



## Executive Summary

ID No.: VCP No. 190

Report date: February 24, 2005

Summarize the assessments for all affected properties included in this report. Be sure to complete and submit the Checklist for Report Completeness. **Attach a chronology of activities associated with the referenced affected property(ies).**

On-Site Property Name: SAHA Swift Site Land use:  residential  commercial/industrial  
City: San Antonio County: Bexar

Does the person own the on-site property?  Yes  No

Describe the nature of the release, estimated volume of release if known, general assessment methods, and indicate if it was an on-going or historical release, and what was done to stop the release if it was on going.

The entire site is 10 acres and is bounded by San Marcos Street to the west, Union Stock Yard Subdivision to the north and west, and by Pendelton Avenue to the south.

A coal ash landfill was present at the site and encompassed an area of 2 acres to a lowest elevation of 615 ft MSL (approximately 15 ft bgs). In 1997 a portion of the landfill was capped with a HDPE liner. Other portions of the landfill were excavated to a depth of 4 ft bgs (approved depth as presented in the *Site Closure Plan*, April 1998). A total of 0.3 acres of ash currently remain at the site 4 ft bgs. The coal ash remaining at the site is located in the northeastern portion of the site. The capped coal ash area is enclosed with a fence. The coal ash that is below 4 ft bgs is covered with 4 feet of clean soil to eliminate surficial exposure to COCs.

Sample locations were located both within and outside of the identified coal ash waste areas. The purpose of the samples within the coal ash waste areas was to define the depth of the coal ash as well as to define the depth of impacts to soil beneath the coal ash. The purpose of the samples outside of identified coal ash waste areas was to define the lateral extent of soil impacts from the coal ash. Soil samples were analyzed for metals, volatile organic compounds (VOCs), and/or semi-volatile organic compounds (SVOCs).

### Soil Investigation

#### 1995 Investigation

Borings that were performed in 1995 were advanced with either a hand auger (B-21 to B-24) or a hollow stem auger (B-9 to B-20 and B-25 to B-32). Soil samples from borings advanced with a hollow stem auger were collected using a 2-foot long split spoon sampler that was advanced with the augers. Soils samples were visually screened for impacts. Soil borings were completed to depths ranging from 4 to 8 ft bgs. Soil samples from borings B-21 to B-24 were analyzed for metals, VOCs and SVOCs. Soil samples from borings B-9 to B-11 were collected from the coal ash waste interval and were analyzed for SVOCs. Soil borings B-28 to B-32 were converted to monitoring wells MW-4 to MW-8. These borings were drilled to completion depths ranging from 22 to 27 ft bgs.

#### 1997 Soil Samples

Coal ash was excavated in 1997. Confirmation soil samples were taken (S-1 and S-2) to confirm that coal ash impacted soil was removed. These samples were analyzed for metals and SVOCs.

#### 1999 Investigation

Borings TH-1 to TH-4 were advanced with a hollow stem auger to a depth of 10 ft bgs in the northern property boundary, near the approximate limits of the area excavated and the capped coal ash. Soil samples from these borings were collected with a split spoon sampler and analyzed for SVOCs. Soil samples were visually screened for coal ash impacts. The depth of soil samples from these borings was based on the known depth of coal ash, as determined during previous investigations and excavation activities.

#### 2004 Investigation

Six surficial soil samples (GS-1 to GS-6) were collected from the area surrounding B-22 and analyzed for SVOCs. These samples were to fully delineate the extent of soil impacts observed in B-22 at 0.5 ft bgs. Additionally, four surficial samples (GTS-1 to GTS-4) were collected from four locations on the site and analyzed for pH and organic carbon.

### Soil Constituent of Concern Exceedance Summary

Constituents of concern that exceed the PCLs are lead (B-21), benzo(a)pyrene (B-9, B-21, and B-22), and benzo(b)fluoranthene (B-21). B-9 and B-21 are located within the 1-acre capped area and the pathways for exposure are no longer complete. B-22 is located to the south of the capped area and the exceedance was located at a depth of 0.5 ft bgs. In 2004, six samples (GS-1 to GS-6) were sampled in the area surrounding B-22 and were analyzed for

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If no, explain why the potential receptors or pathways were not identified, and include in the Conclusions and Recommendations section the actions that will be taken to meet these criteria.

