2.0414		0.8		P
Lead	mg/L	0 - 20	0.4329		0.4304		0.6		P
Nickel	mg/L	0 - 20	2.0994		2.1147		0.7		P
Selenium	mg/L	0 - 20	0.4490		0.4505		0.3		P
Silver	mg/L	0 - 20	0.4209		0.4231		0.5		P
Thallium	mg/L	0 - 20	0.8495		0.8508		0.2		P
Zinc	mg/L	0 - 20	2.1610		2.1693		0.4		P

LABORATORY CONTROL SAMPLE SUMMARY

Client: The Fletcher Group

SDG No.: EL23024

Contract: _____

Lab Code: SHEALY

Case No.: _____

SAS No.: _____

Aqueous LCS Source: High Purity

Solid LCS Source: _____

Batch Number: 12845

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
EQ12845-002	Antimony	mg/L	0.4000	0.4275		107	80.0 - 120.0	P
	Arsenic	mg/L	0.4000	0.4482		112	80.0 - 120.0	P
	Beryllium	mg/L	2.0000	2.0403		102	80.0 - 120.0	P
	Cadmium	mg/L	0.4000	0.4116		103	80.0 - 120.0	P
	Chromium	mg/L	2.0000	2.0352		102	80.0 - 120.0	P
	Copper	mg/L	2.0000	2.0250		101	80.0 - 120.0	P
	Lead	mg/L	0.4000	0.4329		108	80.0 - 120.0	P
	Nickel	mg/L	2.0000	2.0994		105	80.0 - 120.0	P
	Selenium	mg/L	0.4000	0.4490		112	80.0 - 120.0	P
	Silver	mg/L	0.4000	0.4209		105	80.0 - 120.0	P
	Thallium	mg/L	0.8000	0.8495		106	80.0 - 120.0	P
	Zinc	mg/L	2.0000	2.1610		108	80.0 - 120.0	P

LABORATORY CONTROL SAMPLE DUPLICATE SUMMARY

Client: The Fletcher Group

SDG No.: EL23024

Contract: _____

Lab Code: SHEALY

Case No.: _____

SAS No.: _____

Aqueous LCS Source: High Purity

Solid LCS Source: _____

Batch Number: 12845

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
EQ12845-003								
	Antimony	mg/L	0.4000	0.4235		106	80.0 - 120.0	P
	Arsenic	mg/L	0.4000	0.4489		112	80.0 - 120.0	P
	Beryllium	mg/L	2.0000	2.0552		103	80.0 - 120.0	P
	Cadmium	mg/L	0.4000	0.4144		104	80.0 - 120.0	P
	Chromium	mg/L	2.0000	2.0460		102	80.0 - 120.0	P
	Copper	mg/L	2.0000	2.0414		102	80.0 - 120.0	P
	Lead	mg/L	0.4000	0.4304		108	80.0 - 120.0	P
	Nickel	mg/L	2.0000	2.1147		106	80.0 - 120.0	P
	Selenium	mg/L	0.4000	0.4505		113	80.0 - 120.0	P
	Silver	mg/L	0.4000	0.4231		106	80.0 - 120.0	P
	Thallium	mg/L	0.8000	0.8508		106	80.0 - 120.0	P
	Zinc	mg/L	2.0000	2.1693		108	80.0 - 120.0	P



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MATRIX SPIKE SUMMARY

Client: The Fletcher Group Level: LOW SDG No.: EL23024
Contract: _____ Lab Code: SHEALY Case No.: _____ SAS No.: _____
Matrix: WATER Sample ID: EL23019-001 Client ID: EL23019-001S
Percent Solids for Sample: 0.00 Spiked ID: EL23019-001MS Percent Solids for Spike Sample: 0.00
Batch Number: 12828

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/L	85 - 115	0.002027		0.000100	U	0.002000	101		CV

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MATRIX SPIKE DUPLICATE SUMMARY

Client: The Fletcher Group Level: LOW SDG No.: EL23024
Contract: _____ Lab Code: SHEALY Case No.: _____ SAS No.: _____
Matrix: WATER Sample ID: EL23019-001 Client ID: EL23019-001SD
Percent Solids for Sample: 0.00 Spiked ID: EL23019-001MD Percent Solids for Spike Sample: 0.00
Batch Number: 12828

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/L	85 - 115	0.002064		0.000100	U	0.002000	103		CV

DUPLICATE SAMPLE SUMMARY

Client: The Fletcher Group Level: LOW SDG No.: EL23024
Contract: _____ Lab Code: SHEALY Case No.: _____ SAS No.: _____
Matrix: WATER Sample ID: EL23019-001MS Client ID: EL23019-001SD
Percent Solids for Sample: 0.00 Duplicate ID: EL23019-001MD Percent Solids for Duplicate: 0.00
Batch Number: 12828

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/L	0 - 20	0.002027		0.002064		1.8		CV

DUPLICATE SAMPLE SUMMARY

Client: The Fletcher Group Level: LOW SDG No.: EL23024
Contract: _____ Lab Code: SHEALY Case No.: _____ SAS No.: _____
Matrix: WATER Sample ID: EQ12828-002 Client ID: LCSD
Percent Solids for Sample: 0.00 Duplicate ID: EQ12828-003 Percent Solids for Duplicate: 0.00
Batch Number: 12828

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/L	0 - 20	0.002069		0.002038		1.5		CV

LABORATORY CONTROL SAMPLE SUMMARY

Client: The Fletcher Group

SDG No.: EL23024

Contract: _____

Lab Code: SHEALY

Case No.: _____

SAS No.: _____

Aqueous LCS Source: EPA-ICV

Solid LCS Source: _____

Batch Number: 12828

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
EQ12828-002	Mercury	mg/L	0.002000	0.002069		103	85.0 - 115.0	CV

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LABORATORY CONTROL SAMPLE DUPLICATE SUMMARY

Client: The Fletcher Group

SDG No.: EL23024

Contract: _____

Lab Code: SHEALY

Case No.: _____

SAS No.: _____

Aqueous LCS Source: EPA-ICV

Solid LCS Source: _____

Batch Number: 12828

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
EQ12828-003	Mercury	mg/L	0.002000	0.002038		102	85.0 - 115.0	CV



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.

106 Vantage Point Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 20725

Client: Fletcher Group Inc.
Report to Contact: Kathy Webb
Address: 148 River St. Suite 220
City: Greenville, State: SC, Zip Code: 29601
Project Name: Land Of Sky
Printed Name: Richard Jacobs

Table with columns: Sample ID / Description, Date, Time, Matrix, No. of Containers by Preservative Type, and Remarks / Cooler I.D. Includes handwritten entries for MW-1, MW-2, MW-3, and MW-4.

Possible Hazard Identification and Sample Disposal options.

QC Requirements and Chain of Custody table with columns for Relinquished by, Date, Time, Received by, Date, Time, and Receipt Temp.

Sample Receipt Checklist

Client: Fletcher Group Cooler Inspected by/date: BHC 12/23/03 Lot #: EL23024

Means of receipt:			<input checked="" type="checkbox"/> SESI	<input type="checkbox"/> Client	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> Airborne Exp	<input type="checkbox"/> Other
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	1. Were custody seals present on the cooler?					
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?					
Cooler temperature upon receipt <u>8.4</u> °C								
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles								
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None								
If response is No (or Yes for 13,14,15), an explanation/resolution must be provided.								
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. Is the shipper's packing slip attached to this form?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	4. Were proper custody procedures followed?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	5. Were sample IDs listed?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	6. Was collection date & time listed?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	7. Were tests to be performed listed on the COC or was quote # provided?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	8. Did all samples arrive in the proper containers for each test?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	9. Did all container labels agree with COC?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	10. Did all containers arrive in good condition (unbroken)?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	11. Was adequate sample volume available?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	12. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?					
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	13. Were any samples containers missing?					
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	14. Were there any excess samples not listed on COC?					
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	15. Was headspace >6 mm present in any VOA vials?					
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	16. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?					
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all cyanide and/or sulfide samples received at a pH >12?					
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all NH3/TKN/cyanide/BNA/pest/PCB/herb (<0.2 mg/L) and toxicity (<0.1 mg/L) samples free of residual chlorine?					
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were collection temperatures documented on the COC for NC samples?					
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)								
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.								
Sample(s) _____ were received with headspace >6 mm in diameter.								
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.								
Toxicity sample(s) _____ were received with TRC >0.1 mg/L and were analyzed by method 330.5.								

Corrective Action taken, if necessary:

Was client notified: Yes No

Did client respond: Yes No

Date of response: _____

SESI employee: _____

Comments:

Added TICs + deleted Barium
per client. 12-29-03
BMC



Date: 14 January 2004
To: Kathy Webb
From: Diane Rosseter *Dmr*
Subject: Land of Sky Regional Council/Elk Mountain Landfill Brownfield Assessment

I have completed my review of the Land of Sky Regional Council/Elk Mountain Landfill Brownfield Assessment groundwater data collected in December 2003. Sample results were reviewed in accordance with the USEPA *Contract Laboratory Program National Functional Guidelines for Organic Data Review* (EPA540/R-99/008, October 1999), *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA540/R-01/008, July 2002), and the most recently promulgated versions of the analytical methods.

In general, the laboratory met most quality control requirements, however a few minor discrepancies were noted, as indicated below:

Pesticides/PCBs

- 1) The surrogate compound decachlorobiphenyl recovered below the laboratory-established lower control limit in both the pesticide and PCB analysis of MW-2 and MW-4. Results for all pesticides and PCBs were reported as not detected in MW-2 and MW-4 and were therefore, flagged with "UJ".

Although some qualification of the data was necessary, most of the data is fully usable for quantitative reporting and decision-making purposes. The flagged data is also usable, considering the qualifications and conditions indicated above.

UJ - not detected above the associated sample quantitation limit, however result should be considered as estimated