Threatened or Affected Receptors	Check if threatened	Check if affected	List the involved affected property(ies)
Water supply well			
Surface water/sediment			Surface water name:
Building (vapor impact)			Building name:
Underground utility serving as preferential transport pathway			
Underground utility not serving as preferential transport pathway			
Ecological (specify)			
Other (specify)			

Check if no threatened or affected receptors.

Describe the nature of the threatened or affected receptors and any abatement/stabilization actions conducted to address the situations:

Was the Tier 1 Exclusion Criteria for ecological receptors met?  Yes (passed)  No (failed)

Classification(s) of affected groundwater-bearing unit(s):  1  2  3

Depth to shallowest affected groundwater-bearing unit(s): 2.15 – 21.65 feet bgs

Was notification triggered in response to an actual or probable human exposure per §350.55(e)?  Yes  No

If yes, describe the situation that triggered the notification requirement. Include documentation of all notifications in Appendix 12 unless previously provided, in which case indicate date provided to TNRC.

Were all the appropriate notifications made in accordance with §350.55?  Yes  No

If no, explain why notifications were not made:

Were PCLs exceeded in any media?  No  Yes

If PCLs were exceeded, are all the PCLE zones defined?  Yes  No

If not, discuss the reasons this objective was not met and any alternative actions taken. Include in the Conclusions and Recommendations section the actions that will be taken to completely define the PCLE zones.

Do any of the PCLE zones extend beyond the on-site property boundary?  Yes  No  Unknown

Provide a brief description of the PCLE zones, identify the media for which a remedy is required, and describe potential impacts of the COCs at the affected property.

Soil analytical data from the assessment studies indicate that the constituents of concern (COCs) appear to be associated with the coal ash waste. COC impacts from the coal ash to groundwater are limited to where the coal ash is in direct contact with the groundwater. COC impacts to groundwater are not seen in wells that are downgradient from the coal ash cap.

If PCLs are exceeded, has a response action been completed?  Yes  No, will self-implement response action  
 No, will submit RAP

## Conclusions and Recommendations

Describe the conclusions of the assessment.

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Information and conclusions presented in this APAR are solely based on ENSR's site investigation.

Results of the site assessment indicate that soil and groundwater impacts are limited to the extent of the coal ash. Source material (coal ash) was capped, excavated, or covered with fill. In 1997, a 1-acre cap was constructed over a majority of the coal ash present at the site. Coal ash that was present at depths below 4 feet below ground surface were covered with clean fill to eliminate the surficial soil pathway. In addition, shallow coal ash was excavated for disposal.

COCs for soil are lead, benzo(a)anthracene, and benzo(a)pyrene. The concentration of lead above the Tier 2 PCL is present beneath the 1-acre coal ash cap (B-21). Concentrations of benzo(a)anthracene and benzo(a)pyrene above the Tier 1 PCL is present in surficial soils adjacent to coal ash waste (B-22). This sample was collected in 1995. Additional samples were collected in August 2004 the vicinity of B-22 (GS-1 through GS-6) and concentrations of these two COCs were below PCLs. It is ENSR's conclusion that the exceedance observed in B-22 is no longer present at the site, given the age of the sample and the lack of constituents above PCLs in adjacent samples.

COCs for groundwater are benzo(a)anthracene and benzo(a)pyrene. Both COCs were present above the PCL in MW-3. MW-3 was located within the coal ash and was partially screened through the coal ash. The other wells present at the site are not screened within the coal ash and do not show detected concentrations of the COC. It is believed that the PCL exceedances are limited to where groundwater is in direct contact with the coal ash. MW-3 was plugged and abandoned in 1997 during the coal ash cap construction.

The future remedial action for the site is the plugging and abandonment of the remaining wells at the Site and the implementation of a deed restriction. No other remedial actions are necessary.

Discuss the scope and timeframe of the next appropriate step(s) at the affected property(ies).

A deed restriction will be filed for areas where coal ash is present below 4 feet below ground surface and for the 1-acre capped area. The remaining monitoring wells will be plugged and abandoned. Both of these activities will be completed once the APAR has been approved.

A request for No Further Action will be filed after the above actions have been completed.



**FUGRO ENVIRONMENTAL, INC.**

Project No. 0564-9026

November 6, 1996

San Antonio Housing Authority  
 818 South Flores Street  
 San Antonio, Texas 78295

11013 Osgood  
 San Antonio, Texas 78233  
 Phone : 210-590 9393  
 Fax : 210-590-9380

Attention: Mr. Oscar Cervantes

**Statement of Completion  
 Coal Ash Cap Construction Project  
 SAHA Central Maintenance Facility  
 1901 South San Marcos Street  
 San Antonio, Texas**

Fugro Environmental, Inc. is pleased to provide this Statement of Completion confirming that the environmental contracting work at the above referenced facility is complete. The coal ash area at the site was covered by a 60 mil high density polyethylene liner, the liner was covered by a foot of sand, and a woven jute mat erosion protection layer was placed over the sand. The coal ash landfill area is clearly delineated by four foot tall metal fence posts, painted orange, and placed at 20 foot intervals along the perimeter of the coal ash area. Fugro examined the cut in the anchor trench at the perimeter of the coal ash area and observed no coal ash to be present in these locations. The elevations within the coal ash area are at the "rough grade" elevations shown on the cross sections in our bid document. In addition, the drainage swale is constructed at the finished grade elevations and location as shown on the Site Plan Map supplied to Fugro by Duane Moy, P.E., of M.W. Cude and Associates. This map was used as the base map for Plate 1, Cross Section Location Map, included in the bid specification document prepared by Fugro.

We appreciate the opportunity to work with SAHA on this challenging project. Please call me at 590-8393 if you have any questions.

Sincerely,

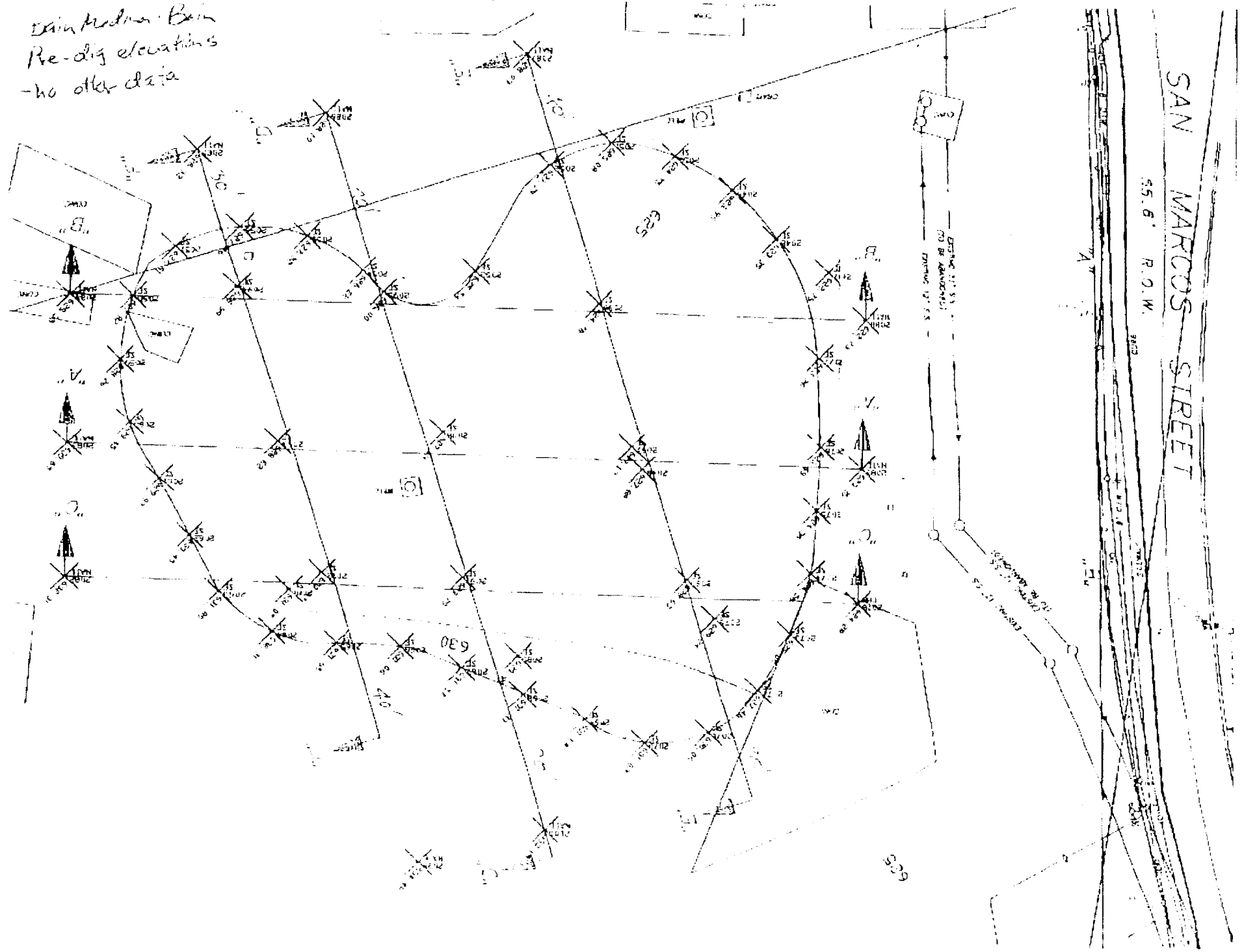
**FUGRO ENVIRONMENTAL, INC.**

Timothy J. Dudit, R.G., C.P.G.  
 Environmental Manager

TJD/(649026)4.DOC

Copies Submitted: Mr. Oscar Cervantes, SAHA, San Antonio, Texas (1)

Drain Median - Berm  
Re-dig elevations  
- no other data



## CHRONOLOGY

### SAHA Swift Site

1901 South San Marcos Street, San Antonio, Texas

**January 1989:** Aptus Environmental Services - Report on the removal and disposal of PCB contaminated transformers from the subject property.

**July 1991:** Trinity Testing Laboratory - Closure report for removal of three underground storage tanks (USTs) and contaminated soil from the subject property.

**June 1992:** Trinity Testing Laboratory - Site assessment for soil and groundwater contamination from previously removed USTs.

**July and October 1992:** Trinity Testing Laboratory - Quarterly monitoring reports for monitor wells at the subject property.

**September 1993:** Clean Environments, Inc. - Phase I Environmental Site Assessment of the subject property.

**November 1993:** Clean Environments, Inc. - Report on sampling and analysis of waste oil drum contents.

**February 15, 1994:** Fugro McClelland (Southwest), Inc. - Preliminary geotechnical study report which included the discovery of coal ash waste in boring B-3.

**February 15, 1995:** Fugro Environmental, Inc. - Phase II Environmental Site Assessment (ESA) of coal ash waste at the subject property.

**May 1995:** Groundwater sampling conducted.

**June 21, 1995:** Fugro Environmental, Inc. - Remedial Site Investigation of the coal ash waste, soil and groundwater at the subject property.

**March 22, 1996:** Fugro Environmental, Inc. - Submittal *Site Closure Plan* to TCEQ.

**October and November 1996:** Construction of the FML coal ash cap over the 0.91-acre coal ash landfill area.

**February to July 1997:** Excavation, testing, special waste authorization, and disposal of coal ash waste outside the FML capped coal ash landfill area. Monitoring wells MW-1, MW-2, MW-3, MW-7 and MW-8 were plugged and abandoned due to their locations within to the coal ash cap or excavated coal ash waste materials.

**August, 1997:** Additional site investigation to delineate the extent and character of the coal ash waste outside the FML capped coal ash area and installation of additional monitoring wells.

## CHRONOLOGY

### SAHA Swift Site

1901 South San Marcos Street, San Antonio, Texas

**April 1998:** Submittal of the revised *Site Closure Plan* to the TCEQ. This report was revised per comments from Mr. Byron Ellington of the TCEQ on the March 1996 *Site Closure Plan*.

**March 1999:** Additional investigation performed consisting of drilling four test holes to a depth of 10 feet below ground surface and collecting soil samples. These sample locations were along the northern boundary of the Site and their purpose was to delineate the northern extent of the coal ash waste. This investigation was in response to a request made by the TCEQ on July 18, 1998.

**July 2000:** Submittal of the *Additional Investigation Report* to the TCEQ.

**October 2001:** Groundwater sampling conducted.

**August 2004:** Additional soil samples for PAHs, pH and total organic carbon were collected. Groundwater sampling was also conducted at this time.

TABLE 1: SUMMARY OF CHEMICAL ANALYSES	
PARAMETER (Conc: mg/kg)	GRAB SAMPLE
GAMMA-BHC (LINDANE)	<0.01
CHLORDANE	<0.02
ENDRIN	<0.01
HEPTACHLOR & HEPTACHLOR EPOXIDE	<0.008
METHOXYCHLOR	<0.02
TOXAPHENE	<0.05
TOTAL ARSENIC	<1.0
TOTAL MERCURY	<0.05
2,4-D	<0.02
2,4,5-TP	<0.02
SELENIUM	<0.05
SILVER	<1.0
LEAD	<1.0
CHROMIUM	<1.0
CADMIUM	<0.05
BARIUM	<1.0
REACTIVE CYANIDES	<5.0
REACTIVE SULFIDES	<10.0
FLASH POINT	<150.Degrees
pH, STANDARD UNITS	<7.0

**4.0 CONCLUSIONS AND RECOMMENDATIONS.** The sample from the 55-gallon drum did not indicate the presence of any chemical compounds which would require transportation and treatment/disposal as a RCRA or CERCLA hazardous waste or as a Texas Natural Resource Conservation Commission (TNRCC) Class 1 nonhazardous waste. However, based upon the waste characteristics observed during field activities, it is expected that the approximately 20 gallons of waste liquid (present in the drum at the site) will be regulated as waste oil under TNRCC jurisdiction. Accordingly, this waste oil must be disposed at a licensed waste oil recycling facility.



A & B Environmental services, Inc.  
 1643 Federal Road  
 Houston, Texas 77015  
 (713) 453-6060

November 19, 1993

TCLP LEACHATE ANALYSIS

TO: Clean Environments, Inc.  
 Attn: Ben Hernandez  
 401 Isom Rd., Ste. 580  
 San Antonio, TX 78216

P.O. #:  
 Ref: #10.6849 Acres-BEZ-1343  
 San Antonio

Sample ID : #1343-BH-01  
 Matrix : Water  
 Date Collected : 11/02/93 @14:00

Lab ID : 8661.11  
 By : Ben

HW #	CONSTITUENT	METHOD/ANALYST	RESULTS mg/l	REG LIMIT mg/l
D004	Arsenic	200.7 TW	<1.0	5
D005	Barium	200.7 TW	<1.0	100
D006	Cadmium	200.7 TW	<0.5	1
D007	Chromium	200.7 TW	<1.0	5
D008	Lead	200.7 TW	<1.0	5
D009	Mercury	200.7 TW	<0.05	0.2
D010	Selenium	200.7 TW	<0.5	1
D011	Silver	200.7 TW	<1.0	5
D020	Chlordane	8080 DH	<0.02	.03
D012	Endrin	8080 DH	<0.01	.02
D031	Heptachlor	8080 DH	<0.008	.008
D031	Heptachlor Epoxide	8080 DH	<0.008	.008
D013	Lindane	8080 DH	<0.01	0.4

REPORTED BY *Rich H. Wall*  
 DATE: 11/19/93



## Volatile TCLP Analysis

Acquisition Name	VA2167.D
Acquisition Date & Time	17 Nov 93 2:44 pm
Sample (Lab ID)	8661.11

Purge Volume (ml)	0.05
Dilution Factor	100.00

Analyte	Amount Found (ug/l)	PQL (ug/l)	Regulatory Level (ug/l)
Vinyl Chloride	<100	100.0	200
1,1-Dichloroethene	<100	100.0	700
2-Butanone	<10000	10000.0	200000
Chloroform	<1000	1000.0	6000
Carbon Tetrachloride	<100	100.0	500
1,2-Dichloroethane	<100	100.0	500
Benzene	<100	100.0	500
Trichloroethene	<100	100.0	500
Tetrachloroethene	<100	100.0	700
Chlorobenzene	<100	100.0	100000

Surrogate	Amount Found (ug/l)	Spike Level (ug/l)	Recovery	Recovery Limits	
Dibromofluoromethane	4.6	5.0	92%	70 to 125 %	Pass
Toluene-d8	5.3	5.0	107%	80 to 120 %	Pass
p-Bromofluorobenzene	4.4	5.0	89%	75 to 130 %	Pass

PQL - The Practical Quantitation Limit represents the level below which an analyte may be identified but not accurately quantified.

Regulatory Level - The USEPA Maximum Contamination Limit for this analyte.

Data release authorized by: