N83447.AR.000584
NAS FORT WORTH
5090.3a

FINAL 2000 ANNUAL GROUNDWATER REPORT FOR SOLID WASTE MANAGEMENT UNIT 68 AND AREA OF CONCERN 7 NAS FORT WORTH TX

5/1/2001

HYDROGEOLOGIC

568 0 File: 17G
P.W.

NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 568

File:
P.W. 17A-80-11

568 1 568

HYDRO GeoLogic INC.

FINAL
SWMU 68 AND AOC 7
2000 ANNUAL GROUNDWATER REPORT
LPST #104819
NAS FORT WORTH JRB, TEXAS

Prepared for
U.S. Air Force Center for Environmental Excellence
Brooks AFB, Texas

Contract Number F41624-95-D-8005
Delivery Order Number 0016

May 2001

HydroGeoLogic, Inc
12343 Hymeadow Drive, Suite 3B
Austin, TX 78750
(512) 336-1170

HYDRO GeoLogic INC

May 16, 2001

Mr. Don Ficklen
AFCEE/ERD
3207 North Road
Brooks AFB, Texas 78235

Re: Final 2000 Solid Waste Management Unit 68 (SWMU 68) and Area of Concern 7 (AOC 7) Annual Groundwater Monitoring Report and Site Closure Request
NAS Fort Worth JRB, Texas
LPST ID #104819
Facility ID No. 0009696

Dear Mr. Ficklen

Please find the enclosed copy of the Final 2000 SWMU 68 and AOC 7 Annual Groundwater Monitoring Report and Site Closure Request Form. This document presents groundwater data acquired at SWMU 68 and AOC 7 during the 2000 Basewide Quarterly Groundwater Sampling Program with conclusions and recommendations for site closure. This document was prepared to fulfill the reporting requirements as specified in Title 30 of the Texas Administrative Code, Chapter 334 and in accordance with appropriate TNRCC guidance documents. AFCEE comments were incorporated into this Final Report, which was submitted to the Texas Natural Resource Conservation Commission (TNRCC) Petroleum Storage Tank (PST) Division.

If you have any questions, please do not hesitate to contact me at (512) 336-1170.

Sincerely,

Todd Harrah

Todd C. Harrah
Project Manager

Enclosures

cc: Mr. Michael Dodyk, HQ AFCEE-ERD
Ms. Audrie Medina, UNITEC

HydroGeoLogic, Inc
12343 Hymeadow Drive • Suite 3B • Austin, Texas 78750 • USA
(512) 336-1170 • Fax (512) 336-0178 • http://www.hgl.com

RESPONSES TO COMMENTS
DRAFT SWMU 68 AND AOC 7
2000 ANNUAL GROUNDWATER REPORT
AND SITE CLOSURE REQUEST
LPST #104819
NAS FORT WORTH JRB, TEXAS

Responses to AFCEE's Comments

Comment 1 *Please include the Contract/Deliverable number (F41624-95-D-8005/0016) in the header of the cover letter.*

Response **Both the contract and delivery order number were added to the cover letter.**

Comment 2 *1st sentence Please replace "semiannual" with "semi-annual" here and throughout the document*

Response **"Semiannual" was replaced with "semi-annual" throughout the report.**

Comment 3 *Please rewrite the fourth and fifth sentences of the paragraph as: "These investigations at SWMU 68 and AOC 7 are part of the ongoing Installation Restoration Program (IRP) at NAS Fort Worth JRB, Texas. This report presents justification for site closure to the Texas Natural Resource Conservation Commission (TNRCC), Petroleum Storage Tank (PST) Division. The Leaking Petroleum Storage Tank (LPST) Site Closure Request Form TNRCC-0028 (Appendix E) is submitted in accordance with 30 TAC 334." Also, please add the LPST Site Closure Request Form as Appendix E. Also, please use "SWMU 68 and AOC 7" in lieu of "SWMU 68/AOC 7" whenever possible*

Response **Both fourth and fifth sentences were revised as requested. The SCR form was added as Appendix E, and "SWMU 68/AOC 7" was replaced with "SWMU 68 and AOC 7" throughout the report. In addition to being included as Appendix E, the SCR will also be submitted to the TNRCC under separate cover, consistent with the request made by the TNRCC PST Project Manager during the January 2001 AFCEE/TNRCC Meeting held in Austin Texas.**

Comment 4 *1st paragraph, 4th sentence. Please replace "above ground" with "above-ground" throughout the document.*

Response **"Above ground" was replaced with "above-ground" throughout the report.**

Comment 5 *1st paragraph, 6th sentence. Please indicate the type of jet fuel contamination present at SWMU 68. Also, please replace "of" with "at".*

Response **JP-4 was inserted into the sentence as requested.**

Comment 6 *2nd paragraph, 1st sentence. Please show the referenced roads on Figure 1.2.*

Response **Both Military Parkway and Range Road were added to Figure 1.2.**

Comment 7 *2nd paragraph. Please rewrite the second sentence as "The duration of refueling operations at AOC 7 is unknown, however, the station was abandoned in the 1960's".*

Response **The sentence was revised as recommended.**

Comment 8 *2nd paragraph. Please explain what evidence is available to show that the station was abandoned in the 1960's.*

Response **Documentation of tank removal has been searched for extensively at NAS Fort Worth and the TNRCC. AOC 7 (Former Base Refueling Station) was abandoned in the 1960s and records of the removal of the tanks cannot be found. An electromagnetic geophysical survey was performed in 1991 to investigate the possibility of any remaining tanks at the site. This survey was inconclusive due to known subsurface interference in the area, however, no tanks were confirmed and therefore were presumed removed. An account of the attempt to confirm the removal of the tanks is also provided in the Final Site Assessment Summary Report Form (TNRCC-0562), HydroGeoLogic Inc., November 2000.**

Comment 9 *2nd paragraph, 4rd sentence Please replace "to determine if any USTs remained at the site" with "to confirm that the USTs had been removed from the site "*

Response **The sentence was revised as recommended.**

Comment 10 *2nd paragraph, 5th sentence. Delete the word "determined". Also, change "thus no tanks were confirmed to exist beneath the site." to "thus the presence of tanks beneath the site could not be confirmed."*

Response **The sentence was revised as recommended.**

Comment 11 *2nd paragraph. Please describe how jet fuel was found in the soil and groundwater in the 1960's. Also, please give the criteria used to determine that SWMU 68 is the source of contamination.*

Response **It was documented in the Final Remedial Action Plan (Parsons ES, 1997) that based on existing site characterization data, the suspected contaminants in the ST-14 and SD-13 groundwater area were JP-4 and gasoline. This contamination was identified in the french underdrain (SWMU 64) and associated oil/water separator (SWMU 67). The french underdrain system intercepted and rerouted contaminants from both AOC 7 and the up-gradient**

SWMU 68 release sites. There was never any jet fuel stored at AOC 7; therefore, the source existed somewhere upgradient of the site (i.e., SWMU 68). Petroleum hydrocarbon contamination in groundwater is historically well delineated and the source was clearly the SWMU 68 POL Farm and associated pipelines. A citation to documentation of the SWMU 68 release identification will be added to the text for clarification.

Comment 12 *2nd sentence Please use "JP-4" in lieu of "jet fuel" when appropriate throughout the report.*

Response **JP-4 was used throughout the report as recommended.**

Comment 13 *Please include a discussion of the previous investigations that lead to the current investigation.*

Response **A complete discussion of the many previous investigations at SWMU 68 and AOC 7 was recently presented by HydroGeoLogic, Inc. in the Site Assessment Report for SWMU 68 and AOC 7 (November 2000). This comprehensive report was prepared and submitted at the request of the TNRCC. A reference will be provided to the text for clarification.**

Comment 14 *Last sentence on the page Please end the sentence with "...stability and to comply with ongoing TNRCC requirements."*

Response **The sentence was revised as recommended.**

Comment 15 *Since only one analytical method is being used, please refer to it in the singular form throughout this section.*

Response **The singular form, "analysis", will be used throughout this section.**

Comment 16 *2nd paragraph, last sentence. Please use "JP-4" in place of "Jet Propulsion Fuel, grade 4" as it has been previously spelled out. Also, please replace "were the cause at the abandoned base refueling station AOC 7" with "were the likely sources of contamination at the abandoned base refueling station AOC 7".*

Response **The sentence was revised as requested.**

Comment 17 *3rd paragraph, 1st sentence. Please insert the word "ago" between the words "long" and "been"*

Response **"Ago" was inserted between "long" and "been" as recommended.**

Comment 18 *Please give a detailed discussion of the "seasonal" effects on LNAPL levels and explain why the "seasonal" effects are not applicable when applying for an LPST*

Closure Request Form. These issues must be addressed in detail before the LPST Closure Request Form can move forward.

Response **HydroGeologic initiated weekly (later monthly) LNAPL removal at well SD13-07 in August 1998. Since October 1999, very small measurable product levels have been removed and recorded. However, in the Fall every year (August through October), approximately 0.12 feet of LNAPL is detected and removed. It is assumed that the occurrence of LNAPL in small quantities at the same time period every year is related to changes in the groundwater table elevation. This pattern of observations was presented to the TNRCC in a January 2001 meeting. The TNRCC indicated that they would accept the Site Closure Request for consideration since the amount of LNAPL detected was limited and had remained stable/predictable over a period of time.**

Comment 19 *2nd paragraph, last sentence. Replace "inappreciable" with "small detected".*

Response **"Small detected" replaced "inappreciable" in the sentence as requested.**

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
PETROLEUM STORAGE TANK

LPST SITE CLOSURE REQUEST FORM

This form is to be used to request closure for Leaking Petroleum Storage Tank (LPST) cases. The soil and groundwater cleanup goals must be met prior to submitting this form. These cleanup goals should be derived from either:

- the TWC *Guidance Manual for LPST Cleanups in Texas*, January 1990 **so long as these goals were achieved prior to November 8, 1995**, or
- the TNRCC *Risk-Based Corrective Action for Leaking Storage Tank Sites* document, January 1994 (RG-36)

Submission of this Site Closure Request constitutes certification by the Responsible Party, Corrective Action Specialist (CAS), and Corrective Action Project Manager (CAPM) that all necessary corrective actions have been completed and final closure of the subject site is appropriate at this time. By signing this Site Closure Request, the Responsible Party, CAS, and CAPM acknowledges that no further corrective actions, with the exception of activities subsequently approved by the TNRCC, will be eligible for reimbursement after the RP's signature date. Although costs for activities such as groundwater monitoring or remediation system operation and maintenance may have been approved for an annual period, these activities should cease upon submission of the Site Closure Request as these activities will not be considered eligible for reimbursement beyond the date of the Site Closure Request Additionally, any costs relating to site assessment or other corrective action activities will not be eligible for reimbursement if the activities are conducted after the date of the Site Closure Request, unless specifically approved by the TNRCC. If, upon review by the TNRCC, the TNRCC concurs that the site meets the conditions for final closure, the costs for closure activities necessary to restore the site to its original condition will be reviewed and approved as appropriate. If the TNRCC determines that the site does not meet the conditions for final closure, the TNRCC will request a workplan and cost proposal for the next appropriate corrective action activity necessary to proceed towards final closure unless appropriate activities have previously been approved. The only type of proposal that should be attached to the Site Closure Request is for site closure costs Any proposals attached to the Site Closure Request for activities other than site closure will not be processed and will be withdrawn from consideration.

If any of the following apply, the site is not ready for closure and this form should not be submitted:

- **The appropriate LPST cleanup goals have not been met (a proposal for the next appropriate step should be submitted instead);**
- **Phase-separated hydrocarbons (>0.1 feet) currently exist at the site;**
- **The contaminant plume is increasing in size; or**
- **All wastes and other material generated from the site have not been properly disposed;**

Do not use this form:

- **if the release was not from a regulated underground or aboveground storage tank;**
- **for tank removal-from-service activities not associated with an LPST site (use the *Release Determination Report Form* (TNRCC-0621) or other appropriate format);**
- **for situations where the second set of confirmation samples collected during tank removal-from-service activities confirms suitability for closure (use the *Release Determination Report Form* (TNRCC-0621) or other appropriate format); or**
- **for shutdown of remediation systems or for plugging of monitor wells when site closure is not yet appropriate.**

If asked to initiate additional activities, submit a workplan and preapproval request for those activities on sites eligible for reimbursement. Please review the document entitled *Preapproval for Corrective Action Activities* (RG-111) for procedures on preapproval requests and the other PST guidance pamphlets and rules for additional information on LPST sites.

Complete all blanks and check "yes" or "no" for all inquiries. **IF A COMPLETED *ASSESSMENT REPORT FORM* (TNRCC-0562) WAS PREVIOUSLY SUBMITTED, YOU DO NOT NEED TO ANSWER THE QUESTIONS WITHIN THE DARK OUTLINED AREAS UNLESS THE INFORMATION HAS CHANGED.** If the question is not applicable to this site, indicate with N/A. If the answer to the question is unknown, please indicate. If space for supplemental information is needed, insert numbered footnote and provide brief supporting discussion in Section VI, Justification for Closure.

SITE CLOSURE REQUEST FORM

I. GENERAL INFORMATION

LPST ID No.: 104819 Facility ID No.: 0009696

Responsible Party: Air Force Center For Environmental Excellence

Responsible Party Address: 3207 North Road City: Brooks Air Force Base State: TX Zip: 78235-5363

Facility Name: Fort Worth Naval Air Station Joint Reserve Base

Facility Street Address: Desert Storm Road and Military Parkway

Facility City: Fort Worth County Tarrant

What is the current use of site? (indicate all that apply):
☐ Residence[1] ☐ School or Day Care center ■ Commercial/Industrial[1] ☐ Recreational ☐ Agricultural

What is the anticipated future use of the site? (indicate all that apply):
☐ Residence[1] ☐ School or Day Care center ■ Commercial/Industrial[1] ☐ Recreational ☐ Agricultural

Adjacent property use (indicate all that apply):
☐ Residence[1] ☐ School or Day Care Center ■ Commercial/Industrial[1] ☐ Recreational ☐ Agricultural

Distance to nearest off-site residence from property line. NA feet in NA direction.

Distance to nearest school or day care center from property line. NA feet in NA direction.

II. CLOSURE SCREENING INFORMATION

Based on the *Limited Site Assessment Report* form or the Risk-Based *Assessment Report Form* (TNRCC-0562), the site is currently a **Priority** 4.1 site. If the site priority has changed, list the other priorities that previously pertained to this site:

■ Yes ☐ No	Have non-aqueous phase liquids (NAPL) ever been present at this site (including tankpit observation wells)? If yes, is NAPL present now (thickness ≥0 1 feet)? ☐ Yes ■ No Current thickness: <0.01ft ft. If NAPL is currently present, stop here and do not submit this form for case closure. Initiate or continue activities necessary for the removal of all recoverable NAPL at the site
■ Yes ☐ No	Were all soils, recovered contaminated groundwater, and any phase-separated hydrocarbons properly disposed of, treated, recycled or reused in accordance with TNRCC requirements? If No, stop here and do not submit this form. Provide a proposal (if the site is eligible for reimbursement) to properly dispose or otherwise manage the wastes/materials or, if the site is not eligible for reimbursement, provide documentation of proper disposition of the wastes.
■ Yes ☐ No	Do contaminant concentrations show a consistent decreasing or low static trend? If No, is the contaminant plume increasing in size? ☐ Yes ☐ No If Yes, stop here, do not submit this form, and initiate activities to control plume migration.

[1] See definition in 30 TAC 334.202

III. RELEASE ABATEMENT/REMEDIATION

Date Release Discovered: **1960s**

Substance(s) released: (check all that apply) ■ Gasoline ❑ Alcohol-blended fuel (Type and percentage of alcohol _____)
❑ Diesel ❑ Used Oil ■ Jet Fuel (type **JP-4**) ❑ Aviation Gasoline ❑ Other: (be specific)_____

Source of Release (specify all that apply):
❑ Spills/overfills ■ Piping leaks ❑ Dispenser leaks ❑ Tank corrosion ❑ Other:_____

■ Yes ❑ No Has a receptor survey been conducted?
■ Yes ❑ No Has a water well inventory been conducted?

❑ Yes ■ No Have vapor impacts to buildings or utility lines ever been associated with this release? If Yes, specify the measures taken to abate the impact and indicate the latest date that an impact was noted:

❑ Yes ■ No Have subsurface utilities ever been affected with NAPL or vapors by this release? If Yes, indicate the latest date that an impact was noted:

If not already provided in *Release Determination Report Form* (TNRCC-0621), or if the information has changed since submittal of the *Release Determination Report*, indicate number of tanks currently and formerly located at this site (attach pages as necessary):

	Type (UST/AST)	Product Type	Size (approx. gal)	
Current:	AST-1159	JP-4	2.5 million gallons	
	AST-1156	JP-4	630,000 gallons	
	AST-1157	JP-4	630,000 gallons	
				Date Removed from Service
Former:	UST	Gasoline/Diesel	Unknown	Unknown (tank numbers, volumes and removal were not permanently recorded)

■ Yes ❑ No If the tanks were permanently removed from service, were native soil samples collected from beneath the tanks **and** the entire length of the piping? If No, explain why not:

❑ Yes ■ No Was a new UST system installed? If Yes, indicate the date, number of tanks and their contents:
The fuel loading system at SWMU 68 was repaired and returned to service.

❑ Yes ■ No Are there any open excavations at the site? If Yes, state size, location, purpose, and status for each of the excavations:

Type(s) of soil remediation and time periods the remediation method was operational (indicate all that apply):
❑ Excavation _____ to _____ (dates), and
❑ Aboveground Bioremediation/Aeration _____ to _____ (dates), or
❑ Thermal Treatment _____ to _____ (dates), or
❑ Disposal _____ to _____ (dates).
■ Bioventing **April 1996** to **April 1998** (dates).
❑ Soil Vapor Extraction _____ to _____ (dates).
❑ In-Situ Bioremediation _____ to _____ (dates).
❑ None

III. RELEASE ABATEMENT/REMEDIATION (Continued)

Type(s) of groundwater remediation and time periods the remediation method was operational (indicate all that apply):

- ☐ Groundwater Pump and Treat _____ to _____ (dates)
- ☐ Air Sparging/SVE _____ to _____ (dates)
- ☐ In-Situ Bioremediation _____ to _____ (dates)
- ☐ Other:_____ _____ to _____ (dates)
- ■ None

■ Yes ☐ No Were copies of all receipts and manifests to document disposition of all wastes submitted to the TNRCC? If No, attach copies to this form.

Measured total volume of NAPL recovered: **unknown** gallons.

Estimated total volume of soil treated/removed. **0** cubic yards (*exclude soil cuttings removed from borings*)

Estimated total volume of groundwater treated/removed: **0** gallons (if known).

Estimated pounds of hydrocarbons removed or treated from soil (if known): **NA**

Estimated pounds of hydrocarbons removed or treated from groundwater (if known): **NA**

Estimated percent of total contaminants removed or treated (if known): **NA**

IV. SOIL DATA VALIDATION

Are there now affected surface soils (contamination exceeding health-based target concentrations) present within 2 feet below the ground surface? ❑ Yes ■ No ❑ Unknown

Type of surface cover over affected surface soil area:

■ Paved [■ Asphalt or ■ Concrete] Percent of affected soils covered? >50% ❑ Unpaved

❑ Other:

Is there public access to the uncovered affected surface soil area? ❑ Yes ■ No

Total number of borings: >100 (including those completed as monitor wells)

■ Yes ❑ No Was the vertical and horizontal extent of soil impacts defined (to the more stringent of health-based target or groundwater protective soil concentrations horizontally and to groundwater or nondetect vertically) by the borings?

❑ Yes ■ No Are shallow (0-15 feet below ground surface) soils affected (contaminant levels exceed health-based target concentrations) on adjacent properties (including right-of-way properties).

■ Yes ❑ No Were all soil sample collection, handling, transport, and analytical procedures conducted in accordance with TNRCC and EPA requirements? If No, provide justification:

MAXIMUM SOIL CONCENTRATION LEVELS

Soil Contaminants	Sample Date	Sample Location	Depth (in feet below ground surface)	Analytical Method	Maximum Concentration* (mg/kg)	Target Cleanup Goals** (indicate source of target cleanup goals: 1990 or 1994 [Plan A or B] guidance)
Benzene	3/1998	GP3-9	9-11	SW8260B	3.3	6.27 (Plan B)
Toluene	3/1998	GP3-9	9-11	SW8260B	<0.74	69 (Plan A, Cat I)
Ethylbenzene	3/1998	GP3-9	9-11	SW8260B	4 8	160 (Plan A, Cat I)
Total Xylenes	3/1998	GP3-9	9-11	SW8260B	7.0	568 (Plan A, Cat I)
Total BTEX	NA					
TPH	NA					
Other Napthalene	3/1998	GP3-9	9-11	SW8260	2	389 (Plan A, Cat I)
Other						

* Enter maximum soil analytical results for soils remaining beneath the site (take into account all available data, including information obtained during the release determination (tank removal from service, minimal site assessment, etc)).

** If Plan A cleanup goals were used, provide the potential groundwater beneficial use category and a justification of how it was determined in Section VI.
1990 cleanup goals may be used only if all activities necessary to meet those goals were completed by November 8, 1995.

V. GROUNDWATER DATA VALIDATION

Is groundwater at the site impacted? ❑ Yes ■ No

Did the assessment document that groundwater was not impacted? ■ Yes ❑ No If No or unsure, provide justification for not determining whether there is a groundwater impact:_____

Total number of monitoring wells installed. **48** _____ Number of monitor wells remaining at the site: **48** _____
Will any of the remaining wells be used in the future? ■ Yes ❑ No If Yes, specify exactly which well(s) will be used:__
Wells to be used for base-wide groundwater monitoring and further compliance monitoring at POL tank farm which will remain in use.
If No, they must be plugged in accordance with Water Code 32.017 **after** obtaining approval for site closure. **Do not** plug the wells until you receive concurrence on site closure. Costs of well plugging may be allowable for reimbursement if all eligibility requirements are met and if the wells were installed under the direction of the TNRCC specifically to address the confirmed release at the site. Provide a proposal with this form (if the site is eligible for reimbursement) for costs of the well plugging

Measured total dissolved solids (TDS) concentration in groundwater. **570** mg/l. From which monitor well(s) was/were the sample(s) collected? **WHGLTA010**

Measured groundwater yield at the site: _____ gallons/day (as determined from well adequately screened in the impacted aquifer). ■ Not determined.

Measured groundwater depth at the site ranges between **16.0** and **21.5** feet below the top of well casing.

Time period of groundwater monitoring at the site (dates): **1993** to **October 2000**.

Total number of groundwater monitoring events: **2 during the 2000 sampling period**.

What type of aquifer is impacted? (unconfined, confined, semi-confined). **Unconfined**

Distance from maximum plume concentration point to nearest existing downgradient well location (not monitor well): **>0.5 mi** in _____ direction (Input ">0.5 mile" if there is no well within 0.5 mile downgradient)

Are any water supply wells impacted or immediately threatened? ❑ Yes ■ No
If Yes, specify type of well: ❑ Drinking water ❑ Non-drinking water

Are there any existing water wells located within the area of impacted groundwater? ❑ Yes ■ No
If Yes, specify type of well: ❑ Drinking water ❑ Non-drinking water

Has surface water been affected? ❑ Yes ■ No

Will the groundwater contaminants likely discharge to a surface water body? ❑ Yes ■ No

What is the potential impact of affected groundwater discharge on surface water?
❑ Current impact ■ Discharges within 500 ft ❑ Discharges within 500 to 0.25 miles
❑ No potential impact

■ Yes ❑ No Were groundwater sample collection, handling, transport, and analytical procedures conducted and documented in accordance with TNRCC requirements? If no, provide justification:_____

V. GROUNDWATER DATA VALIDATION (Continued)

■ Yes ❑ No — Is the extent of groundwater contamination defined (to MCL concentrations)? If No, provide justification for not defining the plume:

❑ Yes ■ No — Have groundwater impacts from this release been detected on adjacent properties? If No, is off-site migration probable? ❑ Yes ■ No Is there documentation that off-site migration has **not** occurred (sample results from off-site sampling point)? ■ Yes ❑ No

❑ Yes ■ No — Was the static groundwater level above the top of the well screen in any monitor wells during any of the last 4 monitoring events? If Yes, provide a statement of validity regarding these samples:

■ Yes ❑ No — Have groundwater samples from all monitor wells met the target cleanup goals for the last four consecutive sampling events?

MAXIMUM GROUNDWATER CONCENTRATIONS

Groundwater Contaminants	Sample Date	Sample Location	Laboratory Method	Maximum Concentration* (mg/l)	Target Cleanup Goals** *(indicate source of target cleanup goals: 1990 or 1994 [Plan A or B] guidance)*
Benzene	10/2000	ST14-W16	SW8260B	0.001	0.0294
Toluene	4/2000	ST14-03	SW8260B	0.003	7 3
Ethylbenzene	ND			ND	3.65
Total Xylenes	ND			ND	73.0
Total BTEX	NA				
TPH	NA				
Other					
Other					

* Enter maximum groundwater analytical results from the most recent 12 months of monitoring.

** 1990 cleanup goals may be used only if all activities necessary to meet those goals were completed by November 8, 1995.

VI. JUSTIFICATION FOR CLOSURE

Please provide a brief summary supporting this request for site closure, including footnoted discussions for the above entries as necessary. **Include discussions providing necessary justifications for any site conditions which deviate from the specific requirements of TNRCC rules and policies, including the document *Risk-Based Corrective Action for Leaking Storage Tank Sites*.** Provide documentation to justify case closure, including information which addresses the potential for future exposure, the existence of impervious cover or other actions which may prevent exposure or limit infiltration, the absence of receptors, etc.

Groundwater usage of the site meets the Category II definition where TDS is less than 3000 mg/kg and there is no beneficial use within 0.5 miles of the site Current site conditions are industrial in nature and will remain industrial in the future. The site is mostly covered by asphalt, concrete driveways, and concrete slab foundations for work buildings. Farmers Branch Stream is located downgradient to both sites but is intermittent in flow and is not considered to be for public usage.

Groundwater monitoring has been performed most recently in 2000 on a semiannual basis. A total of 8 wells were chosen for sampling based on elevated historical concentrations, and the proximity of the wells to the suspected release area. All BTEX compounds were well below the Plan A Category II concentrations during the 2000 sampling.

LNAPL has been measured at the site in four wells. Active monitoring and recovery were initiated from the day of discovery and have recently been measured <0.01 feet in thickness LNAPL was not observed between the months of January through August 2000. During one event in September 2000, LNAPL was measured in each of the wells ranging from <0.02 to 0.1 feet in thickness One well was also observed to have LNAPL in November 2000 with a thickness of 0.01 feet. These two events are considered to be attributed to a seasonal change in groundwater table elevation and not indicative of an increase in LNAPL volume or changing site conditions

Soil samples were collected from the fuel loading area in the vicinity of the bioventing remediation system which was installed in 1996 and run continuously for 2 years. The system was installed at this location due to the elevated concentrations of contaminants detected during historical field events (benzene as high as 67 mg/kg). The post remediation samples were collected in March 1998 to determine the effectiveness of the system Of the 27 subsurface samples collected, the highest benzene concentration was 3.3 mg/kg in the most affected area. The Plan A Category II Target Concentration for benzene in soil is 0.74 mg/kg in soil and the Plan B calculated concentration for benzene in soil was determined to be 6.27 mg/kg as specified in the 1997 Remedial Action Plan submitted to the TNRCC by Parsons Engineering Science, Inc. Only one soil sample exceeded the Plan A Concentration for benzene at a level of 3.3 mg/kg which is lower than the calculated site specific Plan B concentration of 6.27 mg/kg. Toluene, Ethylbenzene, and Xylenes were also detected but well below the Plan A levels. The remediation of soils is considered a success as a result of the system and further corrective action should not be necessary.

Based on the above information, this site no longer poses a threat to current or future human health and has met the requirements for closure under the TNRCC/PST Division.

VII. REPORT PREPARATION

568 15

Based on the results of the site investigation and the additional information presented herein, I certify that the site investigation activities performed either by me, or under my direct supervision, including subcontracted work, were conducted in accordance with accepted industry standards/practices and further, that all such tasks were conducted in compliance with applicable TNRCC published rules, guidelines and the laws of the State of Texas I have reviewed the information included within this report, and consider it to be complete, accurate and representative of the conditions discovered during the site investigation. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties **I certify that the site has met all requirements for closure and that closure is appropriate.**

Project Manager: Kent Duran CAPM No.: 01534 Expiration Date 4/10/2003

Company HydroGeoLogic, Inc.

Address. 12343 Hymeadow Drive, Bldg. 3-B City: Austin State: TX Zip: 78750

Telephone No : 512/336-1170 Fax No. 512/336-0178

Signature: Kent Duran Date: 5/15/01

By my signature affixed below, I certify that I am the duly authorized representative of the Correction Action Specialist named and that I have personally reviewed the site investigation results and other relevant information presented herein and considered them to be in accordance with accepted standards/practices and in compliance with the applicable TNRCC published rules, guidelines and the laws of the State of Texas Further, that the information presented herein is considered complete, accurate and representative of the conditions discovered during the site investigation. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties **I certify that the site has met all requirements for closure and that closure is appropriate.**

Corrective Action Specialist: James Costello CAS No.: 00700 Expiration date: 6/27/2001

Company. HydroGeoLogic, Inc.

Address: 1155 Herndon Parkway, Suite 900 City Herndon State: VA Zip: 20170

Telephone No.: 512/336-1170 Fax No.: 512/336-0178

Signature: [illegible] for Date: 5/16/01

By my signature affixed below, I certify that I have reviewed this report for accuracy and completeness of information regarding points of contact and the facility and storage tank system history and status. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report related to the contact information, and the facility and storage tank system history and status information, I may be subject to administrative, civil, and/or criminal penalties. I attest that I have reviewed this report for accuracy and completeness. I understand that I am responsible for addressing this matter
I certify that the site has met all requirements for closure and that closure is appropriate.

Name of Responsible Party contact: Michael Dodyk, P.E., HQ AFCEE/ERD

Telephone No.: 817/782-7167 Fax No.: 817/782-6399

Signature: Michael R Dodyk Date: 15 May 01

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH THIS FORM IF NOT PREVIOUSLY SUBMITTED:

- A site map illustrating the locations of the entire UST and/or AST system (including piping, dispensers, observation wells, etc.), all soil borings and monitoring wells and all other sampling points, subsurface utilities, and surface water within 500 feet.
- A copy of the latest groundwater gradient map (if monitor wells were completed).
- Summary tables of all soil, groundwater and surface water analytical results, including samples collected from any tank removal from service activities, tank system repair activities, and those collected from borings and monitor wells. The tables must clearly identify the sample number, date of collection, sampling locations, depths (if applicable), and analytical results.
- Copies of any manifests or other waste receipts, and any other documents necessary for case closure.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE
BROOKS AIR FORCE BASE TEXAS

15 May, 2001

MEMORANDUM FOR DENNIS ROGERS (TNRCC)

FROM: Michael Dodyk, P.E.
HQ AFCEE/ERD
P.O. BOX 27008
Ft Worth, TX 76127-0008

SUBJECT: UST Correspondence
Final 2000 SWMU 68 and AOC 7
Annual Groundwater Monitoring Report
NAS Fort Worth JRB, Texas (Formerly Carswell AFB)
LPST ID #104819
Facility ID 0009696

Dear Mr. Rogers,

Two copies of the Final 2000 Solid Waste Management Unit 68 (SWMU 68) and Area of Concern 7 (AOC 7) Annual Groundwater Monitoring Report for NAS Fort Worth JRB, Texas are enclosed for your review. This annual report, site closure request form and the information contained within is being provided to you for the purpose of presenting the 2000 groundwater sampling data at SWMU 68 and AOC 7 and final justification for site closure with the TNRCC.

The goal for this submittal is to present the most current groundwater conditions at the site. The annual report follows guidelines as presented in TNRCC Regulatory Guidance RG-43.

Recent groundwater monitoring at the site suggests that the groundwater contaminants have stabilized. LNAPL monitoring and recovery has occurred at four monitoring wells since 1998. Based on year 2000 monitoring, LNAPL was observed in four monitoring wells in September ranging from 0.02 to 0.1 feet in thickness. This LNAPL occurrence has been infrequent over time and does not appear to indicate an increase in LNAPL volume or change in site conditions, but rather appears to be attributed to seasonal fluctuation in the groundwater table elevation. The most recent

Printed on Recycled Paper

measurements have shown LNAPL thicknesses to be less than <0.01 feet.

Previous soil sampling has shown soil concentrations to meet the appropriate pathways for the Plan A - Early Exit criteria except benzene, which was lower than the calculated site-specific Plan B concentration. A plan B Risk Assessment was performed for SWMU 68 as part of the Final Remedial Action Plan (RAP) to determine the site-specific potential risks of benzene in both soil and groundwater, along with developing Plan B Target Concentrations for soil and groundwater.

Supporting figures and attachments are included with the document.

Should you have any questions regarding this report, please contact me at (817) 782-7167

Sincerely,

Michael R Dodyk

Michael R. Dodyk, P.E.
Restoration Team Chief
ERA Restoration Division

Enclosures

cc:

Mr. Don Ficklen
HQ AFCEE/ERD
3207 North Road
Brooks AFB, TX 78235

Ms. Audrie Medina
UNITEC
2100 Bypass Rd., Building 580
Brooks AFB, TX 78235

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
PETROLEUM STORAGE TANK DIVISION
CORRESPONDENCE IDENTIFICATION SHEET

Date: May 14, 2001 LPST ID No.: 104819
Site Name: SWMU 68 and AOC 7 Facility ID No.: 0009696
Site Address: Desert Storm Road
NAS Fort Worth JRB, Texas 76127

This checklist must accompany all correspondence submitted to the RPR Section and should be affixed to the front of your submittal as a cover page. Please check the appropriate box for the type of correspondence which you have submitted to the RPR Section. Check all boxes that apply if you are submitting more than one type of correspondence. If you cannot find an appropriate category, please complete the "other" section

PROPOSALS

- ☐ Initial Abatement (1)
- ☐ Tank Removal (2)
- ☐ Excavation (3)
- ☐ Waste Treatment (4)
- ☐ Site Assessment (5)
- ☐ Aquifer Testing (6)
- ☐ VES/Sparge Testing (7)
- ☐ Qtrly. GW Monitoring (8)
- ☐ CAP Prep. (9)
- ☐ GW Extrac./Treatment (10)
- ☐ Soil Vapor Extrac (11)
- ☐ Operation & Main. (12)
- ☐ Site Closure (13)
- ☐ Plan A Risk Ass. (14)
- ☐ Plan B Risk Ass (15)
- ☐ Semi-annual GW Mon. (16)*
- ☐ Annual GW Mon. (18)
- ☐ Product Recovery (19)
- ☐ Other proposal _____

REPORTING FORMS

- ☐ Assessment Report Form (TNRCC-0562)
- ☐ LPST Case Questionnaire
- ☐ Product Recovery Report Form (TNRCC-0016)
- ☐ Release Report Form (TNRCC-0621)
- ■ Site Closure Request Form (TNRCC-0028)
- ☐ Monitoring Event Summary and Status Report (TNRCC-0013)
- ☐ Final Site Closure Report Form (TNRCC-0038
- ☐ Priority 4 LPST Case Closure Request Form (TNRCC-0461)
- ☐ Other form _____

REPORTS

- ☐ Tank Closure/Removal
- ☐ Plan A Risk Assessment
- ■ Annual Groundwater Monitoring
- ☐ O&M/Performance Mon.
- ☐ Plan B Risk Assessment
- ☐ CAP Installation/Modification
- ☐ Property Divestiture/Phase I ESA
- ☐ Corrective Action Plan (CAP)
- ☐ Aquifer/Pilot Test Results

MISCELLANEOUS

- ☐ Off-site access assistance
- ☐ Deadline Extension Request
- ☐ Tank tightness test results
- ☐ Request for State-Lead
- ☐ Request for LPST Waste Code
- ☐ Class V Reinjection Request
- ☐ Notice to Owner/Operator for CAS Services
- ☐ Petroleum-Substance Waste Manifest
- ☐ Notice of Continuation of Groundwater Monitoring
- ☐ Underground Storage Tank Registration Form
- ☐ Notice of Continuation of Operation and Maintenance
- ☐ Aboveground Storage Tank Registration Form
- ☐ Other (anything that does not fit into one of the categories above) _____

* The proposal for semi-annual monitoring and annual report (Proposal Activity 17) has been discontinued For semi-annual monitoring, use Proposal Activity 16.

I attest that all work has been conducted in accordance with accepted industry standards/practices and adhered to TNRCC guidance and rules I certify that I am aware that misrepresentation of any of the above claims is a violation of 30 TAC 33 4453(b)(1)(E) and that this violation may result in the disciplinary actions set forth in 30 TAC 334.453 and or 334 463 and 334.465

If a proposal is attached for preapproval, has the proposed work, in part or in whole, already been performed or in progress?

☐ Yes ☐ No

If yes, what work?_____

HydroGeoLogic, Inc. (Registered Corrective Action Specialist) **RCAS00700** (RCAS Reg No) **6/27/2001** (Expiration date)

(Signature) 5/14/01 (Date)

512/336-1170 (Telephone #) **512/336-0178** (FAX #)

Kent Duran (Project Manager) **CAPM01534** (CAPM Reg No) **4/10/2003** (Expiration date)

Kent Duran (Signature) 5/14/01 (Date)

512/336-1170 (Telephone #) **512/336-0178** (FAX #)

By signature below, I certify that documents checked above are included.

Mr. Mike Dodyk, P.E. (Name of Responsible Party Contact) **AFCEE/ERD** (Company)

Michael R Dodyk (Signature) 15 May 01 (Date)

817/782-7167 (Telephone #) **817/782-6399** (FAX #)

568 20

FINAL SWMU 68 AND AOC 7
2000 ANNUAL GROUNDWATER REPORT
LPST #104819
NAS FORT WORTH JRB, TEXAS

Prepared for

Air Force Center for Environmental Excellence
Brooks AFB, Texas

Contract Number F41624-95-D-8005
Delivery Order Number 0016

Prepared by

HydroGeoLogic, Inc.
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

May 2001

REPORT DOCUMENTATION PAGE

Form Approved

QMB No 0704-0188

Public reporting for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1024 Arlington, VA 22202-1302 and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

1 AGENCY USE ONLY *(Leave blank)*	2 REPORT DATE May 2001	3 REPORT TYPE AND DATES COVERED Final
4 TITLE AND SUBTITLE SWMU 68 And AOC 7 2000 Annual Groundwater Report NAS Fort Worth JRB, Texas		4 FUNDING NUMBERS F41624-95-D-8005 Delivery Order 0016
6 AUTHOR(S) HydroGeoLogic, Inc		
7 PERFORMANCE ORGANIZATION NAMES(S) AND ADDRESS(S) HydroGeoLogic, Inc 1155 Herndon Parkway, Suite 900 Herndon, VA 20170		8 PERFORMANCE ORGANIZATION REPORT NUMBER AFC001
9 SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(S) AFCEE/ERD Brooks AFB Texas 78235-5328		10 SPONSORING/MONITORING AGENCY REPORT NUMBER
11 SUPPLEMENTARY NOTES		
12a DISTRIBUTION/AVAILABILITY STATEMENT Unlimited		12b DISTRIBUTION CODE

13 ABSTRACT (Maximum 200 words)

This document presents the Draft Solid Waste Management Unit (SWMU) 68 and Area of Concern (AOC) 7 2000 Annual Groundwater Report at NAS Fort Worth JRB, Texas

This report presents detailed results of data collected during the semi-annual groundwater monitoring of nine monitoring wells located within both the active jet fuel loading and aboveground storage area (SWMU 68) and the abandoned refueling station (AOC 7).

The purpose of this effort is to verify the stability of existing contaminants in the groundwater and to ensure there is no addition of contaminant mass to groundwater from the soil. The ultimate goal is to eventually achieve closure of this unit by the Texas Natural Resource Conservation Commission (TNRCC)/Petroleum Storage Tank (PST) Division.

14 SUBJECT TERMS			15 NUMBER OF PAGES
			16 PRICE CODE
17 SECURITY CLASSIFICATION OF REPORT Unclassified	18 SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19 SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20 LIMITATION OF ABSTRACT Unlimited

568 '22

This page was intentionally left blank

PREFACE

This document presents the Final Solid Waste Management Unit (SWMU) 68 and Area of Concern (AOC) 7 2000 Annual Groundwater Report at Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB). The report is organized by sections consisting of the following: Introduction; Monitoring Activities; Quality Assurance/Quality Control (QA/QC) Procedures; Nature and Extent of Contamination; Conclusions and Recommendations; and References.

HydroGeoLogic, Inc. (HydroGeoLogic) prepared this report under contract to the U. S. Air Force Center for Environmental Excellence (AFCEE), Contract Number F41624-95-D-8005, Delivery Order 0016, in support of the U.S. Air Force Installation Restoration Program (IRP). The AFCEE Contracting Officer's Representative is Mr Don Ficklen

This report was prepared under the direction of Mr. Todd C. Harrah, HydroGeoLogic's Project Manager.

DISCLAIMER

This Final SWMU 68 and AOC 7 2000 Annual Groundwater Report, NAS Fort Worth JRB, has been prepared for the U.S. Air Force (USAF) by HydroGeoLogic for the purpose of aiding in the implementation of a final remedial action plan (RAP) under the Air Force IRP. The limited objectives of this report and the ongoing nature of the IRP, along with the evolving knowledge of site conditions and chemical effects on the environment and health, must be considered in the evaluation of this document since subsequent investigations may make this document premature or inaccurate. Acceptance of this document in performance of the contract under which it was prepared does not mean that the USAF adopts the conclusions, recommendations, or other views expressed herein, which are those of the contractor only and do not necessarily reflect the official position of the USAF.

TABLE OF CONTENTS

Page

1 0 INTRODUCTION 1-1
1.1 HISTORY OF PAST INSTALLATION RESTORATION PROGRAM (IRP) WORK AT SWMU 68 and AOC 7 1-1
1.2 CURRENT SITE INVESTIGATION 1-6
1.3 DESCRIPTION OF CURRENT STUDY 1-6
1.4 REPORT ORGANIZATION 1-9

2.0 MONITORING ACTIVITIES 2-1
2.1 MONITORING OBJECTIVES 2-1
2.1.1 Field Parameters 2-1
2 1 1 1 Water Level Measurements 2-1
2.1.1.2 Field Stabilization Criteria 2-5
2.1.2 Well Purging and Sample Collection 2-5
2 1.3 Laboratory and Chemical Analysis Selection 2-5
2.1.4 Laboratory and Field QA/QC Analysis 2-8
2.1.5 Investigation Derived Waste (IDW) Management 2-8

3.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES 3-1
3.1 FIELD QUALITY CONTROL 3-1
3.1.1 Ambient Blank 3-1
3.1.2 Equipment Blanks 3-1
3.1.3 Trip Blanks 3-2
3.1.4 Field Duplicates 3-2
3.2 SAMPLE TRACKING PROTOCOL 3-2
3.3 LABORATORY QUALITY CONTROL 3-3
3.4 ANALYTICAL METHODS 3-3
3 4.1 EPA Method SW8260B - Volatile Organic Compounds 3-4

4.0 NATURE AND EXTENT OF CONTAMINATION 4-1
4 1 TARGET CONCENTRATIONS 4-1
4.1.1 TNRCC Plan A Target Concentrations 4-1
4.2 NATURE AND EXTENT OF GROUNDWATER CONTAMINATION 4-1
4.2.1 Current Investigation 4-3
4.2.2 Previous Investigations 4-3
4.2.3 Discussion of Groundwater Impacts 4-5
4.3 LIGHT NON-AQUEOUS PHASE LIQUIDS 4-5

5.0 CONCLUSIONS AND RECOMMENDATIONS 5-1

6 0 REFERENCES 6-1

TABLE OF CONTENTS (continued)

APPENDICES

Appendix A
- Appendix A.1 Groundwater Field Sampling Data Sheets
- Appendix A.2 Field Sampling Data Reports
- Appendix A 3 Laboratory Chain-of-Custody's

Appendix B Investigation Derived Waste Records

Appendix C
- Appendix C.1 SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
- Appendix C.2 SWMU 68 and AOC 7 Monitoring Well Laboratory QC Results

Appendix D Signed Laboratory Summary Reports

Appendix E LPST Site Closure Request Form

LIST OF FIGURES

		Page
Figure 1.1	NAS Fort Worth JRB/Plant 4 Base Boundaries	1-2
Figure 1.2	Site Plan and Monitor Well Locations	1-3
Figure 1.3	TNRCC Risk-Based Corrective Action Program	1-7
Figure 1.4	Site Assessment Process for TNRCC RBCA Program	1-8
Figure 2.1	Water Level Elevations in the Terrace Alluvium	2-3

LIST OF TABLES

		Page
Table 2.1	LNAPL Thickness Measurements and Visual Observations at SWMU 68 and AOC 7	2-6
Table 2.2	SWMU 68 and AOC 7 Monitoring Wells and Analyses	2-8
Table 4.1	Plan A Target Concentrations	4-2
Table 4.2	2000 SWMU 68 and AOC 7 Monitoring Well Field Parameters	4-4
Table 4.3a	Concentrations of Organic Constituents in Groundwater - SWMU 68 and AOC 7 April 2000	4-6
Table 4.3b	Concentrations of Organic Constituents in Groundwater - SWMU 68 and AOC 7 October 2000	4-7

This page was intentionally left blank.

LIST OF ACRONYMS AND ABBREVIATIONS

AB	ambient blank
AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
AOC	Area of Concern
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
BRA	Baseline Risk Assessment
BTEX	benzene, toluene, ethylbenzene, xylene
°C	degrees Celsius
COC	chain-of-custody
DO	dissolved oxygen
EB	equipment blank
EC	electrical conductance
EDD	electronic data deliverable
Eh	oxidation-reduction potential
EPA	U.S. Environmental Protection Agency
ES	Engineering Science, Inc.
GC	gas chromatography
GSAP	groundwater sampling and analysis plan
IDW	Investigation Derived Waste
IRP	Installation Restoration Program
JP-4	Jet Propulsion Fuel, grade 4
JRB	Joint Reserve Base
LAW	Law Environmental, Inc.
LNAPL	light non-aqueous phase liquid
LPST	Leaking Petroleum Storage Tank
MCL	maximum contaminant level
µS/cm	microSiemens per centimeter
µg/L	micrograms per Liter
mg/L	milligrams per Liter
mV	millivolt
MSL	mean sea level
NAS	Naval Air Station
NTU	nephelometric turbidity units
POL	Petroleum, Oil, and Lubricant

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

ppm	parts per million
PQL	practical quantitation limit
PST	petroleum storage tank
QA	quality assurance
QAPP	quality assurance project plan
QC	quality control
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
SA	site assessment
SWMU	Solid Waste Management Unit
TB	trip blank
TDS	total dissolved solids
TNRCC	Texas Natural Resource Conservation Commission
USAF	U.S. Air Force
UST	underground storage tank
VOC	volatile organic compound

TAB

SECTION L.0

FINAL SWMU 68 and AOC 7
2000 ANNUAL GROUNDWATER REPORT
LPST #104819
NAS FORT WORTH JRB, TEXAS

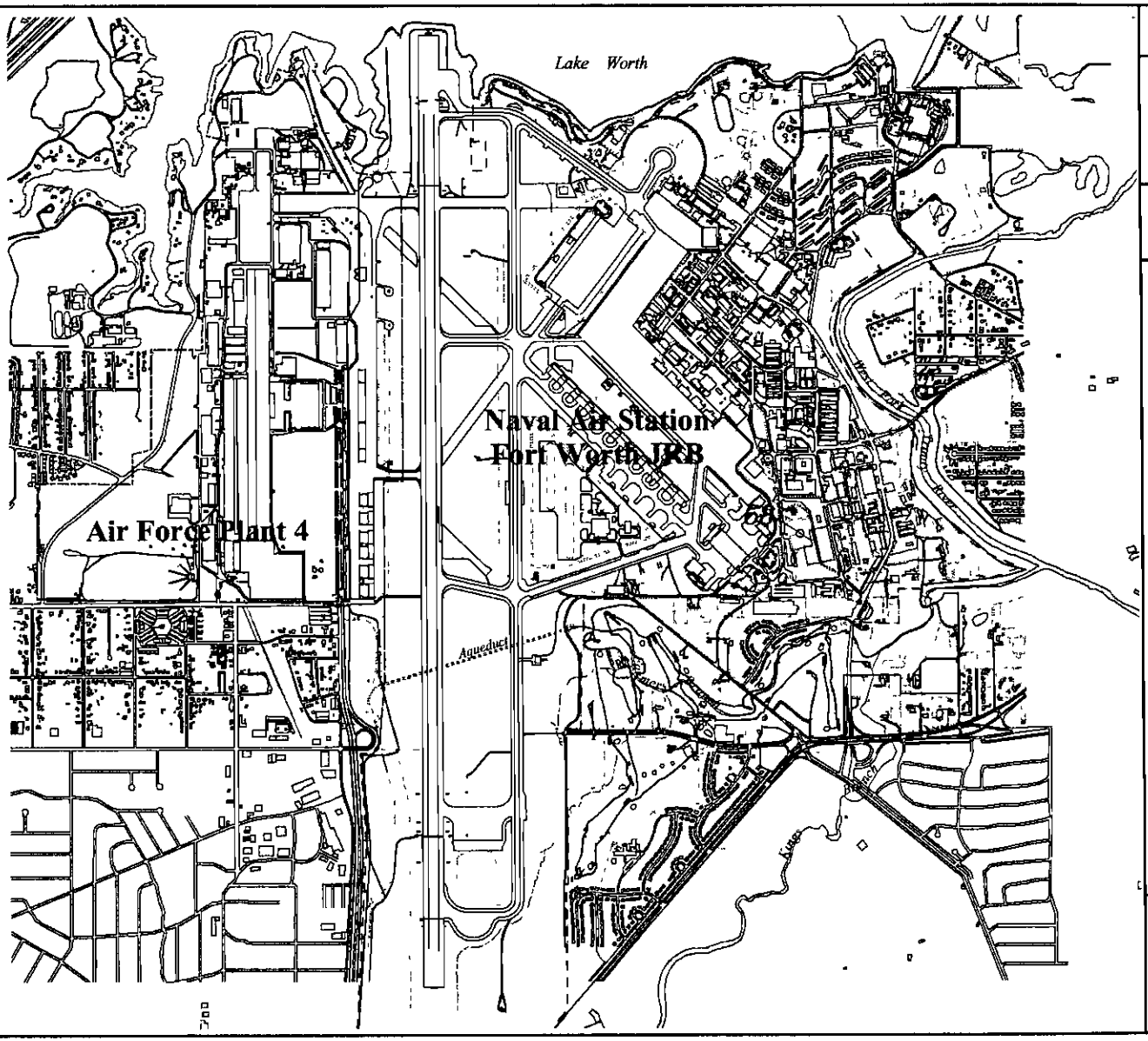
1.0 INTRODUCTION

The objective of this Solid Waste Management Unit (SWMU) 68 and Area of Concern (AOC) 7 annual groundwater report is to summarize the analytical data obtained during two semi-annual groundwater sampling and analysis events performed in 2000. Groundwater sampling events for both facilities were performed in conjunction with the 2000 Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB) basewide long-term groundwater sampling program (see Figure 1.1). Specifically, this report summarizes the results of groundwater sampling events that occurred in April and October 2000. These investigations at SWMU 68 and AOC 7 are part of the ongoing Installation Restoration Program (IRP) at NAS Fort Worth JRB, Texas. This report presents justification for site closure to the Texas Natural Resource Conservation Commission (TNRCC), Petroleum Storage Tank (PST) Division. The Leaking Petroleum Storage Tank (LPST) Site Closure Request Form TNRCC-0028 (Appendix E) is submitted in accordance with 30 TAC 334. This report was authorized by the U.S. Air Force Center for Environmental Excellence (AFCEE) under Contract No. F41624-95-D-8005, Delivery Order 0016.

1.1 HISTORY OF PAST INSTALLATION RESTORATION PROGRAM (IRP) WORK AT SWMU 68 and AOC 7

SWMU 68 consists of a Petroleum, Oil and Lubricant (POL) tank farm, and an associated fuel loading facility. This jet fuel storage and delivery facility has been in continual use since the 1940's. It is located in the eastern portion of the base near the NAS Fort Worth JRB main gate on Desert Storm Road. The POL tank farm consists of three above-ground storage tanks (ASTs) (two with capacities of 630,000 gallons each, and one with a capacity of 2.5 million gallons) that supply a fuel loading facility located approximately 200 feet east across Desert Storm Road. Leaking underground piping in the loading facility is suspected of contaminating the surrounding subsurface soils and groundwater. The jet fuel contamination in the groundwater at SWMU 68 is believed to be commingled with hydrocarbon contaminants at AOC 7.

AOC 7 is a former base refueling station that once existed on the corner of Military Parkway and Range Road, on the southeast side of the base near the main entrance gate (see Figure 1.2). The duration of refueling operations at AOC 7 is unknown, however, the station was abandoned in the 1960's. It is unknown when the Underground Storage Tanks (USTs) were removed. An electromagnetic survey was performed in 1991 to confirm that the USTs had been removed from the site. The survey was inconclusive due to the amount of interference in the immediate area, thus the removal of tanks beneath the site could not be confirmed. The area presently consists of a paved lot. In addition to a possible release of motor gasoline (mogas) at the site, jet fuel was discovered in both soil and groundwater in the 1960's. The source is believed to be from SWMU 68, which is located upgradient from the site (Parsons ES, 1997). Free product in both soil and groundwater were



HydroGeoLogic, Inc
AOC 7/SWMU 68 2000 Annual Groundwater Report
NAS Fort Worth JRB, Texas

Figure 1.1
NAS Fort Worth JRB / Plant 4
Base Boundaries
NAS Fort Worth JRB

U S Air Force Center for
Environmental Excellence

Legend

- - - NAS Fort Worth JRB (Carswell Field)

——— Property Boundary of Air Force Plant 4

——— Former Carswell Air Force Base

Solid Waste Management Unit 68

Area of Concern 7

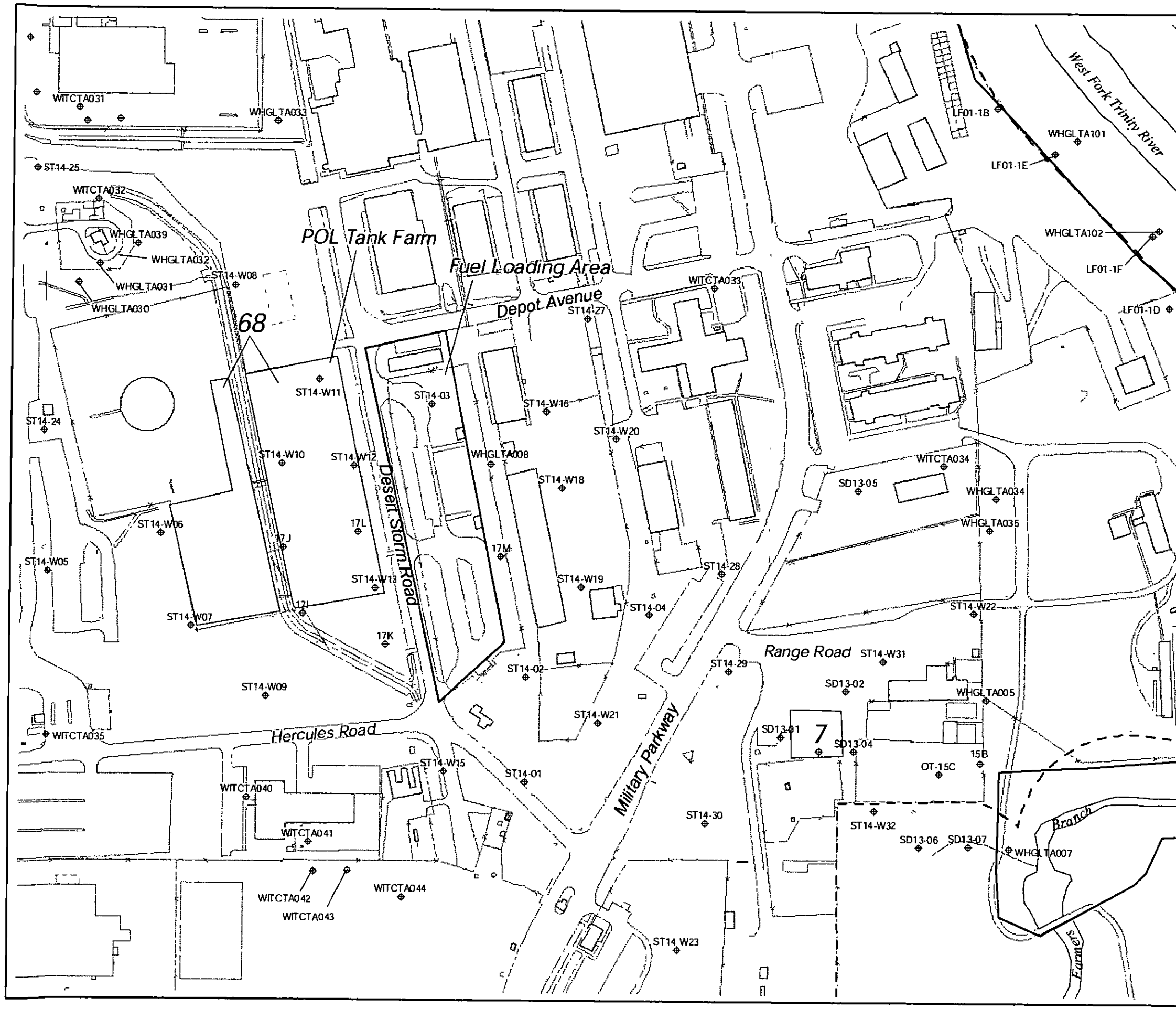
N

1000 0 1000 2000
SCALE IN FEET

Filename X:\AFC001\16bdb\Draft AOC7_SWMU68 Annual GW\ base_boundaries.apr
Project AFC001-16BDB
Created 07/13/00 jbelcher
Revised 03/15/01 asp
Map Source Jacobs 1996

HYDRO GeoLogic

568 33



HydroGeoLogic, Inc
SWMU 68/AOC 7 2000 Annual Groundwater Report
NAS Fort Worth JRB, Texas

Figure 1.2
Location of
SWMU 68 and AOC 7

U.S. Air Force Center for Environmental Excellence

Legend

- NAS Fort Worth JRB (Carswell Field)
- Former Carswell Air Force Base
- Solid Waste Management Unit
- Area of Concern
- Existing Monitoring Well Location
- Monitoring Well Location containing LNAPL
- Sampled Monitoring Well Location

Note. 0.05 feet of product was removed from monitoring well SD13-04 in September 2000

N

100 0 100 200
SCALE IN FEET

Filename X:\Afc001\16bdb\Draft AOC7_SWMU68 2000 Annual GW\ swmu68 and aoc7 locs.apr
Project AFC001-16BDB
Created 02/07/01 jbelcher
Revised: 05/15/01 jb
Map Source HydroGeoLogic, Inc ArcView GIS Database, 2001

HYDRO GeoLogic

detected at the base refueling station during a 1990 IRP sampling event (Radian, 1991), 1995 Resource Conservation and Recovery Act (RCRA) Facility Investigation (Law, 1995), and the 1997 Remedial Action Plan (RAP) (Parsons ES, 1997). Quarterly compliance groundwater monitoring was conducted at AOC 7 in accordance with the Base-wide Groundwater Sampling and Analysis Plan (GSAP) through year 2000.

The IRP is designed to identify, characterize, and remediate any contamination discovered at U.S. Air Force installations, consistent with the National Contingency Plan. The IRP effort at the former Carswell AFB, Texas was initiated in 1984 by the Air Force. When Carswell AFB closed in 1994 and the U.S. Navy assumed control of the installation, AFCEE retained environmental restoration responsibility of this site. The following IRP investigations have been performed at (or in the vicinity of) SWMU 68 and AOC 7, NAS Fort Worth JRB, Texas:

- A. T. Kearney, 1989, RCRA Facility Assessment - Preliminary Review/Visual Site Inspection, Carswell Air Force Base, Texas.
- Radian, 1995. Phase II Confirmation Quantification - Stage I, Carswell Air Force Base (AFB), Fort Worth, Texas.
- Radian, 1989. Installation Restoration Program, Remedial Investigation/Feasibility Study, Volume I, Technical Report (Final). CAFB-NA1.
- Radian, 1991. Remedial Investigation for the East Area. Draft report. Prepared for Carswell AFB, Fort Worth, Texas.
- Engineering Science, Inc. (ES), 1983. Bioventing Pilot Test, Carswell AFB, Fort Worth, Texas.
- Law Environmental, Inc. (LAW), 1995. RCRA Facility Investigation Report, NAS Fort Worth JRB, Carswell Field, Texas.
- Law Environmental, Inc. (LAW), 1996. Basewide Quarterly Groundwater Monitoring: First Semi-annual Report.
- Law Environmental, Inc. (LAW), 1996. Basewide Quarterly Groundwater Monitoring: Second Semi-annual Report.
- Parsons Engineering Science, Inc. (Parsons, ES), 1996. Field Activity Report (TWC-017) for the Remedial Action Plan at SWMU 68, and AOC 7.
- Parsons Engineering Science, Inc. (Parsons, ES), 1997. Final Remedial Action Plan for the Risk-Based Remediation of SWMU 64, 67, and 68 and AOC 7, NAS Fort Worth JRB.
- Parsons Engineering Science, Inc. (Parsons, ES), 1998. Results of Two Years of Bioventing on Soil BTEX Concentrations at Site ST14, Carswell AFB/NAS, Fort Worth, Texas.

- HydroGeoLogic, Inc. (HydroGeoLogic), 1999. Final 1998 Annual Groundwater Sampling and Analysis Report , NAS Fort Worth JRB, Texas.

- HydroGeoLogic, Inc. (HydroGeoLogic), 2000a. Final 1999 Annual Groundwater Sampling and Analysis Report , NAS Fort Worth JRB, Texas.

- HydroGeoLogic, Inc. (HydroGeoLogic), 2000b. Final Site Assessment Report (TNRCC-0562) For SWMU 68 And AOC 7, NAS Fort Worth JRB, Texas.

1.2 CURRENT SITE INVESTIGATION

This section provides an overview of the steps involved and results obtained during the previous investigations regarding both SWMU 68 and AOC 7. These sites were historically affected by a subsurface release of JP-4 originating in the 1960's from the underground piping at the POL tank farm and fuel loading area. The release from SWMU 68 had resulted in a plume that is considered to be commingled with a possible gasoline release at the downgradient former base refueling station AOC 7. A complete listing of the previous investigations performed at SWMU 68 and AOC 7 is presented in a Site Assessment Report submitted at the request of the TNRCC (HydroGeoLogic, 2000a).

1.3 DESCRIPTION OF CURRENT STUDY

The following guidance documents were used to support the evaluation of field and analytical findings at SWMU 68 and AOC 7.

- Texas Natural Resource Conservation Commission, Petroleum Storage Tank Division, 1996, RG-17: Action Levels for Leaking Petroleum Storage Tank (LPST) Sites (TNRCC, 1996a).

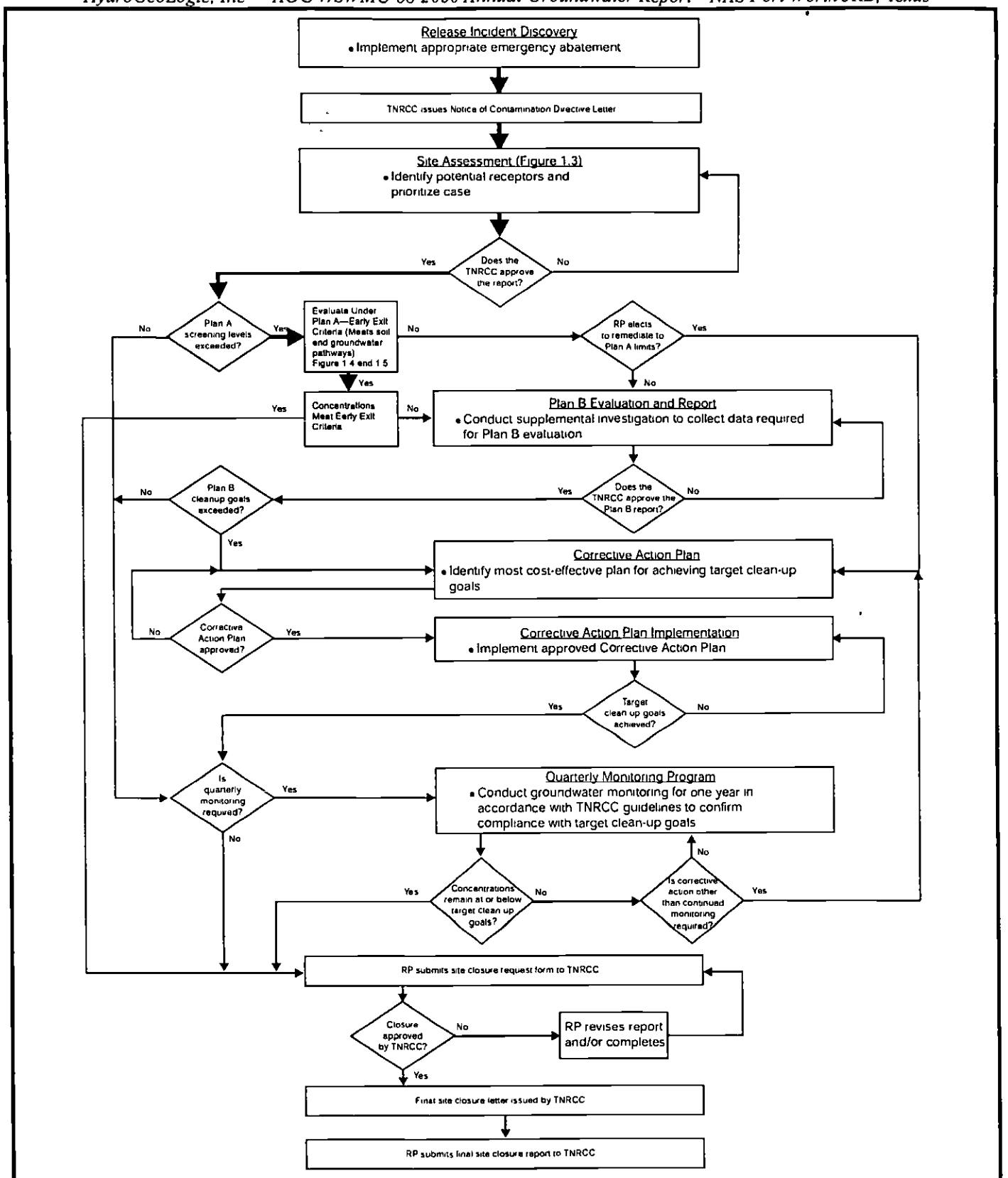
- Texas Natural Resource Conservation Commission, 1995, RG-175: Guidance for Risk-Based Assessment at LPST Sites in Texas, Emphasizing Initial Investigations and Plan A Evaluation (TNRCC, 1995).

- Texas Natural Resource Conservation Commission, Leaking Storage Tank Program, 1994, RG-36: Risk-Based Corrective Action for Leaking Storage Tank Sites (TNRCC, 1994).

- Texas Natural Resource Conservation Commission Regulatory Guidance, Petroleum Storage Tank Division, 1996 (rev.), RG-43: Groundwater Monitoring and Reporting (TNRCC, 1996b).

The TNRCC Risk-Based Corrective Action Program and the TNRCC Plan A Site Assessment Process are presented in Figures 1.3 and 1.4, respectively.

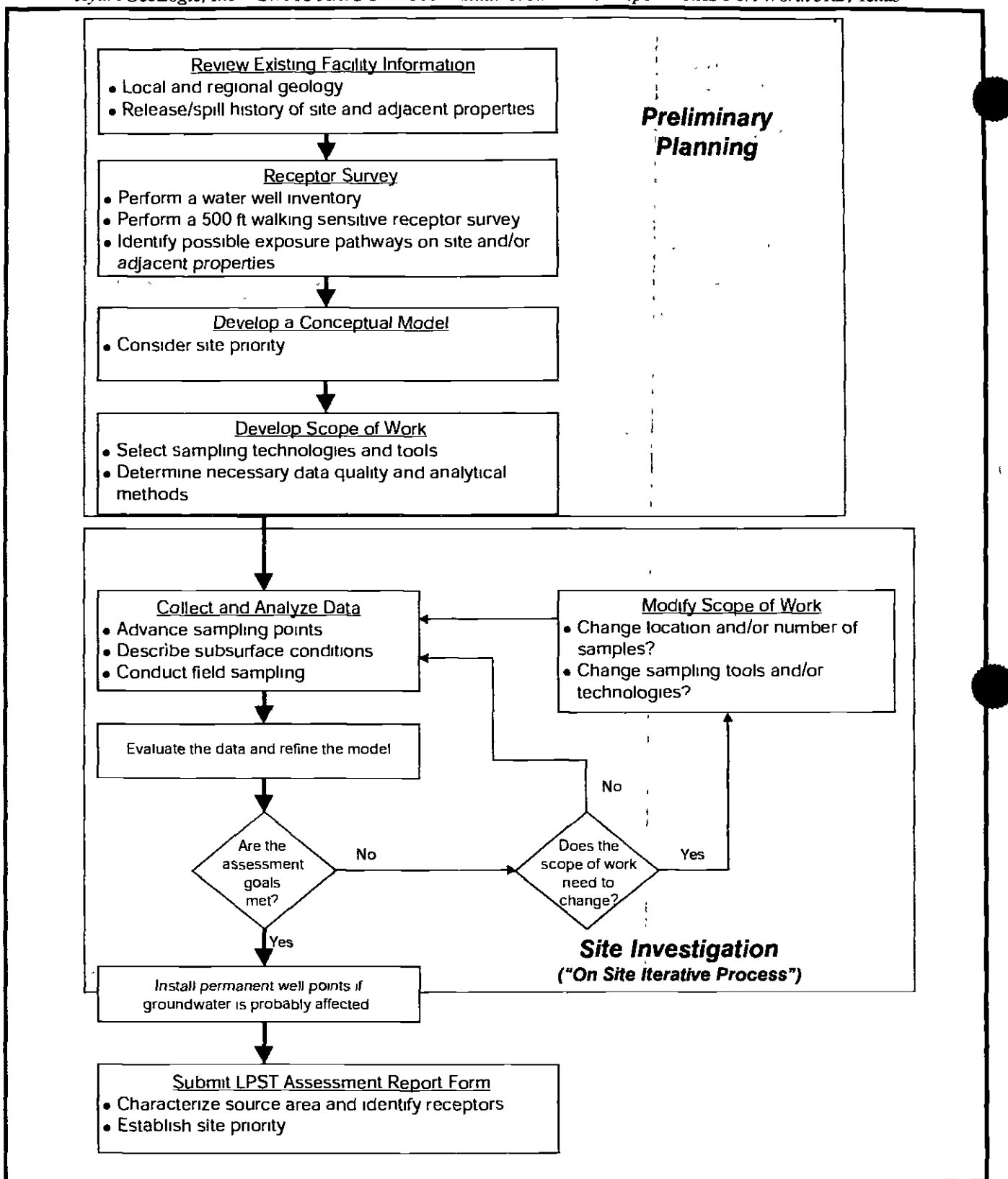
The objective of the 2000 SWMU 68 and AOC 7 annual groundwater monitoring program was to perform the actions proposed in the RAP prepared for the site in 1997. The RAP proposed sampling until the appropriate target concentrations were obtained, and then an additional two years of verification sampling to ensure plume stability and to comply with ongoing TNRCC requirements.



Filename x \AFC001\16bdb\Draft AOC7_SWMU68 2000 Annual GW\ tnrcc action program cdr
Created 06/12/97 M Lawlor
Revised 03/15/01 asp
Source TNRCC 1995

HYDRO GeoLogic

Figure 1.3
TNRCC Risk-Based Corrective Action Program



Filename x:\AFC001\16bdb\Draft AOC7_SWMU68 2000 Annual GW\ site assessment cdr
Created 06/12/97 M.Lawlor
Revised 03/15/01 asp
Source TNRCC 1995

HYDRO GeoLogic

Figure 1.4
Site Assessment Process for TNRCC Risk-Based Corrective Action Program

Specifically, the objectives of this project were to follow RAP criteria by the completion of the following tasks:

- Monitor groundwater conditions in conjunction with long term monitoring of basewide wells. This monitoring is to verify that soil remediation and natural chemical attenuation processes are sufficient to prevent groundwater concentrations from exceeding target concentrations and retard the migration of contaminants away from the sites.

- Confirm groundwater contamination has stabilized by monitoring volatile contaminant concentrations of indicator compounds in groundwater including: benzene, toluene, ethylbenzene, and xylenes (BTEX); and comparing to Plan A- Category II Target Groundwater Concentrations as defined in TNRCC RG-36 (TNRCC, 1994).

- Monitor for and remove free-product (i.e., LNAPL) identified during the RAP conducted by Parsons ES (Parsons ES, 1997).

- Continue to monitor the four additional groundwater monitoring wells installed at the sites. One within the benzene plume at SWMU 68, and the other three as Point of Compliance monitoring wells adjacent to AOC 7 along Farmers Branch Creek.

1.4 REPORT ORGANIZATION

This SWMU 68 and AOC 7 annual groundwater report was designed to contain, at a minimum, all information stated in the TNRCC, PST Division Groundwater Monitoring and Reporting guidance (TNRCC, 1996b). In order to present this information, the remainder of the report is organized as follows:

- Section 2.0 presents monitoring activities, including water level measurements and field parameters; well purging and sample collection; laboratory and chemical analysis selection; laboratory and field quality assurance/quality control (QA/QC) analysis; and Investigation Derived Waste (IDW) management.

- Section 3.0 presents a discussion on the QA/QC program; including field and laboratory QC samples; sample tracking protocol; and the U.S. Environmental Protection Agency (EPA) approved analytical methods used to extract and analyze the samples.

- Section 4.0 presents the target concentrations; assessment of the nature and extent of groundwater contamination; and analytical laboratory results of the 2000 SWMU 68 and AOC 7 groundwater monitoring program.

- Section 5.0 presents conclusions and recommendations.

- Section 6.0 provides references used in this document.

- Appendix A Field sampling data sheets, field sampling data reports, and laboratory chains-of-custody (COC).

- Appendix B Copies of all IDW Records.
- Appendix C All SWMU 68 and AOC 7 monitoring well laboratory results and QC results.
- Appendix D Signed laboratory summary reports.
- Appendix E LPST Site Closure Request Form.

TAB

SECTION 2.0

2.0 MONITORING ACTIVITIES

This section describes the procedures performed throughout both 2000 groundwater sampling events. All samples were collected in conjunction with basewide groundwater sampling events and were performed in accordance with the 2000 Basewide GSAP (HydroGeoLogic 2000b), and the Basewide Quality Assurance Project Plan (QAPP) (HydroGeoLogic 2000c).

2.1 MONITORING OBJECTIVES

The basewide groundwater sampling program was initiated for NAS Fort Worth JRB in April 1995 to address groundwater contamination associated with several SWMUs and AOCs identified on base. The focus of this report pertains to groundwater monitoring conducted at SWMU 68 and AOC 7. The site objectives were established in order to collect the data necessary to attain site closure under the TNRCCs PST Division. Monitoring activities for each SWMU 68 and AOC 7 groundwater sampling event included:

- Field Parameter Collection
- Well Purging and Sample Collection
- Chemical Analysis of Field Samples
- Laboratory and Field QA/QC Analysis
- IDW Management

2.1.1 Field Parameters

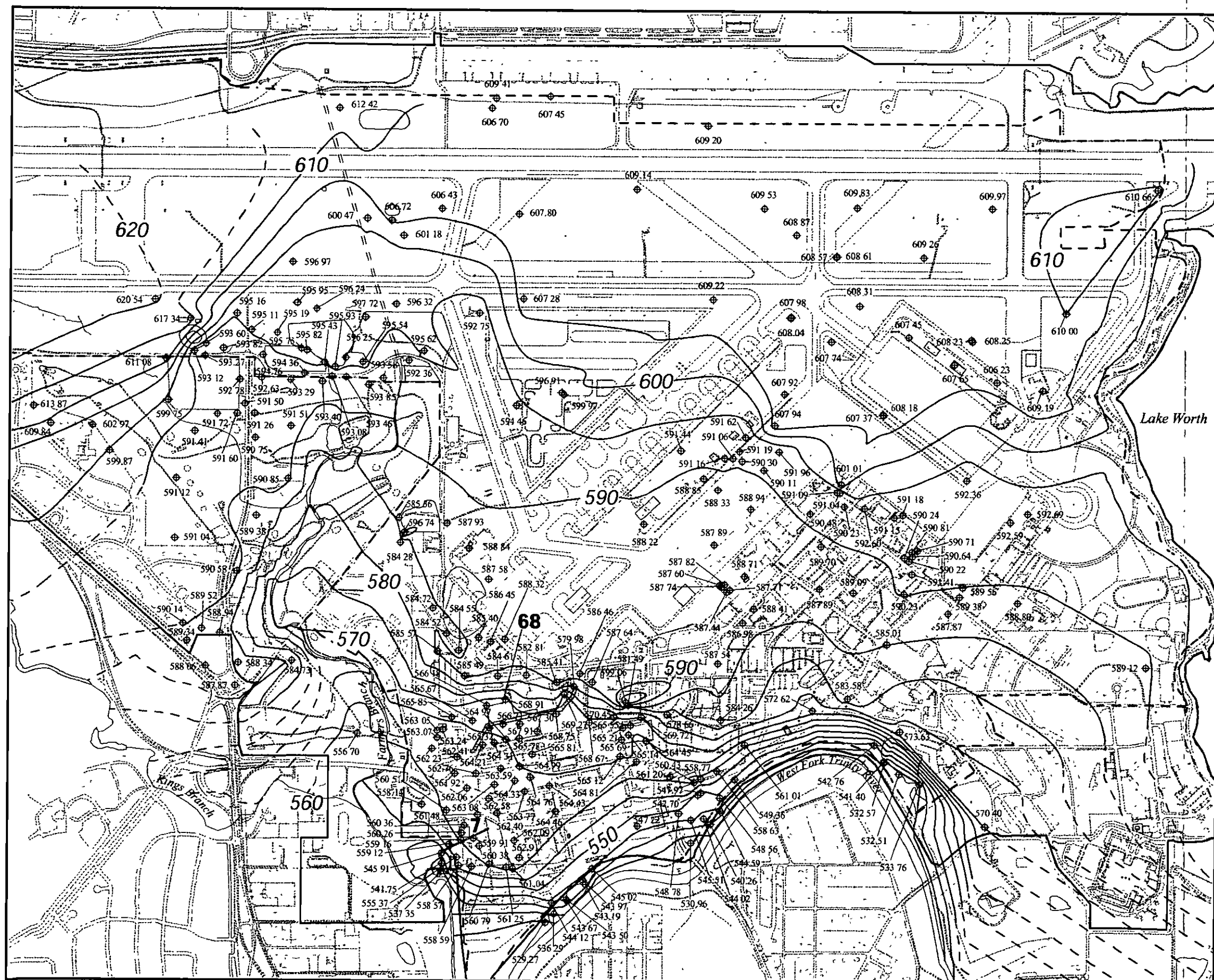
2.1.1.1 Water Level Measurements

In order to evaluate existing groundwater flow patterns, groundwater elevations were obtained during the July 2000 base-wide groundwater monitoring event from 273 monitoring wells screened in the Terrace Alluvium (Figure 2.1). Groundwater elevations varied from 620 feet above mean sea level (MSL) in the southwestern portion of the site to 529 feet MSL in the eastern portion of the site during July 2000. The hydraulic head gradients toward the eastern portion of the site are greater than those on the western portion. The groundwater gradient ranges from approximately 0.009 to 0.015 feet/foot.

In general, the regional groundwater flow direction is from west to east, though local variations in groundwater flow direction are evident. The groundwater flow direction in the Terrace Aquifer in primarily eastward towards the basin formed by the West Fork Trinity River. However, groundwater flow in the area surrounding both SWMU 68 and AOC 7 is toward the smaller Farmers Branch stream. The cause could be manmade drainage structures impacting the natural drainage pattern.

Following the external inspection of each monitoring well, and immediately after the well cap had been removed, a photoionization detector was used to measure the level of organic vapors in the background area, breathing zone, and at the top of each well casing (HydroGeoLogic 2000b).

This page was intentionally left blank.



HydroGeoLogic, Inc.
SWMU 68/AOC 7 2000 Annual Groundwater Report
NAS Fort Worth JRB, Texas

Figure 2.1

Water Level Elevations
Terrace Alluvium
July 2000

U.S. Air Force Center For Environmental Excellence

Legend

- - - - NAS Fort Worth JRB (Carswell Field)

——— Former Carswell Air Force Base

–600– Groundwater Elevation Contour (ft msl)

⊕ Monitoring Well

533 76 Groundwater Elevation (ft msl)

Solid Waste Management Unit 68

□ Area of Concern 7

N

0 500 1000 2000

SCALE IN FEET

Filename X:\AFC001\16bdb\Draft AOC7_SWMU68 2000 Annual GW\ groundwater elev july2000 apr
Project AFC001-16BDB
Created 01/22/00 jbelcher
Revised 03/15/01 asp
Map Source: HydroGeoLogic, Inc GIS Database

HYDRO GeoLogic INC

An electronic oil-water interface device was used to determine the presence and depth of any LNAPL and depth to water. Field notes documented whether an odor, sheen, or measurable free-product (>0.01 feet thickness) was present when removed via absorbent pads. The following monitoring wells were monitored on a monthly basis for free-product: SD13-04, SD13-07, 17M, and WHGLTA007 Free-product has been detected at decreasing thicknesses since August 1998, with year 2000 LNAPL measurements presented in Table 2.1.

2.1.1.2 Field Stabilization Criteria

During all groundwater purging, water quality stabilization criteria (pH, temperature, electrical conductance [EC], dissolved oxygen [DO], oxidation-reduction potential [Eh], and turbidity) were continuously monitored using a flow-thru cell. Section 4.2 provides a summary of the April and October 2000 field stabilization parameters at both SWMU 68 and AOC 7. In addition, copies of the field sampling data sheets are presented in Appendix A.1. If the sampled monitoring well was not experiencing significant drawdown while being purged (i.e , the water column did not drop more than 0.33 feet), and the following water quality stabilization parameters were met after three consecutive readings, then a groundwater sample was collected.

- Temperature: ± 1.0°C
- pH: ± 0.1 units
- EC: ± 3 percent
- DO: ± 10 percent
- Eh: ± 10 mV, and
- Turbidity: < 10 NTUs

2.1.2 Well Purging and Sample Collection

Eight monitoring wells were sampled using non-dedicated stainless steel bladder pumps (well ST14-28 was dry in April and October). The bladder pump is ideal for low-flow purging and can maintain pumping rates between 0.1 to 0.5 liter/minute to minimize turbidity, oxygenation, mixing of chemically distinct zones, and volatilization of volatile organic compounds (VOCs).

Once stabilization of the water quality parameters had been met during the purging process, the groundwater samples were collected. Required sample containers, preservation methods, volumes, and holding times are provided in Section 5.0 of the QAPP (HydroGeoLogic, 2000c).

2.1.3 Laboratory and Chemical Analysis Selection

All nine monitoring wells were utilized for water level measurements, eight being sampled as proposed in the SWMU 68 and AOC 7 SI Report (HydroGeoLogic 2000a). Monitoring wells considered in selecting the nine sampling locations included previous wells with high groundwater contaminant concentrations, and wells at the leading edge of identified groundwater contamination. The analyses selected for groundwater monitoring were based on the TNRCC regulatory guidance document, Groundwater Monitoring and Reporting (TNRCC, 1996b). Table 2.2 includes a list of the monitoring wells selected for both April and July sampling events at SWMU 68 / AOC 7 and the designated analysis performed at each well.

Table 2.1
LNAPL Thickness Measurements and Visual Observations at SWMU 68 and AOC 7
January 2000 - December 2000
NAS Fort Worth JRB, Texas

SD13-04[1]						SD13-07[2]					
Date	DTP (ftoc)	DTW (ftoc)	Product Thickness (ft)	Groundwater Elevations (ft above msl)	Color Observations	Date	DTP (ftoc)	DTW (ftoc)	Product Thickness (ft)	Groundwater Elevations (ft above msl)	Color Observations
1/07/00	-	10.15	0	558 93	None	1/07/00	-	18 07	0	542.37	None
1/19/00	-	10 02	0	559 06	None	1/19/00	-	17 89	0	542 55	None
1/26/00	-	10 13	0	558 95	None	1/26/00	-	17 95	0	542.49	None
2/02/00	-	10 03	0	559 05	None	2/02/00	-	17 73	0	542 71	None
2/09/00	-	10.08	0	559 00	None	2/09/00	-	17 84	0	542 60	None
2/16/00	-	10.16	0	558 92	None	2/16/00	-	17 93	0	542 51	None
2/24/00	-	10.12	0	558 96	None	2/24/00	-	17 89	0	542.55	None
3/06/00	-	10 03	0	558 05	None	3/06/00	-	17 59	0	542 85	None
4/03/00	-	9 88	0	559 20	None	4/03/00	-	16.88	0	543.56	None
6/15/00	-	8 93	0	560 15	None	6/15/00	-	15.95	0	544 49	None
8/03/00	-	10 12	0	558 96	None	8/03/00	NM	NM	NM	NM	None
9/07/00	10 37	10 42	0 05	558.66	None	9/07/00	19 41	19 51	0 10	540.93	None
11/19/00	-	9 41	0	559 67	None	11/19/00	17 40	17 41	0 01	543 03	None

Notes
[1] The Top of Casing Elevation for SD13-04 is 569 08 ft above mean sea level (msl)
[2] The Top of Casing Elevation for SD13-07 is 560 44 ft above mean sea level (msl)
DTP - Depth to Product in feet
DTW - Depth to Water in feet
NM - Not measured If the monitoring well did not contain product for one or two consecutive measurements, the frequency of measurements was reduced to bi-weekly
NR - Not recorded.
\- - No product was found
ftoc - Depth from top of well casing
ft above msl - groundwater elevations in feet above mean sea level
Product measurements were performed using an oil/water interface probe capable of measuring to 0 01 feet of product When a trace amount of free-product was recovered, the product thickness was estimated
All free-product was removed using absorbent pads
The correction factor was not calculated for these datum since the difference between the apparent thickness and product thickness was negligible.

Table 2.1 (continued)
LNAPL Thickness Measurements and Visual Observations at SWMU 68 and AOC 7
January 2000 - December 2000
NAS Fort Worth JRB, Texas

WHGLTA007[3]						ST14-17M[4]					
Date	DTP (ftoc)	DTW (ftoc)	Product Thickness (ft)	Groundwater Elevations (ft above msl)	Color Observations	Date	DTP (ftoc)	DTW (ftoc)	Product Thickness (ft)	Groundwater Elevations (ft above msl)	Color Observations
1/07/00	-	14.82	0	538 06	None	1/07/00	-	11 89	0	562 39	None
1/19/00	-	14 68	0	538 20	None	1/19/00	-	11 58	0	562 70	None
1/26/00	-	14 76	0	538 12	None	1/26/00	-	11 71	0	562.57	None
2/02/00	-	14.65	0	538 23	None	2/02/00	-	11 55	0	562 73	None
2/09/00	-	14 78	0	538 10	None	2/09/00	-	11 63	0	562.65	None
2/16/00	-	14 83	0	538.05	None	2/16/00	-	11 80	0	562.48	None
2/24/00	-	14 80	0	538 08	None	2/24/00	-	11 71	0	562 57	None
3/06/00	-	14.43	0	538 45	None	3/06/00	-	11 53	0	562 75	None
4/03/00	13.85	13 85	0	539 03	None	4/03/00	-	11.22	0	563.06	None
6/15/00	-	13 21	0	539 67	None	6/15/00	-	878	0	565 50	None
8/03/00	-	15.70	0	537.18	None	8/03/00	-	11 23	0	563.05	None
9/07/00	16.03	16.50	0 02	536.38	None	9/07/00	11.92	11 94	0 02	562.34	None
11/19/00	-	14 19	0	538.69	None	11/19/00	-	9 89	0	564.39	None

Notes
[3] The Top of Casing Elevation for WHGLTA007 is 552 88 ft above mean sea level (msl)
[4] The Top of Casing Elevation for ST14-17M is 574 28 ft above mean sea level (msl)
DTP - Depth to Product in feet
DTW - Depth to Water in feet.
NM - Not measured. If the monitoring well did not contain product for one or two consecutive measurements, the frequency of measurements was reduced to bi-weekly.
NR - Not recorded.
\- - No product was found.
ftoc - Depth from top of well casing
ft above msl - groundwater elevations in feet above mean sea level
Product measurements were performed using an oil/water interface probe capable of measuring to 0 01 feet of product When a trace amount of free-product was recovered, the product thickness was estimated.
All free-product was removed using absorbent pads
The correction factor was not calculated for these datum since the difference between the apparent thickness and product thickness was negligible

Table 2.2
SWMU 68 and AOC 7 Monitoring Wells and Analyses

Sampling Event	Monitoring Well	Sample Parameters[1] VOCs
Apr-00	SD13-01	X
	SD13-02	X
	SD13-04	X
	ST14-03	X
	ST14-27	X
	ST14-28[2]	X
	ST14-W11	X
	ST14-W16	X
	ST14-W21	X
Jul-00	SD13-01	X
	SD13-02	X
	SD13-04	X
	ST14-03	X
	ST14-27	X
	ST14-28[2]	X
	ST14-W11	X
	ST14-W16	X
	ST14-W21	X

Notes
[1] All samples were tested for the following standard field parameters temperature, pH, specific conductivity, DO, Eh, and turbidity
[2] ST14-28 was not sampled during either April or October 2000 due to lack of groundwater
VOCs - Volatile organic compounds (EPA Method SW8260B)

2.1.4 Laboratory and Field QA/QC Analysis

The laboratory and field QA/QC program at NAS Fort Worth JRB included specific procedures regarding sample volumes, container types, and preservation requirements for the collection of groundwater samples as described in the Final Basewide GSAP (HydroGeoLogic 2000b). Sample bottles met EPA requirements for environmentally clean containers. Sample labels were pre-printed to facilitate sample tracking from the field through the laboratory to the final report. Documentation of sample collection is performed in the field to ensure that sample labeling, COC, and request for analysis are in agreement and traceable back to the correct field sample. Custody seals were placed on each cooler before shipment by a common carrier. Additional laboratory and field QA/QC information can be found in Section 3.0.

2.1.5 Investigation Derived Waste (IDW) Management

IDW management procedures were followed as outlined in Final IDW Management Plan (HydroGeoLogic 1999). All wastewater (i.e., purge water, decon water) produced during the

groundwater sampling events were transferred to a 1200-gallon polytank located on base in the designated IDW storage area. At the completion of each sampling event, a composite sample was collected from the polytank and analyzed for the appropriate suite of parameters (i.e., VOCs (SW8260B), semivolatile organic compounds (SW8270C), total metals (SW6010B), Pesticides/Polychlorinated Biphenyls (SW8080A), and total petroleum hydrocarbons (TX1005). Final disposal of the wastewater was conducted on base and discharged into the base sanitary sewer system, upon approval by the U.S. Navy Environmental Office. Appendix B contains copies of the IDW disposal log records for the purge and waste water.

All absorbent pads used during the LNAPL removal were disposed of at the U.S. Navy's Hobby Shop in a 55-gallon plastic drum. The U.S. Navy's Waste Management Office accepted responsibility for the disposal of the used absorbent pad waste.

This page was intentionally left blank.

TAB

SECTION 3.0

3.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

This section describes the analytical methods and QC procedures used throughout the basewide quarterly monitoring events and SWMU 68 and AOC 7 groundwater monitoring at NAS Fort Worth JRB, Texas.

3.1 FIELD QUALITY CONTROL

During 2000 SWMU 68 and AOC 7 field activities, field QA/QC samples were used to determine the overall quality of the analytical data. The field QA/QC samples collected and evaluated for sampling technique and decontamination, include ambient blanks, equipment blanks, trip blanks, and field duplicates. The validated field QA/QC sample results are summarized in Appendix C.2.

3.1.1 Ambient Blank

Ambient blanks consisted of American Society for Testing and Materials (ASTM) Type II reagent grade water poured into a 40 milliliter VOC sample vial at a sampling site (in the same vicinity as the associate samples). Ambient blanks are used to assess the potential introduction of contaminants from ambient sources (e.g., active runways, engine test cells, gasoline motors in operation, etc.) to the investigative samples during sample collection. Ambient blanks were handled like environmental samples and transported to the laboratory and analyzed for VOCs during both April and July sampling events.

No ambient blanks were collected during the April 2000 sampling event since no potential interferences from the above sources were identified while sampling occurred. Two blanks were collected in October 2000 to account for the above sources. No contaminants were detected in either sample.

3.1.2 Equipment Blanks

Equipment blanks consisted of ASTM Type II reagent grade water poured into or over the sampling device; collected in a sample container, and transported to the laboratory for analysis. Equipment blanks were used to assess the effectiveness of the field equipment decontamination procedures. Throughout each of the groundwater sampling events, one equipment blank was collected from sampling equipment used on each day that equipment decontamination activities occurred. Equipment blanks were collected immediately after the equipment was decontaminated. Each equipment blank was analyzed for all laboratory analyses requested for the environmental samples collected at any associated site on that day.

April groundwater samples were all collected with dedicated sampling equipment, therefore no equipment blanks were collected. Three blanks were collected during the October monitoring sampling event due to the removal of the dedicated pumps. Methylene Chloride was detected in the blank collected on October 31, 2000 at 0.9 micrograms per Liter (µg/L). No additional VOCs were detected in the two remaining equipment blanks.

3.1.3 Trip Blanks

Trip blanks consisted of 40 milliliter VOC sample vials prepared and provided by the laboratory with ASTM Type II reagent grade water. Trip blanks are transported to the sampling site, handled as an environmental sample, and returned to the laboratory for the analysis of VOCs and/or methane. One trip blank is used per sample cooler to assess the potential introduction of contamination into investigation samples from unrelated sources, such as cross contamination occurring during transportation and storage.

Four trip blanks were collected during April 2000 sampling event, with no contaminants detected and no data were qualified based on trip blank results. Three trip blanks were collected during the October groundwater monitoring event. Though methylene chloride (an extraction solvent) was detected in October 2000, there was no trip blank contamination that affected the samples during either sampling event (Appendix C.2).

3.1.4 Field Duplicates

Field duplicates were collected at a frequency of 1 for every 10 environmental samples to assess the precision of the sample collection process. Field duplicate samples were collected at the same time, (or in immediate succession) and location as the environmental sample ("parent" sample). The parent and duplicate sample are treated in an identical manner during transportation, storage, preparation, and analysis. There were two field duplicates submitted in association with the 2000 basewide sampling event. One field duplicate analyte was chosen over the parent sample analyte in April due to higher concentrations. October had no deviation in results between the field duplicate and parent sample. All field duplicate results met project precision criteria.

3.2 SAMPLE TRACKING PROTOCOL

Each field sample was assigned a unique identification number that described where the sample was collected. The number consists of a maximum 12-digit alphanumeric code as follows:

xxxxxxxxxzzaa

where:

xxxxxxxxx	represents the well identification or well name (e.g., ST14-27, ST13-04)
zz	represents the medium (WG for water-ground)
aa	indicates the sample event number for groundwater (e.g., 01, 02, 03, etc.)

For example, the groundwater sample collected during the April sampling event from SD13-04 was identified as "SD13-04WG04." In order to ensure that field duplicates were analyzed 'blind' by the laboratory, each field duplicate sample was assigned a unique sample identification number, that did not associate the duplicate with its parent sample (e.g., DUP01, DUP02, etc). Field duplicate locations were determined prior to mobilization. Documentation was maintained in the field

sampling log book, and on the sample collection log, to track all field duplicate samples (Appendix A.1 and A.2).

QC samples were identified by use of a similar system of identifiers with a maximum of 10 characters. The QC sampling number system is summarized below:

xxyyyyyy

where:

xx represents the medium (EB for equipment blank, TB for trip blank, AB for ambient blank)

yyyyyy represents the date (month, day, year)

For example, an equipment blank obtained on October 12, 2000, would be identified as EB101200. Documentation was maintained in the field sampling log book, and on the sample collection log, to track all field QC samples (Appendix A.1 and A 2).

The Project Geologist/Field Coordinator maintained a list detailing the connection between each QC sample and specific environmental samples. For instance, each trip blank was correlated with a particular set of samples shipped to the laboratory in the same cooler, and each equipment blank was correlated to those samples collected using a particular set of sampling tools on a specific date.

After the laboratory data were received and prior to validation, the laboratory's electronic data deliverable (EDD) was reviewed to ensure that it was complete, correct, and compliant with the Air Force's Environmental Resources Program Information Management System format. Once the EDD was approved, data entry and QC operations were performed using the validation reports.

3.3 LABORATORY QUALITY CONTROL

The laboratory QC program, including sample handling, laboratory QC elements, and data reporting, is fully documented in the Final Basewide QAPP (HydroGeoLogic 2000c). Sample handling includes documentation of sample receipt, placement in storage, controlled sample access, and disposal. Laboratory QC elements consist of instrument calibration and maintenance, laboratory control samples, method blanks, and matrix spike/matrix spike duplicate samples, and method-specific QC checks. Reporting of the laboratory control data was planned prior to the collection of the data, allowing the laboratory to place the appropriate information into each data package so that the data quality evaluation could be performed in a timely manner.

3.4 ANALYTICAL METHOD

This section includes brief description of the method used and the recommended holding time. The method was taken from *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (U.S. EPA SW-846, Third Edition, and its first and second update), *Methods for Chemical Analysis of Water and Waste* (U.S. EPA 1979), *ASTM Annual Book of Standards* (1993), and from

manufacturers' literature. More information regarding the method can be found in the Basewide QAPP (HydroGeoLogic, 2000c).

3.4.1 EPA Method SW8260B - Volatile Organic Compounds

Volatile (or purgeable) organics in water were analyzed using method SW8260B. This method uses a capillary column gas chromatography (GC)/mass spectrometry technique. Volatile compounds are introduced into the GC by purge and trap (SW5030A). An inert gas is bubbled through the water samples to transfer the purgeable organic compounds from the liquid to vapor phase. The vapor is then swept through a sorbent trap where the purgeable organics are trapped. The trap is back flushed and heated to desorb the purgeable organics onto a capillary GC column where they are separated and then detected with a mass spectrometer. The maximum recommended sample holding time for this analysis is 14 days for preserved water samples and 7 days if unpreserved by acid. All holding times were met for this analysis.

TAB

SECTION 4.0

4.0 NATURE AND EXTENT OF CONTAMINATION

Since January 1998, a LTM program has been in place for both sites based on requirements specified in the RAP (Parsons, ES, 1997). It was determined in February 2000 that future investigation and closure activities at both SWMU 68 / AOC 7 would be conducted according to the requirements in the TNRCC PST Regulations (TNRCC, 2000). A total of sixteen SWMU 68 and AOC 7 groundwater samples were collected during both 2000 monitoring events and submitted to the contracted laboratory for chemical analysis. Appendix D contains the laboratory summary reports for each sampling event.

4.1 TARGET CONCENTRATIONS

Target concentrations are the maximum allowable contaminant concentrations in the particular contaminated media that are protective of human health and groundwater quality. The values provide the responsible party with a target clean up concentration which is to be used to help restore the site without the use of institutional controls protective of human health.

Five categories of Plan A Target Concentrations have been established by the TNRCC that consider either actual or potential beneficial groundwater usage. Category I, II, III, and IV beneficial usage of groundwater is based on the presence of impacted or threatened water supply sources and the quality of the water present in the affected zone of the aquifer. Category V is used when a beneficial groundwater use cannot be established. This category considers effects on soils only. The impacted or threatened water supply source applies to a drinking water source within the same or connected interval as the affected groundwater zone. The quality of water in the affected zone refers to the potential beneficial use based on the total dissolved solids (TDS) present. The affected groundwater zone at SWMU 68 and AOC 7 has a Category II beneficial usage based on TDS concentrations less than 3,000 parts per million (ppm) and no known current beneficial use within 0.5 miles of the site (HydroGeoLogic, 2000a).

4.1.1 TNRCC Plan A Target Concentrations

The Plan A Target Concentrations for groundwater are based on the beneficial groundwater use category. Table 4.1 presents the established groundwater target concentrations for Categories I, II, and III (TNRCC, 1994). In the Plan A Site Assessment for SWMU 68 and AOC 7, a direct comparison of site conditions was made with the appropriate target concentrations to validate the use of Plan A Category II Target Concentrations.

4.2 NATURE AND EXTENT OF GROUNDWATER CONTAMINATION

In accordance with the Site Assessment (SA) for SWMU 68 and AOC 7, nine monitoring wells were proposed for semi-annual sampling to monitor the nature and extent of dissolved contaminants at both sites. The SA proposed continued sampling until the appropriate target concentrations were obtained.

Table 4.1
Plan A Target Concentrations

Chemical of Concern	Target Groundwater Concentration (mg/L)		
	Category I	Category II	Category III
Acenaphthene	2 19	2.19	3 13
Acetone	3 65	3.65	5.21
Anthracene	11	11	15 6
Benzene	0.005	0.0294	0 14
Benzo (a) anthracene	0.000117	0.0017	0.00556
Benzo (b) fluoranthene	0.000117	0.00117	0.00556
Benzo (k) fluoranthene	0.00117	0.0117	0.0556
Benzo (a) pyrene	0 0002	0 000117	0.000556
Chrysene	0.0117	0 117	0.556
Dibenz (a, h) anthracene	0 0000117	0.000117	0.000556
Dichlorobenzene (1,2)	0 6	3 29	4 69
Dichlorobenzene (1,3)	0.6	3 25	4 64
Dichlorobenzene (1,4)	0.075	0.355	1 69
Ethylbenzene	0.7	3.65	5.21
Fluoranthene	1.46	1.46	2 08
Fluorene	1.46	1.46	2.08
Formaldehyde	7.3	7.3	10
Indeno (1,2,3-cd) pyrene	0.000117	0.00117	0.00556
Methyl Ethyl Ketone	21.9	21 9	31.3
Naphthalene	1.46	1 46	2.08
Pyrene	1.1	1.1	1.56
Toluene	1	7.3	10 4
Xylene	10	73	104

Notes
Category I, II, and III Target Concentrations taken from Appendix A, Table A-1 of RG-36 (TNRCC, 1994).

Hydrocarbon contamination has resulted in free petroleum product and detectable concentrations of petroleum hydrocarbons in soil and groundwater collected in the terrace alluvium underlying both SWMU 68 and AOC 7 sites. The most likely sources of hydrocarbon contamination include surface spills and slowly leaking underground lines of JP-4 at SWMU 68, while possible spills from underground piping and related USTs were the likely sources of contamination at the abandoned base refueling station AOC 7.

It is believed the contaminated soils at AOC 7 are not a significant source of groundwater contamination since the site was abandoned in the early 1970's, thus the petroleum hydrocarbon sources have long ago been eliminated. Although very small quantities of LNAPL have recently been measured at the site, chemistry data suggests that the trace amount of LNAPL is not acting as a source for future soil or groundwater contamination.

SWMU 68 has been operational throughout most of the NAS Fort Worth JRB history. Consequently, the residual fuel hydrocarbon contamination in soils and groundwater are likely a

result of multiple low-volume release events rather than single, large-volume release events (Parsons ES, 1997).

Due to the common indicator constituents of motor gas and JP-4, only VOCs were analyzed during the 2000 sampling events in order to identify areas of possible contaminant migration away from the two sites. Decreasing VOC contamination and reduction in free product thickness suggests plume stabilization and natural attenuation processes are actively occurring in the groundwater.

The majority of both sites are covered by impermeable materials such as cement and asphalt, with gravel and grass covering minor portions. SWMU 68 includes concrete, asphalt and gravel driveways, along with parking areas, warehouse structures, and storage buildings. AOC 7 is maintained as an abandoned industrial paved area, so non-intrusive workers are not regularly present. This limitation of potential exposure to current or future onsite workers lessen the potential exposure risk existing at either site.

4.2.1 Current Investigation

Groundwater samples were collected from eight of the nine monitoring wells at SWMU 68 and AOC 7 during both 2000 sampling events (ST14-28 had insufficient groundwater for sample collection). Prior to the environmental sample collection, field parameters were monitored until the designated stabilization criteria were obtained for temperature, pH, conductivity, DO, oxidation reduction potential, and turbidity (Table 4.2). Once field parameters stabilized, the environmental samples were collected and analyzed for VOCs (EPA Method SW8260B). Though several constituents were detected in both SWMU 68 and AOC 7 groundwater samples, none contained detections that exceeded the Category II target concentrations.

4.2.2 Previous Investigations

Previous investigations have detected benzene concentrations exceeding the maximum contaminant levels (MCLs) at the fuel loading area of SWMU 68. Analytical results have defined hydrocarbon plumes around the POL and the fuel loading area. Benzene, toluene, and total xylenes were also detected above MCLs at AOC 7. Parsons Engineering Science (Parson ES) prepared a RAP in 1997 that concluded that benzene is biodegrading in groundwater at both sites via oxygen and nitrate reduction, ferric iron reduction, sulfate reduction, and methanogenesis (Parson ES, 1997).

Parsons ES also field evaluated two types of source reduction: biosparging and bioventing. A single biosparging test well was constructed at SWMU 68 (fuel loading area) in December 1994 (Parsons ES, 1997). A full-scale bioventing system followed in April 1996, operating for over two years. Data collected in March 1998 assessed the impact the bioventing operations had on reducing petroleum hydrocarbon contamination beneath the site. Soil gas results suggested that biological degradation of hydrocarbons was active, and subsurface soil samples indicated reduced benzene concentrations throughout the site (Parsons ES, 1998).

Table 4.2
2000 SWMU 68 and AOC 7
Monitoring Well Field Parameters

Monitoring Well	pH	Temperature[1] (°C)	Electrical Conductance[2] (µS/cm)	Dissolved Oxygen[3] (mg/L)	Oxygen Reduction Potential[4] (mV)	Turbidity[5] (NTU)
April 2000						
SD13-01	6.99	19 57	734	0 69	-111 3	1 32
SD13-02	7.08	21.05	505	1.81	-130.3	0.82
SD13-04	6 86	21.31	536	1 54	-107.1	5 6
ST14-03	7.03	22 21	510	0.64	-109.3	1.57
ST14-27	6 91	21.77	362	0.38	13.0	4 95
ST14-W11	7 06	20 52	478	2 49	-47 6	0 96
ST14-W16	7.23	20.71	589	.027	-153 9	1 27
ST14-W21	7.16	21.11	622	0.56	-132.0	9.3
October 2000						
SD13-01	6 5	25.5	634	1.01	-186	2.5
SD13-02	6.64	26.2	478	0.86	-171 4	0 87
SD13-04	7 26	24.5	708	1.45	-87.1	6.8
ST14-03	6.59	24 71	521	1.08	-129 4	2 04
ST14-27	6.87	26.68	680	1.08	-126 9	8.7
ST14-W11	6.84	24 53	446	3.42	-57.8	0 63
ST14-W16	6.8	25.2	644	0.87	-142	1.7
ST14-W21	7.3	24.4	659	1.14	-97	8.3

Notes:
[1] Temperature was measured in degrees Celsius (°C)
[2] Conductance was measured in microSiemens per centimeter (µS/cm)
[3] Dissolved oxygen was measured in milligrams per liter (mg/L)
[4] Oxygen Reduction Potential was measured in millivolts (mV).
[5] Turbidity was measured in nephelometric turbidity units (NTUs)

Soil samples were also collected by Parsons ES in 1998 at AOC 7 in order to measure the progress of natural attenuation in the subsurface soils. Laboratory results indicated no additional sampling or remediation was required due to little fuel contamination remaining the soils (Parsons ES, 1998).

A Baseline Risk Assessment (BRA) was prepared for both sites using the 1990 IRP analytical data (Radian, 1991) and EPA (1986a) risk assessment guidance, which has since been superseded (Parsons ES, 1997). Although the BRA indicated that both carcinogenic and non-carcinogenic human health risks associated with exposure to the contaminants at SWMU 68 and AOC 7 were below levels warranting remedial action, these sites were identified as high-priority sites because they may have represented a direct contaminant source or contaminant migration pathway to Farmers Branch and the West Fork of the Trinity River.

Additionally, the report cited significant uncertainty about the processes involved in subsurface contaminant transport and the potential for increased risks over time. Long term groundwater

monitoring has more recently been performed by HydroGeoLogic and Law Engineering, with elevated benzene and metals being the constituents of concern.

4.2.3 Discussion of Groundwater Impacts

During both 2000 monitoring events, a total of fifteen compounds were detected at low concentrations in groundwater. Although benzene was detected above the PQL at ST14-W16 (0.001 mg/L), along with toluene at monitoring wells SD13-02 (0.0007 mg/L) and ST14-03 (0.003 mg/L), these VOC concentrations did not exceed Category II target concentrations. Both ethylbenzene and total xylenes were not detected in all eight monitoring wells sampled throughout the entire year. Table 4.3a and 4.3b provide the analytical results associated with Plan A target compounds. Appendix C.1 provides an overview of all laboratory results.

4.3 LIGHT NON-AQUEOUS PHASE LIQUIDS

Free-product has historically been detected in four monitoring wells at SWMU 68 and AOC 7 (SD13-04, SD13-07, WHGLTA007, and 17M). Both JP-4 product and gasoline are less dense than water and therefore "float" on top of the groundwater in the saturated zone. This LNAPL product thickness has been steadily decreasing since levels were measured in 1998. During the weekly product monitoring and recovery events in 2000, the presence of LNAPL continued to decrease. A complete listing of the 2000 monthly free product monitoring of the four monitoring wells is presented in Table 2.1.

Recent levels of LNAPL detected in all four monitor wells can be associated with seasonal effects. In September 7, 2000, SD 13-04 had 0.05 feet (0.6 inches), SD 13-07 had 0.1 feet (1.2 inches), while WHGLTA007 and 17M had 0.02 feet (0.24 inches) of free product. Only one monitor well, SD13-07, had LNAPL detected other than in September (0.01 feet in November 2000). These small quantities of free product occurring at concurrent times throughout both sites can be qualified as seasonal, and thus be determined insignificant as potential future source areas for dissolved contaminants, and should not be considered a barrier in consideration of site closure.

Table 4.3a
Concentrations of Organic Constituents in Groundwater - SWMU 68 and AOC 7
April 2000
NAS Fort Worth JRB, Texas

Analytical Parameter (mg/L)	Plan A[1]	Sample Location [2]								
		SD13-01	SD13-02	SD13-04	ST14-03	ST14-27	ST14-28	ST14-W11	ST14-W16	ST14-W21
Aromatic VOCs										
Chlorobenzene	NE	0 002	ND	0.0008	ND	ND	dry	ND	ND	ND
Isoproplylbenzene (Cumene)	NE	0.016	0.009	0.042	ND	ND	dry	ND	0 010	0.015
Naphthalene	1 46	ND	ND	ND	ND	ND	dry	ND	0 005J	ND
N-Butylbenzene	NE	0.03	0 0006	0.003	ND	ND	dry	ND	0.0003F	ND
N-Proplybenzene	NE	0 13	0 004	0.035	ND	ND	dry	ND	0.008	0.0009J
Sec-Butylbenzene	NE	0.010	0 002	0.08	ND	ND	dry	ND	0.0006	ND
T-Butylbenzene	NE	0 009	0.005	0.006	0 003	ND	dry	ND	0.005	0.004
Tert-Butyl-Methyl Ether	NE	ND	0.001	ND	ND	ND	dry	ND	ND	ND
Toluene	7.3	ND	ND	ND	0 003	ND	dry	ND	ND	ND

[1] Plan A Category II Target Groundwater Concentrations
[2] Parentheses ( ) indicate concentrations exceeding Plan A Target Concentrations for Category II sites
J - Result is detected and the quantitation is an estimation
F - Result is detected but the associated numerical value is below the detection limit
NA - Not analyzed
NE - Category II Target Concentration is not available for the constituent
ND - Non Detect
R - Result was rejected during data validation due to deficiencies in the QC criteria

Table 4.3b
Concentrations of Organic Constituents in Groundwater - SWMU 68 and AOC 7
October 2000
NAS Fort Worth JRB, Texas

Analytical Parameter (mg/L)	Plan A[1]	Sample Location[2]								
		SD13-01	SD13-02	SD13-04	ST14-03	ST14-27	ST14-28	ST14-W11	ST14-W16	ST14-W21
Aromatic VOCs										
Benzene	0 0294	ND	ND	ND	ND	ND	dry	ND	0.001	ND
Chlorobenzene	NE	0 001	ND	ND	ND	ND	dry	ND	ND	ND
Chloromethane	NE	0 0005	ND	ND	ND	ND	dry	ND	ND	ND
Isopropylbenzene (Cumene)	NE	0 009	ND	0.013	0 0007	ND	dry	ND	0 007	0.017
Hexachlorobutadiene	NE	0 0005	ND	ND	ND	ND	dry	ND	ND	ND
Methylene Chloride	NE	ND	ND	ND	ND	ND	dry	ND	0 0005J	ND
Naphthalene	1.46	ND	ND	ND	ND	ND	dry	ND	0 002J	0.0005R
N-Butylbenzene	NE	0.0013	ND	0.002	ND	ND	dry	ND	ND	ND
N-Propylbenzene	NE	0.006	ND	0.007	MD	ND	dry	ND	0.006	0.0009
Sec-Butylbenzene	NE	0 008	ND	0 005	ND	ND	dry	ND	ND	0.0004F
T-Butylbenzene	NE	0 008	0.001	0 007	0.003	0.003	dry	ND	0.005	0.003
Toluene	7.3	ND	0.0007	ND	ND	ND	dry	ND	ND	ND
1,1,2-Trichloroethane	NE	ND	ND	ND	ND	ND	dry	ND	ND	0.002
1,2,3-Trichlorobenezne	NE	0.0006	ND	ND	ND	ND	dry	ND	ND	ND

Notes:
1 Plan A Category II Target Groundwater Concentrations
2 Parentheses ( ) indicate concentrations exceeding Plan A Target Concentrations for Category II sites
J - Result is detected and the quantitation is an estimation
F - Result is detected but the associated numerical value is below the detection limit
R - Result was rejected during data validation due to deficiencies in the QC criteria
NA - Not analyzed
NE - Category II Target Concentration is not available for the constituent
ND - Non Detect

This page was intentionally left blank.

TAB

SECTION 5.0

5.0 CONCLUSIONS AND RECOMMENDATIONS

Previous investigations conducted at SWMU 68 and AOC 7 indicate decreasing groundwater contamination levels in the Terrace Alluvium aquifer. In order to verify plume concentrations and stability, HydroGeoLogic performed groundwater monitoring during 2000 while continuing to monitor and remove free-product from four monitoring wells. These laboratory results provided evidence of plume stabilization and low contaminant concentrations in all eight monitoring wells. Not only did no VOC contaminants exceed the Plan A-Category II Target Groundwater Concentrations, but none exceeded Category I concentrations. The presence of measurable LNAPL (> 0.01 feet thickness) was actively monitored on a weekly to monthly basis at wells SD13-04, SD13-07, WHGLTA007, and 17M. The small detected amounts of free-phase hydrocarbon contamination (attributed to seasonal effects) at these four monitoring wells meets the intent of closure criteria.

With respect to contaminant concentrations and free product measurements, HydroGeoLogic believes that plume stability has been demonstrated and that compliance has been achieved at both sites based on 2000 data and previous site investigations. Continued monitoring at both sites has verified plume reduction and decreasing contaminant concentrations below target concentrations. Consistent with these findings, HydroGeoLogic has prepared and submitted a Site Closure Request Form in conjunction with this report. A copy of the Site Closure Request Form is included as Appendix E.

This page was intentionally left blank.

TAB

SECTION 6.0

6.0 REFERENCES

Air Force Center for Environmental Excellence (AFCEE), 1997. Memorandum of Understanding for Environmental Compliance at NAS Fort Worth JRB, Carswell Field.

ASTM Annual Book of Standards, 1993.

HydroGeoLogic, Inc., (HydroGeoLogic), 1999. Final Investigation Derived Waste Management Plan, NAS Fort Worth JRB, Texas.

HydroGeoLogic, Inc., (HydroGeoLogic), 2000a. Final Site Assessment Report for SWMU 68 and AOC 7, LPST Number 104819, NAS Fort Worth JRB, Texas, November, 2000.

HydroGeoLogic, Inc., (HydroGeoLogic), 2000b. Final Basewide Groundwater Sampling and Analysis Program, NAS Fort Worth JRB, Texas.

HydroGeoLogic, Inc., (HydroGeoLogic), 2000c. Final Basewide Quality Assurance Program Plan, NAS Fort Worth JRB, Texas, February 1998.

Jacobs Engineering Group, Inc. (Jacobs), 1995. USAFB Conversion Agency Final, NAS For Worth JRB Removal/Closure of the Fuel Hydrant System, Final Technical Report, and Appendices A, B, C, and D, December 1995.

Law Environmental Government Services, 1994. Installation Restoration Program (IRP) Draft RCRA Facility Investigation for Carswell AFB, Fort Worth, Texas.

Law Environmental, Inc. (LAW), 1995. RCRA Facility Investigation Report, NAS Fort Worth JRB, Carswell Field, Texas.

Law Environmental Inc. (LAW), 1996. Installation Restoration Program Quarterly Groundwater Monitoring, First Semi-annual Report, Volume 1.

Parsons Engineering Science (Parsons ES), Inc., 1997. Final Remedial Action Plan for Risk-based Remediation of Site ST14 (SWMU 68), LPST ID 104819: the Former Base Refueling Area (AOC 7); the French Underdrain System (SWMU 64); and the North Oi./water Separator (SWMU 67), Carswell ARB, NAS Fort Worth JRB, Texas, July 1997.

Parsons Engineering Science (Parsons ES), Inc., 1998. Results of Two-Year Soil Sampling at Site ST14 Bioventing System, Carswell AFB, TX (Contract, F41624-93-C-8004).

Radian, 1991. Remedial Investigation for the East Area. Draft report. Prepared for Carswell Air Force Base, Texas.

Texas Natural Resource Conservation Commission (TNRCC), 1994. Leaking Storage Tank Program, Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36), January 1994.

Texas Natural Resource Conservation Commission (TNRCC), 1995. Guidance for Risk-Based Assessment at LPST Sites in Texas, Emphasizing Initial Investigations and Plan A Evaluation (RG-175), October 1995.

Texas Natural Resource Conservation Commission (TNRCC), 1996a. Petroleum Storage Tank Division, Action levels for LPST Sites (RG-17), October 1996.

Texas Natural Resource Conservation Commission (TNRCC), 1996b. Petroleum Storage Tank Division, Groundwater Monitoring and Reporting (RG-43), September 1996 (rev.).

Texas Natural Resource Conservation Commission (TNRCC), 1997. Interoffice Memorandum: Process for Closure Evaluation for Petroleum Hydrocarbon LPST Sites Exceeding Target Concentrations, February 1997.

U.S. Army Corps of Engineers, Fort Worth District, 1992. Spot 35, Carswell Air Force Base Results of Contamination Investigation, November, 1992.

U.S. Environmental Protection Agency (EPA). 1986a. Superfund Public Health Evaluation Manual. Office of Emergency and Remedial Response. EPA/540/1-86/060. (OSWER Directive 9285.4-1)

TAB

APPENDIX A

APPENDIX A.1

GROUNDWATER FIELD SAMPLING DATA SHEETS

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SD13-01		Location: NAS Fort Worth JRB	
Sampler(s): NHade JWallace		Project Name: SWMU 68, AOC 7 64,67	
Well Depth:		Project #: AFC001-33DBA	Date: 4/5/00 Time: 920
DTW (ft): *	DTP (ft): NA	Courier: X FedEx ___ UPS ___ Hand ___ Other	
MP Ht. Above/Below Ground Surface: 2.94		Sampling Method: lowflow	
Condition of Bottom of Well: NA		Type of Pump: Bladder	
Screen Interval (ft): 10.06 - 17.26		Weather (sun/clear, overcast/rain, wind direction, ambient temperature): SW 65°F	
Well Diameter (in): 2			
Placement of Pump (ft): 12.15'			

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
920	*	0.3	0	6.51	19.55	435.0	-101.0	1.97	2.12	clear
923	*	0.2	0.9	6.67	19.33	434.0	-104.9	1.86	2.01	"
926	*	0.1	1.5	6.76	18.91	429.0	-103.8	1.70	1.86	"
929	*	0.2	1.8	6.86	18.63	426.0	-114.8	1.86	1.78	"
931	*	0.2	2.4	6.87	19.71	436.0	-126.5	1.14	2.27	"
934	*	0.2	3.0	6.93	19.74	436.0	-126.0	0.83	NH ~~2~~ 1.70	"
937	*	0.2	3.6	6.96	19.55	433.0	-110.1	0.74	1.63	"
940	*	0.2	4.2	6.97	19.54	433.0	-113.4	0.71	1.53	"
943	*	0.2	4.8	6.99	19.57	434.0	-111.3	0.69	1.32	"
946	Collect		Sample		SD13-	01WG01				

Observations

Color: (Clear) Other (describe):

Odor: (~~None~~ NH) (Low) Medium High Very Strong H2S (Fuel-like)

Notes: * Water is below top of dedicated pump.

Signed/Sampler(s): Nick Hade, J Wallace

568 74

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SD13-02		Location: NAS Fort Worth JRB	
Sampler(s): WHade JWallace		Project Name: SWMU 68, AOC 7 64, 67	
Well Depth:		Project #: AFC001-33DBA	Date: 4/5/00 Time: 1031
DTW (ft): *	DTP (ft): N/A	Courier: X FedEx ___UPS ___Hand ___Other	
MP Ht. Above/Below Ground Surface: 2.64		Sampling Method: Low-flow	
Condition of Bottom of Well:		Type of Pump: Bladder	
Screen Interval (ft): 12.14 - 16.14		Weather (sun/clear, overcast/rain, wind direction, ambient temperature): SW 70°F	
Well Diameter (in): 2			
Placement of Pump (ft): 11.83'			

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediments Discharged
1034	*	0.3	0	6.97	20.97	507.0	-118.4	4.96	3.04	Clear
1037	*	0.3	0.9	7.00	21.07	507.0	-121.4	4.54	2.59	"
1040	*	0.2	1.8	7.02	21.35	509.0	-115.4	4.44	2.28	"
1043	*	0.3	2.4	7.04	21.17	507.0	-121.4	3.68	1.20	"
1046	*	0.3	3.53 NH	7.04	21.14	507.0	-120.0	3.40	1.43	"
1049	*	0.3	4.2	7.05	21.19	506.0	-121.7	3.11	1.13	"
1052	*	0.3	5.1	7.06	21.16	506.0	-125.0	2.61	1.25	"
1055	*	0.3	6.0	7.06	21.13	506.0	-125.0	2.43	1.18	"
1058	*	0.3	6.9	7.07	21.04	505.0	-127.0	2.10	1.57	"
1101	*	0.3	7.8	7.08	21.02	505.0	-127.5	1.96	0.91	"
1104	*	0.3	8.7	7.08	21.05	505.0	-130.3	1.81	0.82	"
1107	*	Collect Sample SD13-02 WG01								
					~~SD13-02 WG01 MS~~ NH					
					~~SD13-02 WG01 MSD~~ NH					

Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very Strong H2S Fuel-like

Notes: * Water level is below top of dedicated pump.

Signed/Sampler(s): [illegible] [illegible]

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SD13-04	Location: NAS Fort Worth JRB
Sampler(s): J Wallace N Hade	Project Name: SWMU 68, AOC 7
Well Depth.	Project #: AFC001-33DBA Date: 4/5/00 Time: 1222
DTW (ft): 9.89 DTP (ft): NA	Courier: X FedEx ___ UPS ___ Hand ___ Other
MP Ht. Above/Below Ground Surface: 2.76	Sampling Method: Lowflow
Condition of Bottom of Well:	Type of Pump: Bladder
Screen Interval (ft): 3.26 - 13.26	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): SW 75°F
Well Diameter (in): 2	
Placement of Pump (ft): 7.61	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond umhos/cm	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
1225	*	0.3	0	6.83	23.58	637.0	-99.0	3.31	6.21	clear
~~1230~~ 1228	*	0.3	0.9	6.81	21.61	630.0	-96.0	2.81	5.88	"
1231	*	0.3	1.8	6.77	20.64	616.0	-94.3	2.03	5.34	"
1234	*	0.2	2.7	6.77	20.96	613.0	-94.4	1.99	5.08	"
1237	*	0.2	3.3	6.78	21.39	601.0	-96.2	1.91	4.45	"
1240	*	0.2	3.9	6.82	21.38	563.0	-99.4	1.77	4.13	"
12 ~~1445~~ 1244	*	0.2	4.5	6.85	21.44	543.0	-105.0	1.63	4.41	"
1247 ~~1447~~ 1247	*	0.2	5.1	6.86	21.31	536.0	-107.1	1.54	5.60	"
1250 ~~1450~~ 1249	*	collect sample			SD13-04WG01					

Observations

Color: (Clear) Other (describe):

Odor: None Low (Medium) High Very Strong H2S (Fuel-like)

Notes: * water is below top of dedicated pump

Signed/Sampler(s): N Hade, J Wallace

568. 76

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No. ST14-03	Location: NAS Fort Worth JRB
Sampler(s): N. Hade, J. Wallace	Project Name: SWMU 68, AOC 7 SWMU 64,67
Well Depth.	Project #. AFC001-33DBA Date: 4/5/00 Time: 1321
DTW (ft). 11.82 DTP (ft): —	Courier: ✓ FedEx ___ UPS ___ Hand ___ Other
MP Ht. Above/Below Ground Surface: 1.85	Sampling Method Low Flow
Condition of Bottom of Well: N/A	Type of Pump: Bladder
Screen Interval (ft): 9.7 - 19.5	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	Sunny, 75°, wind(S)
Placement of Pump (ft): N/A	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
1321	~~11.82~~ 11.92	0.2	0	6.88	21.64	599.00	-87.3	3.68	2.98	
1324	12.00	0.2	.6	6.88	21.71	600.00	-93.3	3.36	2.56	
1327	11.92	0.2	1.2	6.92	21.79	568.00	-99.5	2.43	2.34	
1330	11.90	0.2	1.8	6.94	22.22	558.00	-98.9	2.18	2.03	
1333	11.91	0.2	2.4	6.96	22.23	549.00	-100.1	1.83	2.09	
1336	11.91	0.2	3.0	6.97	22.22	540.00	-103.9	1.58	1.87	
1339	11.92	0.2	3.6	6.98	22.19	542.00	-103.1	1.40	1.76	
1342	11.93	0.2	4.2	6.98	22.15	531.00	-103.0	1.20	1.79	
1345	11.93	0.2	4.8	7.00	22.12	522.00	-105.9	1.09	1.89	
1348	11.93	0.2	5.4	7.01	22.14	519.00	-105.6	0.98	1.73	
1351	11.94	0.2	6.0	7.01	22.16	517.00	-101.3	0.86	1.68	
1354	11.94	0.2	6.6	7.02	22.20	514.00	-104.4	0.78	1.55	
1357	11.95	0.2	7.2	7.02	22.18	512.00	-107.8	0.71	1.66	
1400	11.95	0.2	7.8	7.03	22.21	510.00	-109.3	0.64	1.57	
1401	Collect Sample		ST14-03							

Observations

Color: (Clear) Other (describe): clear

Odor: (None) Low Medium High Very Strong H2S Fuel-like none

Notes: All parameters stabilized except DO. DO was steadily decreasing.

Signed/Sampler(s): J. Wallace, N. Hade

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No · ST14-27	Location NAS Fort Worth JRB
Sampler(s): J. Wallace, C. Williams	Project Name SWMU 68, AOC 7
Well Depth 15.75'	Project # AFC001-33DBA Date. 4-11-00 Time 1200
DTW (ft)· 10.2' DTP (ft): –	Courier. ✓ FedEx ___ UPS ___ Hand ___ Other
MP Ht Above/Below Ground Surface: -1.19	Sampling Method · Low flow purging
Condition of Bottom of Well· Soft	Type of Pump Bladder
Screen Interval (ft) 4 81 - 14.81	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)
Well Diameter (in) 2"	Overcast, 70°
Placement of Pump (ft)· (top): 9.75'	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. (umhos/cm)	ORP (mv)	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1200	10.2	0.2	0.0	7.00	21.79	365	6.4	1.80	41.2	slightly cloudy
1203	10.2	0.2	0.6	6.96	21.66	360	10.0	0.99	36.9	"
1206	10.2	0.2	1.2	6.94	21.67	361	10.9	0.77	26.0	clear
1209	10.2	0.2	1.8	6.93	21.70	361	11.2	0.64	16.99	"
1212	10.2	0.2	2.4	6.93	21.71	361	11.7	0.55	13.98	
1215	10.2	0.2	3.0	6.92	21.72	361	12.2	0.50	9.51	
1218	10.2	0.2	3.6	6.92	21.70	361	13.1	0.43	8.45	
1221	10.2	0.2	4.2	6.92	21.72	361	13.4	0.41	5.60	
1224	10.2	0.2	4.8	6.91	21.77	362	13.0	0.38	4.95	
1230	Collect samples.									

Observations

Color. (Clear) Other (describe). Clear

Odor (None) Low Medium High Very Strong H2S Fuel-like None

Notes.

Signed/Sampler(s) C. Williams, J. Wall

568 78

GROUNDWATER FIELD SAMPLING DATA SHEET

~~Page 1 of 2~~

Well No : ST14-28	Location: NAS Fort Worth JRB
Sampler(s). S. Stanford, C. Williams	Project Name: SWMU 68, AOC 7
Well Depth: 16.66	Project #: AFC001-33DBA Date: 4-5-00 Time: ~~1315~~ 1320
DTW (ft): * DTP (ft): –	Courier: ✓ FedEx ___ UPS ___ Hand ___ Other
MP Ht Above/Below Ground Surface: -0 44	Sampling Method . Grab - Low flow
Condition of Bottom of Well: –	Type of Pump: Bladder
Screen Interval (ft): 7 - 17	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2"	Sunny, Clear, 70°, Wind from South
Placement of Pump (ft): top of pump: ~~16.64~~ 11.64'	

Field Parameters

Time (24 hr)	Depth to Water (ft) *	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size and Amount of Sediment Discharged
1320	–	0.1	0.0	6.68	22.49	714	-96.4	3.95	27.0	clear
1323	–	0.1	0.3	6.64	22.61	717	-102	2.11	27.8	
1326	–	0.1	0.6	6.62	22.67	719	-102	3.29	30.5	
1329	–	0.1	0.9	6.61	22.93	725	-100	2.01	28.4	
1332	–	0.1	1.2	6.61	23.10	730	-96	1.76	32.5	
1334	lower pump ≈ 1 foot; air bubbles in discharge tubing									
1336	–	0.1	1.6	6.58	23.08	732	-104	1.48	39.8	
1339	–	0.1	1.9	6.60	22.85	731	-106	1.17	46.9	
1342	–	0.1	2.2	6.59	23.41	739	-108	1.70	42.9	
1345	–	0.1	2.5	6.58	23.53	741	-106	1.63	38.8	
1350	Stop pureing; air bubles in discharge tubing; allow well to recharge									
1423	–	0.05	2.6	6.60	23.30	743	-102	2.12	42.2	
1426	–	0.05	2.75	6.57	23.35	738	-101	1.60	36.8	
1429	–	0.05	2.90	6.57	23.73	744	-101	1.86	28.6	
1432	–	0.05	3.05	6.57	23.89	746	-100	1.54	25.6	
1435	–	0.05	3.20	6.57	24.16	750	-99	~~2.29~~ 1.74	23.2	

1440 Well went dry.

Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very Strong H2S Fuel-like

Notes. * Water level below top of pump, unable to measure.

Signed/Sampler(s): C. Williams, S. [illegible]

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: ST14-W11	Location: NAS Fort Worth JRB
Sampler(s): NHade JWallace	Project Name: SWMU 68, AOC 7 SWMU 64,67
Well Depth:	Project #: AFC001-33DBA Date: 4/5/00 Time: 1510
DTW (ft): 9.95' DTP (ft): NA	Courier: ✓ FedEx ___ UPS ___ Hand ___ Other
MP Ht Above/Below Ground Surface: -0.09	Sampling Method : Low Flow
Condition of Bottom of Well:	Type of Pump: Bladder
Screen Interval (ft): 6.04 - 19.89	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 2	Sunny SW 80°F
Placement of Pump (ft): 11.6'	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
1518	9.96	0.1	0	7.06	21.44	494.0	-14.5	4.97	14.49	clear (rust particles)
1521	9.96	0.3	0.3	7.11	20.48	478.0	-37.0	4.44	3.90	"
1524	9.98	0.2	~~0~~ 1.2	7.09	20.43	476.0	-38.9	4.07	2.50	"
1527	9.98	0.3	1.8	7.08	20.36	475.0	-48.0	3.60	1.93	"
1530	9.98	0.2	2.7	7.09	20.36	475.0	-49.8	3.34	1.18	"
1533	9.98	0.2	3.3	7.07	20.62	478.0	-50.6	2.90	1.06	"
1536	9.98	0.2	3.9	7.07	20.53	478.0	-49.7	2.64	0.94	"
1539	9.98	0.2	4.5	7.06	20.60	478.0	-48.2	2.53	0.85	"
1542	9.98	0.2	5.1	7.06	20.52	478.0	-47.6	2.49	0.96	"
1545	Collect		samples		ST14-W11WG01					

Observations

Color: Clear Other (describe).

Odor: None Low Medium High Very Strong H2S Fuel-like

Notes:

Signed/Sampler(s): NHade, JWallace

568 80

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No : ST14-W16	Location NAS Fort Worth JRB
Sampler(s): J.Wallace/N.Hade	Project Name SWMU 68, AOC 7
Well Depth. 19.63	Project # AFC001-33DBA Date 4/4/00 Time. 1423
DTW (ft) 9.73 DTP (ft): 11.1	Courier X FedEx ___UPS ___Hand ___Other
MP Ht Above/Below Ground Surface: -0 37	Sampling Method: low-flow
Condition of Bottom of Well N/A	Type of Pump: Bladder
Screen Interval (ft). 7 19 - 18.89	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)
Well Diameter (in) 2	Sunny, clear, windy SW, 70°
Placement of Pump (ft): N/A	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. (umhos/cm)	ORP (mv)	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1423	9.75	0.2	0	7.16	20.65	595.00	-149.6	0.52	1.80	Clear
1426	9.75	0.2	.6	7.21	20.68	590.00	-153.6	0.32	1.32	
1429	9.76	0.2	1.2	7.22	20.70	590.00	-151.2	0.30	1.30	
1431	9.76	0.2	1.8	7.23	20.71	589.00	-158.9	0.27	1.27	
1432	Collect sample		ST14-W16WG11							
			DUP04							

Observations

Color: Clear Other (describe) Clear

Odor: None Low Medium High Very Strong H2S Fuel-like

Notes

Signed/Sampler(s) [illegible] [illegible]

GROUNDWATER FIELD SAMPLING DATA SHEET

568 81

Well No.	ST14-W21	Location.	NAS Fort Worth JRB
Sampler(s):	N. Hade JWallace	Project Name:	SWMU 68, AOC 7
Well Depth:		Project #:	AFC001-33DBA Date: 4.6.00 Time: 1204
DTW (ft): *	DTP (ft): NA	Courier:	✓ FedEx ___ UPS ___ Hand ___ Other
MP Ht. Above/Below Ground Surface:	-0.15	Sampling Method :	Low-Flow
Condition of Bottom of Well:		Type of Pump:	Bladder
Screen Interval (ft):	7.99 - 16.89	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):	Sunny S 80°F
Well Diameter (in).	2		
Placement of Pump (ft).	10.98'		

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (mmhos/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
1206	*	0.1	0	7.12	21.23	626.0	-114.0	5.01 ~~15.07~~	33.3	clear (slightly cloudy)
1209	*	0.2	0.3	7.08	21.15	632.0	-123.6	1.09	30.8	"
1212	*	0.2	0.9	7.06	21.07	632.0	-122.3	0.80	28.1	"
1215	*	0.2	1.5	7.06	21.00	632.0	-119.0	0.71	18.5	"
1218	*	0.2	2.1	7.07	20.91	632.0	-120.7	0.73	14.2	"
1221	*	0.2	2.7	7.07	20.96	634.0	-121.0	0.72	10.4	"
1224	*	0.2	3.3	7.06	20.89	635.0	-121.3	0.72	9.9	"
1227	*	0.2	3.9	7.06	20.87	634.0	-122.4	0.71	11.1	"
1230	*	0.2	4.5	7.08	20.89	631.0	-127.0	0.62	16.9	becoming slightly cloudy
1233	*	0.2	5.1	7.10	20.91	628.0	-129.0	0.50	35.5	cloudy - rust particles
1236	*	0.2	5.7	7.10	20.95	622.0	-121.0	0.56	27.4	"
1239	*	0.2	6.3	7.11	20.95	624.0	-125.6	0.55	38.7	"
1242	*	0.2	6.9	7.12	20.97	624.0	-129.8	0.58	27.8	"
1245	*	0.2	7.5	7.15	21.03	624.0	-133.0	0.53	17.0	clearing
1248	*	0.2	8.1	7.14	21.13	623.0	-132.8	0.50	16.5	"
1251	*	0.2	8.7	7.15	21.17	623.0	-132.7	0.54	10.7	"

Observations

Color: (Clear) Other (describe): slightly cloudy then clears

Odor: (None) Low Medium High Very Strong H2S Fuel-like

Notes: * water level is below top of dedicated pump.

Signed/Sampler(s): [illegible], JWallace

568 82

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: STM-W21		Location.	
Sampler(s):		Project Name:	
Well Depth:		Project #.	Date: Time:
DTW (ft):	DTP (ft):	Courier: ____FedEx ____UPS ____Hand ____Other	
MP Ht. Above/Below Ground Surface:		Sampling Method :	
Condition of Bottom of Well:		Type of Pump:	
Screen Interval (ft):		Weather (sun/clear, overcast/rain, wind direction, ambient temperature):	
Well Diameter (in):			
Placement of Pump (ft):			

Field Parameters

1254	*	0.2	9.3	7.15	21.06	622.0	-132.4	0.53	8.20	
1257	*	0.2	9.9	7.16	21.11	622.0	-132.0	0.56	9.30	
1300	collect sample			STM-W21 well						

Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very Strong H2S Fuel-like

Notes:

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.. SD13-01	Location: NAS Fort Worth JRB
Sampler(s). K. Duran	Project Name SWMU 68 and AOC 7 Sampling
Well Depth: 17.39	Project # AFC 001 33 DDA Date. 10/31/00 Time 652
DTW (ft): * DTP (ft): —	Courier ✓ FedEx ___ UPS ___ Hand ___ Other
MP Ht. Above/Below Ground Surface: 2.94	Sampling Method Low Flow
Condition of Bottom of Well. —	Type of Pump BP
Screen Interval (ft) 10.06 - 17.26'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature) S/SE 71°F
Well Diameter (in) 2	
Placement of Pump (ft): 15.4' (intake)	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
652	*	.210	0	6.3	24.6	618	-88	3.71	12.9	
655		.210	.63	6.4	25.4	634	-151	1.64	3.8	
658		.21	1.26	6.4	25.5	634	-163	1.49	3.9	
701		.21	1.89	6.4	25.5	634	-177	1.28	3.5	
704		.21	2.52	6.5	25.4	633	-175	1.19	3.2	
707		.21	3.15	6.5	25.5	633	-168	+1.10	3.1	
710		.21	3.78	6.5	25.5	634	-170	1.04	2.6	
713		.21	4.41	6.5	25.5	634	-186	1.01	2.5	
			End Collecting Parameters							

Observations

Color: Clear Other (describe): Clear

Odor: None Low Medium High Very Strong H2S Fuel-like none

Notes: * Top of pump above water level

Signed/Sampler(s): K. Duran J. Watt GW

568 84

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No · SD13-02	Location NAS Fort Worth JRB
npler(s). J Wallace	Project Name SWMU 68 and AOC 7 Sampling
Well Depth 16.38	Project # AFC 001 33 DDA Date. 10/27/00 Time 0805
DTW (ft): * DTP (ft): —	Courier. X FedEx ___ UPS ___ Hand ___ Other
MP Ht Above/Below Ground Surface· 2.64	Sampling Method : LOW FLOW
Condition of Bottom of Well: —	Type of Pump. bladder
Screen Interval (ft): 12.14 - 16.14'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)
Well Diameter (in) 2	Overcast, S, 70°
Placement of Pump (ft) 15.0' (intake)	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
~~0805~~ 0755 *		0.1	0	6.39	25.78	484	-135.8	1.94	2.37	
0808		0.3	0.3	6.41	26.10	483	-150.0	1.31	1.92	
0811		0.15	1.20	6.56	26.26	481	-153.3	0.92	1.03	
0814		0.15	1.65	6.59	26.20	479	-171.0	0.94	0.82	
0817		0.15	2.10	6.62	26.11	478	-164.0	0.93	1.26	
0820		0.15	2.55	6.62	26.12	477	-165.2	0.89	0.78	
0823		0.15	3.00	6.64	26.20	478	-171.4	0.86	0.87	
0825	Collect samples									

Observations

Color: (Clear) Other (describe): clear

Odor· None (Low) Medium High Very Strong H2S (Fuel-like) low hydrocarbon odor

Notes: * DTW below top of pump.

Signed/Sampler(s): J Wall

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: SD13-04	Location: NAS Fort Worth JRB
Sampler(s): J. Wallace	Project Name: SWMU 68 and AOC 7 Sampling
Well Depth: 13.22	Project #: AFC 001 33 DDA Date: 10/31/00 Time: 0644
DTW (ft): * DTP (ft): —	Courier: X FedEx ___ UPS ___ Hand ___ Other
MP Ht Above/Below Ground Surface: 2.76	Sampling Method: LOW FLOW
Condition of Bottom of Well: —	Type of Pump: BLADDER
Screen Interval (ft): 3.26 - 13.26'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): overcast, S, 70°
Well Diameter (in): 2	
Placement of Pump (ft) (Top) 6.70	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
0644	*	0.05	0	7.40	24.47	779	-68.3	2.21	9.96	
0647		0.1	0.15	7.23	24.16	763	-70.3	2.08	9.80	
0650		0.1	0.45	7.19	23.98	746	-73.0	2.06	8.66	
0653		0.15	0.75	7.19	24.30	719	-77.8	1.90	7.50	
0656		0.15	1.20	7.20	24.49	727	-80.3	1.72	7.62	
0659		0.15	1.65	7.22	24.34	722	-81.6	1.69	7.45	
0702		0.15	2.10	7.23	24.19	712	-83.1	1.66	7.04	
0705		0.15	2.55	7.25	24.34	708	-85.1	1.58	7.01	
0708		0.15	3.00	7.26	24.26	703	-86.2	1.52	6.84	
0711		0.15	3.45	7.26	24.50	708	-87.1	1.45	6.80	
0712	collect	samples								

Observations

Color: (Clear) Other (describe). clear

Odor: (None) Low Medium High Very Strong H2S Fuel-like none

Notes: * DTW below top of pump.

Signed/Sampler(s). JWall

568 86

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No : ST14-03	Location. NAS Fort Worth JRB
npler(s): J. Wallace	Project Name SWMU 68 and AOC 7 Sampling
Well Depth 19.78	Project #. AFC 001 33 DDA Date: 10/27/00 Time: 1025
DTW (ft) * DTP (ft): —	Courier X FedEx ___UPS ___Hand ___Other
MP Ht Above/Below Ground Surface: 1.85	Sampling Method . LOW FLOW
Condition of Bottom of Well: —	Type of Pump Bladder
Screen Interval (ft): 9.7 - 19.5'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature) overcast, S, 70°
Well Diameter (in) 2	
Placement of Pump (ft) top 12.15	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
1025	*	0.1	0	6.41	25.19	619	-100.6	5.31	9.25	
1028		0.2	0.3	6.39	24.95	621	-110.8	3.53	5.56	
1031		0.2	0.9	6.38	25.15	629	-119.1	2.43	2.21	
1034		0.2	1.5	6.38	24.93	627	-121.6	2.17	1.87	
1037		0.1	2.1	6.38	24.79	622	-122.3	2.04	2.18	
1040		0.15	2.4	6.38	24.99	607	-123.0	1.80	1.07	
1043		0.10	2.85	6.44	24.59	591	-127.1	1.65	0.64	
1046		0.10	3.15	6.46	24.48	583	-127.7	1.63	0.73	
1049		0.15	3.45	6.45	24.78	565	-129.6	1.36	2.79	
1052		0.10	3.90	6.51	24.87	545	-124.7	1.09	2.12	
1055		0.10	4.20	6.56	24.73	533	-126.9	1.05	2.70	
1058		0.10	4.50	6.58	24.71	527	-128.2	1.09	1.96	
1101		0.10	4.80	6.59	24.71	521	-129.4	1.08	2.04	
1104	collect samples									

Observations

Color: (Clear) Other (describe): clear

Odor: (None) Low Medium High Very Strong H2S Fuel-like none

Notes: * DTW at top of pump (12.15)

Signed/Sampler(s) J Wall

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No. ST14-27	Location: NAS Fort Worth JRB
Sampler(s) K. Duran, J. Wallace	Project Name: SWMU 68 and AOC 7 Sampling
Well Depth: 15.7	Project #: AFC 001 33 DDA Date: 10/30/00 Time: 1339
DTW (ft): 9.84 DTP (ft): —	Courier: X FedEx ___UPS ___Hand ___Other
MP Ht. Above/Below Ground Surface: -1.19	Sampling Method: LOW FLOW
Condition of Bottom of Well firm	Type of Pump: Bladder
Screen Interval (ft): 4.81 - 14.81'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)
Well Diameter (in) 2	Sunny, 80°, SE
Placement of Pump (ft) (top) 9.77	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
1339	9.85	0.15	0	7.02	27.51	687	106.3	2.09	27.5	
1342	9.85	0.15	0.45	6.93	27.66	691	109.9	1.67	21.5	
1345	9.85	0.15	0.90	6.88	27.47	689	113.6	1.45	18.5	
1348	9.85	0.15	1.35	6.86	27.23	672	117.8	1.34	16.6	
1351	9.86	0.15	1.80	6.85	27.37	689	119.2	1.31	14.4	
1354	9.86	0.15	2.25	6.85	26.85	668	121.8	1.11	12.8	
1357	9.86	0.15	2.70	6.86	26.73	668	124.7	1.10	9.7	
1400	9.86	0.15	3.15	6.86	26.61	679	126.8	1.08	6.4	
1403	9.86	0.15	3.60	6.87	26.66	680	126.9	1.08	8.7	
1406	collect		samples							

Observations

Color: (Clear) Other (describe). clear

Odor: (None) Low Medium High Very Strong H2S Fuel-like none

Notes:

Signed/Sampler(s). J. Wall Kent Duran

568 88

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No ~~WFCTA010~~ 94 ST14-28	Location: NAS Fort Worth JRB, Texas
Sampler(s): K. Duran, J. Wallace	Project Name: October 2000 Quarterly Sampling
Well Depth: 16.95	Project #: AFC001-1~~0~~ 98 38DA Date: 11/1/00 Time: 0757
TW (ft): * DTP (ft): —	Courier: X FedEx ___UPS ___Hand ___Other
TOP Ht Above/Below Ground Surface: ~~0.4~~ 94 ~~0.39~~	Sampling Method LOW FLOW
Condition of Bottom of Well —	Type of Pump: BLADDER
Screen Interval (ft): ~~19.11 - 29.11~~ 7-17.0	Weather (sun/clear, overcast/rain, wind direction, ambient temperature).
Well Diameter (in) 2	RAIN, SW, 72°F
Placement of Pump (ft) 94 14. TOP 12.63	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
0757	*	0.15	0	7.22	24.97	795	-109.1	1.50	87	
0800		0.1	0.45	7.16	24.96	796	-109.7	1.22	80	
0803		0.1	0.75	7.12	24.71	795	-109.5	1.11	73	
0806		0.1	1.05	7.12	24.56	792	-108.4	1.12	69	
0809		0.1	1.35	7.12	24.46	787	-104.1	1.18	67	
0812		0.1	1.65	7.13	24.22	781	-101.7	1.21	68	
0815		0.1	1.95	7.12	24.67	789	-102.2	1.16	74	
0818		well	went	dry						
~~0821~~	qw									
~~0824~~	qw									
~~0827~~	qw									
~~0830~~	qw									

Observations

Color: Clear (Other) (describe): Cloudy

Odor: None (Low) Medium High Very Strong H2S Fuel-like low hydrocarbon

Notes: * Below top of pump

Signed/Sampler(s) JWall Keo Duran

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No. ST14-W11	Location: NAS Fort Worth JRB
Sampler(s): J. Wallace	Project Name. SWMU 68 and AOC 7 Sampling
Well Depth: 17.53	Project #: AFC 001 33 DDA Date: 10/27/00 Time: 1146
DTW (ft): 10.15 DTP (ft): —	Courier: X FedEx ___ UPS ___ Hand ___ Other
MP Ht. Above/Below Ground Surface. -0.09	Sampling Method: LOW FLOW
Condition of Bottom of Well: —	Type of Pump BLADDER
Screen Interval (ft): 6.04 - 19.89'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): overcast, S, 70°
Well Diameter (in): 2	
Placement of Pump (ft) 14.84' (intake)	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DOA (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
1146	10.18	0.15	0	6.84	23.91	440	62.4	3.46	809	
1149	10.15	0.15	0.45	6.79	23.86	440	10.5	2.87	2.48	
1152	10.15	0.15	0.90	6.79	23.83	439	-13.9	2.20	1.06	
1155	10.15	0.15	1.35	6.79	23.86	440	-48.1	2.03	0.92	
1158	10.16	0.15	1.80	6.79	23.88	440	-48.9	2.37	1.01	
1201	10.16	0.15	2.25	6.80	23.90	440	-50.4	2.31	0.76	
1204	10.16	0.15	2.70	6.81	24.07	441	-58.8	2.20	0.62	
1207	10.16	0.15	3.15	6.81	24.12	441	-62.3	2.20	0.70	
1210	10.16	0.15	3.60	6.81	24.17	442	-60.1	2.18	0.68	
stopped purging as battery died										
~~1314~~ 1414	10.16	0.15	4.05	7.05	25.12	452	11.2	4.86	1.01	
1429	10.16	0.15	4.50	6.91	24.79	448	-8.4	4.36	0.72	
1432	10.16	0.15	4.95	6.87	24.63	447	-27.0	3.83	0.51	
1435	10.16	0.15	5.40	6.85	24.59	446	-38.2	3.54	0.60	
1438	10.16	0.15	5.85	6.85	24.60	447	-43.2	3.38	0.86	
1441	10.16	0.15	6.30	6.85	24.48	445	-47.2	3.62	0.74	
1444	10.16	0.15	6.75	6.81	24.40	444	-49.6	3.66	0.78	
1447	10.16	0.15	7.20	6.84	24.53	446	-53.8	3.42	0.63	

Observations

Color: Clear Other (describe): slightly cloudy w/ rust particles

Odor: None Low Medium High Very Strong H2S Fuel-like hydrocarbon*

Notes: *PID reading was high but humidity sometimes causes false high readings. Vendor suggested cleaning filter & wiping lense at last well & the PID seemed to function properly afterwards. Confirmed BZ PID reading w/ Kents PID = 0.00 ppm.

Signed/Sampler(s):

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No · ST14-W16	Location. NAS Fort Worth JRB
npler(s): K. Dorman, S. Wallace	Project Name: SWMU 68 and AOC 7 Sampling
Well Depth: 19.04	Project #. AFC 001 33 DDA Date: 10/30/00 Time: 1222
DTW (ft): 9.50 DTP (ft)· —	Courier: ✓ FedEx ___ UPS ___ Hand ___ Other
MP Ht. Above/Below Ground Surface: -0.37	Sampling Method : Low Flow
Condition of Bottom of Well:	Type of Pump. BP
Screen Interval (ft) 7 19 - 18.89'	Weather (sun/clear, (overcast)/rain, wind direction, ambient temperature)· S/SE 81°F
Well Diameter (in): 2	
Placement of Pump (ft) 14.25' (intake)	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size, and Amount of Sediment Discharged
1222	9.5	-2	0	6.9	25.9	710	-120	2.14	2.7	
1225	9.51	.2	.6	6.8	25.6	677	-128	1.24	1.6	
1228	9.51	.2	1.2	6.8	25.3	648	-138	0.97	1.4	
1231	9.51	.3	1.8	6.8	25.3	642	-141	0.90	1.5	
1234	9.51	.3	2.7	6.8	25.2	644	-142	0.87	1.7	
238	Collect samples									

Observations

Color: (Clear) Other (describe): clear

Odor: None (Low) Medium High Very Strong H2S (Fuel-like) low hydrocarbon

Notes:

Signed/Sampler(s) Kenny Dorman S. Wallace

GROUNDWATER FIELD SAMPLING DATA SHEET

Well No. ST14-W21	Location: NAS Fort Worth JRB
Sampler(s): K. Duran, J. Wallace	Project Name: SWMU 68 and AOC 7 Sampling
Well Depth: 17.53	Project #: AFC 001 33 DDA Date: 10/31/00 Time: 0800
DTW (ft): * DTP (ft): —	Courier ✓ FedEx ___ UPS ___ Hand ___ Other
MP Ht. Above/Below Ground Surface: -0.15	Sampling Method: Low Flow
Condition of Bottom of Well —	Type of Pump: BP
Screen Interval (ft) 7.99 - 16.89'	Weather (sun/clear, overcast/rain, wind direction, ambient temperature): S/SE 71°F
Well Diameter (in) 2	
Placement of Pump (ft) 15.9' (intake)	

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp (C)	Cond (umhos/cm)	ORP (mv)	DO (mg/L)	Turb (NTU)	Type, Size and Amount of Sediment Discharged
0800	*	.15	0	7.6	24.1	626	-80	2.2	36.1	
803		.15	.45	7.3	24.3	642	-80	1.52	21.0	
806		.15	.9	7.3	24.3	634	-78	1.36	14.2	
809		.15	1.35	7.2	24.4	656	-76	1.17	10.36	
812		.1	1.8	7.2	24.7	669	-76	0.97	8.2	
815		.1	2.1	7.2	24.8	676	-75	0.91	6.9	
818		.1	2.4	7.2	24.8	681	-77	0.88	9.8	
821		.2	2.7	7.2	24.8	679	-80	0.87	15.0	
824		.1	3.3	7.2	24.6	668	-93	0.98	21.9	
827		.1	3.6	7.3	24.4	662	-98	.98	34.6	
830		.1	3.9	7.3	24.3	658	-102	1.04	35.7	
833		.10	4.2	7.4	24.3	650	-108	1.10	36.1	
836		.1	4.5	7.4	24.3	653	-107	1.04	28.7	
839		.1	4.8	7.3	24.3	658	-104	1.06	23.1	
842		.1	5.1	7.3	24.3	656	-102	1.09	17.8	
845		.1	5.4	7.3	24.3	654	-101	1.09	14.4	

Observations

Color: (Clear) Other (describe): Clear

Odor: (None) Low Medium High Very Strong H2S Fuel-like none

Notes: * DTW below top of pump

Signed/Sampler(s): J. Wallace Ken Duran

568 92

GROUNDWATER FIELD SAMPLING DATA SHEET

Page 2 of 2

Well No.: ~~WHCTA010~~ ST14-W21		Location: NAS Fort Worth JRB, Texas	
Team (s) K. Duran, J. Wallau		Project Name: ~~October 2000 Quarterly Sampling~~ SWMU 68 & AOC 7	
Well Depth: 17.53		Project #: AFC001-1~~0000~~	Date: 10/31/00 Time: 0800
DTW (ft): *	DTP (ft): —	Courier: X FedEx ___ UPS ___ Hand ___ Other	
TOP (ft) Above/Below Ground Surface: ~~0.39~~ -.15		Sampling Method: Low Flow	
Condition of Bottom of Well —		Type of Pump: Bladder	
Screen Interval (ft) ~~13.11 - 23.11~~ 7.99 - 16.89		Weather (sun/clear, overcast/rain, wind direction, ambient temperature) Sunny, S, 71°F	
Well Diameter (in): 2			
Placement of Pump (ft) (intake) 15.9			

Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. (umhos/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Type, Size and Amount of Sediment Discharged
0848		0.1	5.7	7.3	24.3	658	-100	1.10	12.1	
0851		0.1	6.0	7.3	24.4	658	-98	1.12	9.8	
0854		0.1	6.3	7.3	24.3	658	-98	1.14	8.2	
0857		0.1	6.7	7.3	24.4	659	-97	1.14	8.3	
0903	collect	samples								

Observations

Color: Clear Other (describe): clear

Odor: None Low Medium High Very Strong H2S Fuel like none

Notes: * DTW below top of pump.

Signed/Sampler(s) JWall KDuran

APPENDIX A.2

FIELD SAMPLING DATA REPORTS

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB — PROJECT NAME: SWMU 68, AOC 7

SITE: swmu — PROJECT NAME: AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID: SD13-01WG01 — DATE: 4/5/00 — TIME: 946

MATRIX TYPE: WG

SAMPLING METHOD:

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: 180000

SAMPLE BEG DEPTH (FT): N/A

SAMPLE END DEPTH (FT): N/A

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB040500

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

	PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
	2000ppm	COLOR: clear	
2nd	0 ppm	ODOR: ~~none~~ NH Slight fuel odor	
		OTHER	

pH 6.99 Temperature 19.57 (C) Dissolved Oxygen 0.69 (mg/L) Specific Conductivity 434 (umhos/cm)

Iron N/A (mg/L) Oxidation/Reduction Potential -111.3 (mv) Turbidity 1.32 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION SW AMBIENT TEMPERATURE 65°F

SHIPMENT VIA: FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO: STL - Chicago

COMMENTS

SAMPLER: J. Wallace OBSERVER: N. Hade

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

568 .95

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

'ATION: NAS Fort Worth JRB PROJECT NAME SWMU 68, AOC 7

SITE: SWMU 64,67,68 and AOC 7 PROJECT NAME AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID SD13-02WG01 DATE: 4/5/00 TIME: 1107

MATRIX TYPE: WG

SAMPLING METHOD: Low flow

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY # 180000

SAMPLE BEG DEPTH (FT) N/A

SAMPLE END DEPTH (FT) N/A

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS) ~~SD13-02WG01MS~~ NH

MATRIX SPIKE DUP (SD) ~~SD13-02WG01MSD~~ NH

FIELD DUP (FD) –

AMBIENT BLANK (AB). –

EQUIPMENT BLANK (EB) –

TRIP BLANK (TB) TB040500

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS		MISCELLANEOUS
.197 ppm	COLOR	Clear	
2nd 0 ppm	ODOR	slight fuel odor	
	OTHER		

pH 7.08 Temperature 21.05 (C) Dissolved Oxygen 1.81 (mg/L) ~~Specific~~ NH Conductivity 505 (umhos/cm)

Iron – (mg/L) Oxidation/Reduction Potential -130.3 (mv) Turbidity 0.82 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION SW AMBIENT TEMPERATURE 70°F

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO STL - Chicago

COMMENTS

SAMPLER J. Wallace OBSERVER N. Hade

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

TION: NAS Fort Worth JRB

PROJECT NAME: SWMU 68, AOC 7

SITE: SWMU 64, 67, 68 AND AOC7

PROJECT NAME: AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID: SD13-04WG01

DATE: 4/5/00 TIME: ~~1450~~ 24H 1350

MATRIX TYPE: WG

SAMPLING METHOD: Low flow

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: 180000

SAMPLE BEG DEPTH (FT): N/A

SAMPLE END DEPTH (FT): N/A

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): –

MATRIX SPIKE DUP (SD): –

FIELD DUP (FD): –

AMBIENT BLANK (AB): –

EQUIPMENT BLANK (EB): –

TRIP BLANK (TB): TB040500

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS		SAMPLE CHARACTERISTICS		MISCELLANEOUS
	930 ppm	COLOR	clear	
2nd	0 ppm	ODOR	med. Sul odor	
		OTHER		

pH 6.86 Temperature 21.31 (C) Dissolved Oxygen 1.54 (mg/L) ~~Specific~~ Conductivity 536 (umhos/cm)

Iron – (mg/L) Oxidation/Reduction Potential -107.1 (mv) Turbidity 5.60 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION SW AMBIENT TEMPERATURE 75°F

SHIPMENT VIA: FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO: STL - Chicago

COMMENTS

SAMPLER: J Wallace OBSERVER: N Hale

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

568 97

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB — PROJECT NAME: SWMU 68, AOC 7

SITE: SWMU 64, 67, 68, AOC 7 — PROJECT NAME: AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID: ST14-03WG01 — DATE: 04/05/00 TIME: 1401

MATRIX TYPE: WG

SAMPLING METHOD: LOW FLOW

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: 180000

SAMPLE BEG. DEPTH (FT): N/A

SAMPLE END DEPTH (FT): N/A

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB040500

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
40.4 ppm	COLOR clear	
2nd 0.00 ppm	ODOR none	
	OTHER	

pH 7.03 Temperature 22.21 (C) Dissolved Oxygen 0.64 (mg/L) ~~Specific~~ Conductivity 510.00 (umhos/cm)

Iron N/A (mg/L) Oxidation/Reduction Potential -109.3 (mv) Turbidity 1.57 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION S AMBIENT TEMPERATURE 75°

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO STL - Chicago

COMMENTS:

SAMPLER N. Hado OBSERVER J. Wallace

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION NAS Fort Worth JRB — PROJECT NAME SWMU 68, AOC 7

SITE SWMU 68, AOC 7 — PROJECT NAME AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID ST14-27WG11 — DATE: 4-11-00 TIME 1230

MATRIX TYPE WG

SAMPLING METHOD. BP

LOT CONTROL # 0 1 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: 193000

SAMPLE BEG DEPTH (FT) —

SAMPLE END DEPTH (FT) —

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE

MATRIX SPIKE (MS) —

MATRIX SPIKE DUP (SD) —

FIELD DUP (FD) —

AMBIENT BLANK (AB) —

EQUIPMENT BLANK (EB) EB041100

TRIP BLANK (TB) TB041100

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS: 8.1ppm at wellhead; 2nd 0.0ppm in BZ

SAMPLE CHARACTERISTICS: COLOR Clear; ODOR None; OTHER —

MISCELLANEOUS

pH 6.91 Temperature 21.77 (C) Dissolved Oxygen 0.38 (mg/L) ~~Specific~~ Conductivity 362 (umhos/cm)

Iron — (mg/L) Oxidation/Reduction Potential 13.0 (mv) Turbidity 4.95 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR ____ OVERCAST/RAIN ✓ WIND DIRECTION ____ AMBIENT TEMPERATURE 70°

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO STL - Chicago

COMMENTS

SAMPLER J. Wallace OBSERVER C. Williams

MATRIX TYPE CODES

DC = DRILL CUTTINGS; SL = SLUDGE; WG = GROUND WATER; SO = SOIL; LH = HAZARDOUS LIQUID WASTE; GS = SOIL GAS; SH = HAZARDOUS SOLID WASTE; WS = SURFACE WATER; SE = SEDIMENT; SW = SWAB/WIPE

SAMPLING METHOD CODES

B = BAILER; G = GRAB; BP = BLADDER PUMP; HA = HAND AUGER; BR = BRASS RING; H = HOLLOW STEM AUGER; CS = COMPOSITE SAMPLE; HP = HYDRO PUNCH; C = CONTINUOUS FLIGHT AUGER; SS = SPLIT SPOON; DT = DRIVEN TUBE; SP = SUBMERSIBLE PUMP

568 99

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION:	NAS Fort Worth JRB	PROJECT NAME	SWMU 68, AOC 7
SITE:	SWMU 64,67,68 AND AOC7	PROJECT NAME	AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID ST14-W11WG01

DATE: 4/5/00 TIME: 1545

MATRIX TYPE: WG

SAMPLING METHOD: Low Flow

LOT CONTROL #: 0 0 ~~0~~ NA 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY # 180[illegible]

SAMPLE BEG DEPTH (FT) N/A

SAMPLE END DEPTH (FT). N/A

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS) –

MATRIX SPIKE DUP (SD) –

FIELD DUP (FD) –

AMBIENT BLANK (AB) –

EQUIPMENT BLANK (EB) –

TRIP BLANK (TB) TB040500

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1.6 ppm	COLOR clear	
2nd 0 ppm	ODOR none	
	OTHER	

pH 7.06 Temperature 20.52 (C) Dissolved Oxygen 2.49 (mg/L) ~~Specific~~ NA Conductivity 478 (umhos/cm)

Iron – (mg/L) Oxidation/Reduction Potential -47.6 (mv) Turbidity 0.96 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION SW AMBIENT TEMPERATURE 80°F

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO STL - Chicago

COMMENTS

SAMPLER J. Wallace OBSERVER D. Hade

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HYDRO GeoLogic INC

· FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB — PROJECT NAME: SWMU 68, AOC 7

SITE: SWMU 64, 67, 68 & AOC 7 — PROJECT NAME: AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID: ST14-W16WG01 — DATE: 04/04/00 TIME: 1432

MATRIX TYPE: WG

SAMPLING METHOD: Low Flow

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: 170000

SAMPLE BEG DEPTH (FT): N/A

SAMPLE END DEPTH (FT): N/A

GRAB ( ) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE.

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): DUP04

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB040400

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS		SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st	760 ppm	COLOR: clear	
2nd	0 ppm	ODOR: none slight fuel	
		OTHER:	

pH 7.23 Temperature 20.71 (C) Dissolved Oxygen 0.27 (mg/L) ~~Specific~~ Conductivity 589.00 (umhos/cm)

Iron N/A (mg/L) Oxidation/Reduction Potential -153.9 (mv) Turbidity 1.27 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION SW AMBIENT TEMPERATURE 70°

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO STL - Chicago

COMMENTS

SAMPLER: J. Wallace OBSERVER: N. Hade

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

568 101

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB

PROJECT NAME. SWMU 68, AOC 7

SITE: SWMU 64, 67, 68 AND AOC 7

PROJECT NAME AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID ST14-W21WG~~01~~ 11

DATE: 4-6-00 TIME: 1300

MATRIX TYPE: WG

SAMPLING METHOD: Low Flow

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: 190000

SAMPLE BEG DEPTH (FT) N/A

SAMPLE END DEPTH (FT) N/A

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): –

MATRIX SPIKE DUP (SD) –

FIELD DUP (FD) –

AMBIENT BLANK (AB) –

EQUIPMENT BLANK (EB) –

TRIP BLANK (TB): TB040600

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS		SAMPLE CHARACTERISTICS		MISCELLANEOUS
1st	13.5 ppm	COLOR.	clear	
2nd	0 ppm	ODOR	none	
		OTHER		

pH 7.16 Temperature 21.11 (C) Dissolved Oxygen 0.56 (mg/L) ~~Specific~~ NH Conductivity 622.0 (umhos/cm)

Iron – (mg/L) Oxidation/Reduction Potential -132.0 (mv) Turbidity 9.30 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION S AMBIENT TEMPERATURE 80°F

SHIPMENT VIA FEDEX X HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO: STL -

COMMENTS

SAMPLER J. Wallace OBSERVER. N. Hade

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION:	NAS Fort Worth JRB	PROJECT NAME	SWMU 68, AOC 7
SITE:	Plume	PROJECT NAME	AFC001-33DBA

SAMPLE INFORMATION

SAMPLE ID TB040500

DATE: 4/5/00 TIME: 0730

MATRIX TYPE: WQ

SAMPLING METHOD:

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: 180000

SAMPLE BEG DEPTH (FT) N/A

SAMPLE END DEPTH (FT) N/A

GRAB ( ) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS) —

MATRIX SPIKE DUP (SD) —

FIELD DUP (FD). DUP01

AMBIENT BLANK (AB)

EQUIPMENT BLANK (EB). —

TRIP BLANK (TB) —

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	2	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
—	COLOR —	
2nd —	ODOR: —	
	OTHER	

pH — Temperature — (C) Dissolved Oxygen — (mg/L) ~~Specific~~ NH Conductivity — (umhos/cm)

Iron — (mg/L) Oxidation/Reduction Potential — (mv) Turbidity — (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION S AMBIENT TEMPERATURE 55°F

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO STL - Chicago

COMMENTS

SAMPLER. N. Hade OBSERVER J. Wallace

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

568 103

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB

SITE: _____

PROJECT NAME: SWMU 68 and AOC 7 Sampling

PROJECT NAME: AFC 001 33 DDA

SAMPLE INFORMATION

SAMPLE ID: SD13-01WG13

DATE: 10/31/00 TIME: 716

MATRIX TYPE: WG

SAMPLING METHOD: Low Flow

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB 103100

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

	PID READINGS	SAMPLE CHARACTERISTICS		MISCELLANEOUS
1st	0.0	COLOR	Clear	
2nd	0.0	ODOR	none	
		OTHER		

pH 6.5 Temperature 25.5 (C) Dissolved Oxygen 1.01 (mg/L) Conductivity 674 (umhos/cm)

Iron — (mg/L) Oxidation/Reduction Potential -186 (mv) Turbidity 2.5 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR ✓ OVERCAST/RAIN _____ WIND DIRECTION S/SE AMBIENT TEMPERATURE 71 °F

SHIPMENT VIA FEDEX x HAND DELIVER _____ COURIER _____ OTHER _____

SHIPPED TO STL - Chicago

COMMENTS _____

SAMPLER K. Duran OBSERVER _____

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GRDUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB

PROJECT NAME SWMU 68 and AOC 7 Sampling

SITE: _____

PROJECT NAME AFC 001 33 DDA

SAMPLE INFORMATION

SAMPLE ID SD13-02WG13

DATE: 10/27/00 TIME: 0825

MATRIX TYPE: WG

SAMPLING METHOD: LOW FLOW

LOT CONTROL #: 0 0 1 A

Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #. _____

SAMPLE BEG DEPTH (FT) N/A

SAMPLE END DEPTH (FT) N/A

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE.

MATRIX SPIKE (MS) —

MATRIX SPIKE DUP (SD) —

FIELD DUP (FD) —

AMBIENT BLANK (AB) —

EQUIPMENT BLANK (EB) —

TRIP BLANK (TB) TB102700

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH<2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS

1st 0.00ppm

2nd 0.00ppm

SAMPLE CHARACTERISTICS

COLOR clear

ODOR none

OTHER

MISCELLANEOUS

pH 6.64 Temperature 26.20 (C) Dissolved Oxygen 0.86 (mg/L) Conductivity 478 (umhos/cm)

Iron N/A (mg/L) Oxidation/Reduction Potential -171.4 (mv) Turbidity 0.87 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION S AMBIENT TEMPERATURE 70°

SHIPMENT VIA FEDEX x HAND DELIVER _____ COURIER _____ OTHER _____

SHIPPED TO STL - Chicago

COMMENTS _____

SAMPLER. J. Wallace OBSERVER _____

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

568 105

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB
SITE: _____

PROJECT NAME. SWMU 68 and AOC 7 Sampling
PROJECT NAME AFC 001 33 DDA

SAMPLE INFORMATION

SAMPLE ID SD13-04WG13

DATE: 10/31/00 TIME: 0712

MATRIX TYPE: WG

SAMPLING METHOD: LOW FLOW

LOT CONTROL #. 0 0 1 A
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG DEPTH (FT) N/A
SAMPLE END DEPTH (FT) N/A
GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS) —
MATRIX SPIKE DUP (SD) —
FIELD DUP (FD). —
AMBIENT BLANK (AB) —
EQUIPMENT BLANK (EB) —
TRIP BLANK (TB) TB103100

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS		SAMPLE CHARACTERISTICS		MISCELLANEOUS
1st	0.00 ppm	COLOR	clear	
2nd	0.00 ppm	ODOR	none	
		OTHER		

pH 7.26 Temperature 24.50 (C) Dissolved Oxygen 1.45 (mg/L) Conductivity 708 (umhos/cm)
Iron N/A (mg/L) Oxidation/Reduction Potential -87.1 (mv) Turbidity 6.80 (NTU)

GENERAL INFORMATION

WEATHER. SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION S AMBIENT TEMPERATURE 70°

SHIPMENT VIA FEDEX x HAND DELIVER _____ COURIER _____ OTHER _____

SHIPPED TO STL - Chicago

COMMENTS _____

SAMPLER. J. Wallace OBSERVER _____

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

OCATION: NAS Fort Worth JRB
PROJECT NAME: SWMU 68 and AOC 7 Sampling
TE:
PROJECT NAME: AFC 001 33 DDA

SAMPLE INFORMATION

AMPLE ID: ST14-03WG13
DATE: 10/27/00 TIME: 1104
IATRIX TYPE: WG
AMPLING METHOD: LOW FLOW
OT CONTROL # 0 0 1 A
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)
HAIN-OF-CUSTODY #
AMPLE BEG DEPTH (FT): N/A
AMPLE END DEPTH (FT): N/A
RAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE.

MATRIX SPIKE (MS): —
MATRIX SPIKE DUP (SD): —
FIELD DUP (FD): DUP07WG13
AMBIENT BLANK (AB): —
EQUIPMENT BLANK (EB): —
TRIP BLANK (TB): TB102700

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS
st 0.00 ppm
nd 0.00 ppm

SAMPLE CHARACTERISTICS
COLOR clear
ODOR none
OTHER

MISCELLANEOUS

pH 6.59 Temperature 24.71 (C) Dissolved Oxygen 1.08 (mg/L) Conductivity 521 (umhos/cm)
Iron N/A (mg/L) Oxidation/Reduction Potential -129.4 (mv) Turbidity 2.04 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR ____ OVERCAST/RAIN X WIND DIRECTION S AMBIENT TEMPERATURE 70°
SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____
SHIPPED TO: STL - Chicago
COMMENTS
SAMPLER J. Wallace OBSERVER

MATRIX TYPE CODES

DC=DRILL CUTTINGS
WG=GROUND WATER
LH=HAZARDOUS LIQUID WASTE
SH=HAZARDOUS SOLID WASTE
SE=SEDIMENT
SL=SLUDGE
SO=SOIL
GS=SOIL GAS
WS=SURFACE WATER
SW=SWAB/WIPE

SAMPLING METHOD CODES

B=BAILER
BP=BLADDER PUMP
BR=BRASS RING
CS=COMPOSITE SAMPLE
C=CONTINUOUS FLIGHT AUGER
DT=DRIVEN TUBE
G=GRAB
HA=HAND AUGER
H=HOLLOW STEM AUGER
HP=HYDRO PUNCH
SS=SPLIT SPOON
SP=SUBMERSIBLE PUMP

568 107

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB

PROJECT NAME SWMU 68 and AOC 7 Sampling

SITE:

PROJECT NAME AFC 001 33 DDA

SAMPLE INFORMATION

SAMPLE ID STI4-27WG13

DATE: 10/30/00 TIME 1406

MATRIX TYPE: WG

SAMPLING METHOD: LOW-FLOW

LOT CONTROL #: 0 1 1 A

Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #

SAMPLE BEG DEPTH (FT) N/A

SAMPLE END DEPTH (FT) N/A

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS) —

MATRIX SPIKE DUP (SD) —

FIELD DUP (FD) —

AMBIENT BLANK (AB) —

EQUIPMENT BLANK (EB) EB103000

TRIP BLANK (TB) TB103000

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS		SAMPLE CHARACTERISTICS		MISCELLANEOUS
1st	0.00 ppm	COLOR	clear	
2nd	0.00 ppm	ODOR	none	
		OTHER		

pH 6.87 Temperature 26.68 (C) Dissolved Oxygen 1.08 (mg/L) Conductivity 680 (umhos/cm)

Iron N/A (mg/L) Oxidation/Reduction Potential 126.9 (mv) Turbidity 8.7 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR X OVERCAST/RAIN ____ WIND DIRECTION SE AMBIENT TEMPERATURE 80°

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO: STL - Chicago

COMMENTS

SAMPLER J. Wallace OBSERVER K. Duran

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB — PROJECT NAME: SWMU 68 and AOC 7 Sampling

SITE: _____ — PROJECT NAME: AFC 001 33 DDA

SAMPLE INFORMATION

SAMPLE ID: ST14-W11WG13 — DATE: 102700 — TIME: 1450

MATRIX TYPE: WG

SAMPLING METHOD: LOW FLOW

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY # _____

SAMPLE BEG DEPTH (FT): N/A

SAMPLE END DEPTH (FT): N/A

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB102700

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS	SAMPLE CHARACTERISTICS	MISCELLANEOUS
1st	COLOR: Slightly cloudy w/ rust particles	
2nd	ODOR: slight hydrocarbon	
	OTHER:	

pH 6.84 Temperature 24.53 (C) Dissolved Oxygen 3.42 (mg/L) Conductivity 446 (umhos/cm)

Iron N/A (mg/L) Oxidation/Reduction Potential -57.8 (mv) Turbidity 0.63 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION S AMBIENT TEMPERATURE 70°

SHIPMENT VIA FEDEX x HAND DELIVER _____ COURIER _____ OTHER _____

SHIPPED TO STL - Chicago

COMMENTS _____

SAMPLER J. Wallace OBSERVER _____

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

568 109

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB

SITE: _____

PROJECT NAME: SWMU 68 and AOC 7 Sampling

PROJECT NAME: AFC 001 33 DDA

SAMPLE INFORMATION

SAMPLE ID: ST14-W16WG13

DATE: 10/30/00 TIME: 1238

MATRIX TYPE: WG

SAMPLING METHOD: LOW FLOW

LOT CONTROL #: 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG DEPTH (FT): —

SAMPLE END DEPTH (FT): —

GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE.

MATRIX SPIKE (MS): ST14-W16WG13MS

MATRIX SPIKE DUP (SD): ST14-W16WG13MSD

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB103000

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS		SAMPLE CHARACTERISTICS		MISCELLANEOUS
1st	78.8 ppm	COLOR	clear	
2nd	0.00 ppm	ODOR	slight hydrocarbon	
		OTHER		

pH 6.8 Temperature 25.2 (C) Dissolved Oxygen 0.87 (mg/L) Conductivity 644 (umhos/cm)

Iron — (mg/L) Oxidation/Reduction Potential -142 (mv) Turbidity 1.7 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR ____ OVERCAST/RAIN ✓ WIND DIRECTION S/SE AMBIENT TEMPERATURE 81°F

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO STL - Chicago

COMMENTS _____

SAMPLER J. Wallace OBSERVER K. Duran

MATRIX TYPE CODES

DC=DRILL CUTTINGS
WG=GROUND WATER
LH=HAZARDOUS LIQUID WASTE
SH=HAZARDOUS SOLID WASTE
SE=SEDIMENT
SL=SLUDGE
SO=SOIL
GS=SOIL GAS
WS=SURFACE WATER
SW=SWAB/WIPE

SAMPLING METHOD CODES

B=BAILER
BP=BLADDER PUMP
BR=BRASS RING
CS=COMPOSITE SAMPLE
C=CONTINUOUS FLIGHT AUGER
DT=DRIVEN TUBE
G=GRAB
HA=HAND AUGER
H=HOLLOW STEM AUGER
HP=HYDRO PUNCH
SS=SPLIT SPOON
SP=SUBMERSIBLE PUMP

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB
PROJECT NAME: October Quarterly Groundwater Sampling
SITE:
PROJECT NAME: AFC001-33DDA

SAMPLE INFORMATION

SAMPLE ID: ST14-W16WG13MS
DATE: 10/30/00 TIME: 1238
MATRIX TYPE: WG
SAMPLING METHOD: LOW FLOW
LOT CONTROL #: 0 0 1 A
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)
CHAIN-OF-CUSTODY #:
SAMPLE BEG DEPTH (FT): N/A
SAMPLE END DEPTH (FT): N/A
GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:
MATRIX SPIKE (MS): ST14-W16WG13 ~~MS~~ MW
MATRIX SPIKE DUP (SD): ST14-W16WG13 ~~MSD~~ MW
FIELD DUP (FD): —
AMBIENT BLANK (AB): —
EQUIPMENT BLANK (EB): —
TRIP BLANK (TB): TB103000

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS
1st 78.8 ppm
2nd 0.00ppm

SAMPLE CHARACTERISTICS
COLOR: Clear
ODOR: Slight hydrocarbon
OTHER:

MISCELLANEOUS

pH 6.8 Temperature 25.2 (C) Dissolved Oxygen 0.87 (mg/L) Conductivity 644 (umhos/cm)
Iron N/A (mg/L) Oxidation/Reduction Potential -142 (mv) Turbidity 1.7 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR ____ OVERCAST/RAIN X WIND DIRECTION SE AMBIENT TEMPERATURE 81°
SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____
SHIPPED TO STL - Chicago
COMMENTS
SAMPLER: J. Wallace OBSERVER: K. Duran

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

568 111

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB

PROJECT NAME: October Quarterly Groundwater Sampling

SITE:

PROJECT NAME: AFC001-33DDA

SAMPLE INFORMATION

SAMPLE ID: ST14-W16WG13MSD

DATE: 10/30/00 TIME: 1238

MATRIX TYPE: WG

SAMPLING METHOD: Low Flow

LOT CONTROL # 0 0 1 A

Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #

SAMPLE BEG DEPTH (FT): N/A

SAMPLE END DEPTH (FT): N/A

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE.

MATRIX SPIKE (MS): ST14-W16WG13

MATRIX SPIKE DUP (SD): ST14-W16WG13

FIELD DUP (FD): —

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB103000

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

	PID READINGS	SAMPLE CHARACTERISTICS		MISCELLANEOUS
1st	78.8 ppm	COLOR	Clear	
2nd	0.00 ppm	ODOR	slight hydrocarbon	
		OTHER		

pH 6.8 Temperature 25.2 (C) Dissolved Oxygen 0.87 (mg/L) Conductivity 644 (umhos/cm)

Iron N/A (mg/L) Oxidation/Reduction Potential -142 (mv) Turbidity 1.7 (NTU)

GENERAL INFORMATION

WEATHER: SUN/CLEAR ____ OVERCAST/RAIN X WIND DIRECTION SE AMBIENT TEMPERATURE 81°

SHIPMENT VIA FEDEX x HAND DELIVER ____ COURIER ____ OTHER ____

SHIPPED TO STL - Chicago

COMMENTS

SAMPLER J. Wallin OBSERVER K. Dunn

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

HYDRO GeoLogic Inc

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB
SITE: _____
PROJECT NAME: SWMU 68 and AOC 7 Sampling
PROJECT NAME: AFC 001 33 DDA

SAMPLE INFORMATION

SAMPLE ID: ST14-W21WG13
DATE: 10/31/00 TIME: 907
MATRIX TYPE: WG
SAMPLING METHOD: LOW FLOW
LOT CONTROL #: 0 0 1 A
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)
CHAIN-OF-CUSTODY #: _____
SAMPLE BEG DEPTH (FT): —
SAMPLE END DEPTH (FT): —
GRAB (✓) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE
MATRIX SPIKE (MS): —
MATRIX SPIKE DUP (SD): —
FIELD DUP (FD): —
AMBIENT BLANK (AB): —
EQUIPMENT BLANK (EB): —
TRIP BLANK (TB): TB103100

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS
1st: 17.9
2nd: 0.0

SAMPLE CHARACTERISTICS
COLOR: clear
ODOR: none
OTHER:

MISCELLANEOUS

pH 7.3 Temperature 24.4 (C) Dissolved Oxygen 1.14 (mg/L) Conductivity 659 (umhos/cm)
Iron — (mg/L) Oxidation/Reduction Potential -97 (mv) Turbidity 8.3 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR ✓ OVERCAST/RAIN _____ WIND DIRECTION S/SE AMBIENT TEMPERATURE 71°F
SHIPMENT VIA FEDEX x HAND DELIVER _____ COURIER _____ OTHER _____
SHIPPED TO: STL - Chicago
COMMENTS _____
SAMPLER: J. Wallace OBSERVER: K. Dreer

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

568 113

HYDRO GeoLogic INC

FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB

SITE: _____

PROJECT NAME: October Quarterly Groundwater Sampling

PROJECT NAME: AFC001-33DDA

SAMPLE INFORMATION

SAMPLE ID: DUP07WG13 gw

DATE: 10/27/00 TIME: 1200

MATRIX TYPE: WG

SAMPLING METHOD: LOW FLOW

LOT CONTROL # 0 0 1 A

(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)

CHAIN-OF-CUSTODY #: _____

SAMPLE BEG DEPTH (FT): N/A

SAMPLE END DEPTH (FT): N/A

GRAB (X) COMPOSITE ( )

ENTER SAMPLE NUMBERS FOR QC SAMPLES/ BLANKS ASSOCIATED WITH THIS SAMPLE:

MATRIX SPIKE (MS): —

MATRIX SPIKE DUP (SD): —

FIELD DUP (FD): ST14-03WG13 (collected @ 1104)

AMBIENT BLANK (AB): —

EQUIPMENT BLANK (EB): —

TRIP BLANK (TB): TB102700

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	ANALYTICAL METHOD	ANALYSIS
40 mL VOA	3	Cool to 4C/HCl to pH < 2	SW8260B	VOCs

NOTABLE OBSERVATIONS

PID READINGS		SAMPLE CHARACTERISTICS		MISCELLANEOUS
1st	0.00 ppm	COLOR	clear	
2nd	0.00 ppm	ODOR	none	
		OTHER		

pH 6.59 Temperature 24.7 (C) Dissolved Oxygen 1.08 (mg/L) Conductivity 521 (umhos/cm)

Iron N/A (mg/L) Oxidation/Reduction Potential -129.4 (mv) Turbidity 2.04 (NTU)

GENERAL INFORMATION

WEATHER SUN/CLEAR _____ OVERCAST/RAIN X WIND DIRECTION S AMBIENT TEMPERATURE 70°

SHIPMENT VIA FEDEX x HAND DELIVER _____ COURIER _____ OTHER _____

SHIPPED TO STL - Chicago

COMMENTS _____

SAMPLER J. Wallace OBSERVER _____

MATRIX TYPE CODES		SAMPLING METHOD CODES	
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMPLE	HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER	SS=SPLIT SPOON
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

APPENDIX A.3

LABORATORY CHAIN-OF-CUSTODY'S

STL
Committed To Your Success

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

QC - AFCEE
Del - CLP file
EDD
Int COC

Report To:
Contact: Lynn Morgan
Company: HydroGeoLogic
Address: 1155 Herndon Pkwy, Suite 900
Herndon, VA 20170
Phone: 703-478-5186
Fax: 703-471-4180
E-Mail: LMORGAN@HGL.com

Bill To:
Contact:
Company:
Address: (SAME)
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot # 9A0466 08

Package Sealed: Yes No — Samples Sealed: Yes No
Received on Ice: Yes No — Samples Intact: Yes No
Temperature °C of Cooler: 2.0, 2.3
Within Hold Time: Yes No — Preserv. indicated: Yes No NA
pH Check ok: Yes No NA — Res. Cl2 Check ok: Yes No NA
Sample Labels and COC Agree: Yes No COC not present

Sampler Name: JENNIFER WALLACE
Signature: Jennifer Wallace
Project Name: April 2000 Quarterly
Project Number: AFC001-33DBA
Project Location: NASFW JRB Texas
Date Required Hard Copy: 5.2.00
Fax: / /
Lab PM: Donna Ingersol

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOCs SW8260B	TAL + Hg SW6010B/SW7470	Alkalinity/Anions E310.1/SW9056	TOC (SW9060)	Methane, Ethane, Ethene RSK175	Additional Analyses / Remarks
						Refrg #	5	3	9	3	5/8	
						#/Cont.	2	1	1	1	2	
						Volume	40ml	1L	1L	500mL	40ml	
						Preserv	1	3	6	2	1	
001		TB040400	04/04/00	0850	W		2					
002		WITCTA010WG11	04/04/00	1312	W		3	1				
002	X	WITCTA010WG11MS	04/04/00	1312	W		3	1				
002	X	WITCTA010WG11MSD	04/04/00	1312	W		3	1				
003		ST14-W16	04/04/00	1432	W		3					
004		DUP04	04/04/00	1200	W		3					
005		WITCTA024WG11	04/04/00	1440	W		3		1	1	3	Methane Ethane Ethene
005	X	WITCTA024WG11MS	04/04/00	1440	W		3		1	1	3	logged in under sep. batch
005	X	WITCTA024WG11MSD	04/04/00	1440	W		3		1	1	3	9A0466 10 per Donna Ingersol
006		GMI-22-07MWG11	04/04/00	1325	W		3					4-5-00

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Mark Hale	HydroGeologic	4/4/00	1700	Sherri Scott	STL	4-5-00	1435
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
MELE Jodie Bracken	STL	04/05/00	1700				

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl, Cool to 4°
2 H2SO4 Cool to 4°
3 HNO3, Cool to 4°
4 NaOH, Cool to 4°
5 NaOH/Zn Acetate, Cool to 4°
6 Cool to 4°
7 None

COMMENTS
Serial Dilution on WITCTA010WG11

170000

Date Received: 4, 5, 00
Courier: Fed-X
Hand Delivered: ☐
Bill of Lading: see attached

568 115

STL Committed To Your Success

AFCEE CLP-Like

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

EDD
Int COC

Report To:
Contact Lynn Morgan
Company HydroGeologic
Address 1155 Herndon PKwy, Suite 900
Herndon, VA 20170
Phone 703-478-5186
Fax 703-471-4180
E Mail lmorgan@hgl.com

Bill To:
Contact Chris Camp
Company
Address (SAME)
Phone
Fax
PO# Quote

Shaded Areas For Internal Use Only 1 of 1

Lab L t# 9A0466028

Package Sealed? Yes No
Samples Sealed Yes No
Received on Ice Yes No
Samples Intact Yes No
Temperature °C of Cooler

Within Hold Time Yes No
Preserv indicated Yes No NA
pH Check ok Yes No NA
Res. Cl_2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present

Sampler Name Jen Wallace / ~~Nicole Hade~~
Signature
Project Name April 2000 Quarterly
Project Number AFCOU1 - 33DBA
Project Location NASEW JRB, Texas
Date Required Hard Copy ___/___/___ Fax ___/___/___
Lab PM Donna Ingersol

Refrg #														
# Cont.	2	2	1	1										
Volume	40ml	40ml	1L	500mL										
Preserv	1	1	6	2										

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOCs (SW8260B)	Methane, Ethane, Ethene RSK-175	Alkalinity Analysis 310.1 Prep	TOC (SW9060)	Additional Analyses / Remarks
001		TB040500	4/5/00	730	W	G	2				
		~~SD13-010601~~	~~4/5/00~~	~~946~~	~~W~~	~~G~~	~~3~~				
		~~SD13-020601~~	~~4/5/00~~	~~1107~~	~~W~~	~~G~~	~~3~~				
002		DUP01	4/5/00	1200	W	G	3				1 vial broken
003		GMI-22-04MW11	4/5/00	0945	W	G	3				
004		WJETA535WG11	4/5/00	1108	W	G	3	3	1	1	
005		HM-123WG11	4/5/00	1540	W	G	3	3	1	1	
006		SD13-04WG11	4/5/00	1250	W	G	3				
007		ST14-03WG01	4/5/00	1401	W	G	3				1 vial broken
008		SD13-01WG01	4/5/00	0946	W	G	3				
009		ST14-W11WG01	4/5/00	1545	W	G	3				1 vial broken
010		SD13-02WG01	4/5/00	1107	W	G	3				

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Nicole Hade	HydroGeologic	4/5/00		Sherri Scott	STL	4-6-00	1140
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscell
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl Cool to 4°
2 H2SO4 Cool to 4°
3 HNO3, Cool to 4°
4 NaOH Cool to 4°
5 NaOH/Zn Acetate Cool to 4°
6 Cool to 4°
7 None

COMMENTS
All samples end in WG11. If labeled WG01 please ignore it should be WG11

Date Received 4.6.00
Courier Fed-X Hand Delivered ☐
Bill of Lading see attached

STL Chicago Chain of Custody CUF 3.00 23114.5000

568 116

STL
Committed To *Your* Success

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

AFCEE
CLP-Like
EDD
Inf COC

Report To:
Contact Lynn Morgan
Company HydroGeologic
Address 11.55 Herndon Pkwy, Suite 900
Herndon, VA 20170
Phone 703-478-5186
Fax 703-471-4180
E-Mail lmorgan@hgl.com

Bill To:
Contact Chris Camp
Company
Address (SAME)
Phone
Fax
PO# Quote

Shaded Areas For Internal Use Only 1 of 1

Lab Lot # 9A0466656

Package Sealed Yes No — Samples Sealed Yes No
Received on Ice Yes No — Samples Intact Yes No
Temperature °C of Cooler 3.4 °C
Within Hold Time Yes No — Preserv indicated Yes No NA
pH Check ok Yes No NA — Res. Cl2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present

Sampler Name: JENNIFER WALLACE
Signature: Jennifer Wallace
Project Name: April 2000 Quarterly
Project Number: AFC001-33DBA
Project Location: NASEW JRB, Texas
Date Required Hard Copy: 5/4/00
Fax: / /
Lab PM: Donna Ingersol

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOCs (SW8260B)	~~SVOCs~~	Chromium/Hg (SW7471/SW6010B)	Alkalinity/Anions (E300.1/SW9056)	Methane, Ethane, Ethene (RSK-175)	TOC (SW9060)	Chromium (SW6010B)
Refrg #													
# Cont.							2		2	1	2	1	2
Volume							40ml		1L	1L	40ml	500ml	1L
Preserv							1		3	6	1	2	3
001		TB040600	4-6-00	0700	W	G	2						
002		LF03-3DWG11	4-6-00	1434	W	G	3		1				
003		ST14-W21WG11	4-6-00	1300	W	G	3						
004		LF05-01WG11	4-6-00	1405	W	G	3						
005		W-153WG11	4-6-00	1300	W	G	3						
006		HM-116WG11	4-6-00	1150	W	G	3		TNH				1
007		WHGLTA025WG11	4-6-00	1043	W	G	3						
008		DUP02	4-6-00	1200	W	G	3			1	3	1	
009		LF05-5GWG11	4-6-00	0900	W	G	3			1	3	1	
010		HM-112WG11	4-6-00	1555	W	G	3			1	3	1	
~~011~~													

Additional Analyses / Remarks

568 117

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	HydroGeologic	4-6-00	1730	[signature]	STL	4-7-00	1350
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other

Preservative Key
1 HCl, Cool to 4°
2 H2SO4 Cool to 4°
3 HNO3, Cool to 4°
4 NaOH Cool to 4°
5 NaOH/Zn Acetate, Cool to 4°
6 Cool to 4°
7 None

COMMENTS
19:00

Date Received 4/7/00
Courier FX — Hand Delivered ☐
Bill of Lading See Attached

193000
Outside

STL
Committed To Your Success

AFCEE
Custom

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

Int Use

Report To: Chris Camp
Contact ~~Lynn Morgan~~ (PM)
Company HydroGeoLogic
Address 1155 Herndon Pkwy Suite 300
Herndon, VA 20170
Phone 703-478-5186
Fax 703-471-4186
E-Mail lmorgan@hgl.com

Bill To:
Contact Chris Camp
Company
Address (same)
Phone
Fax
PO# Quote

Shaded Areas For Internal Use Only 1 of 1

Lab Lot # 9A04732

Package Sealed (Yes) No
Samples Sealed Yes (No)
Received on Ice (Yes) No
Samples Intact (Yes) No
Temperature °C of Cooler (1.5, 2.1, 1.0)
Within Hold Time (Yes) No
Preserv. Indicated (Yes) No NA
pH Check ok (Yes) No NA
Res. Cl_2 Check ok Yes No (NA)
Sample Labels and COC Agree (Yes) No COC not present

Sampler Name: JENNIFER WALLACE
Signature: J Wallace
Project Name: Quarterly Sampling - April
Project Number: AFC-001-33DBA
Project Location: NASFW JRB, Texas
Date Required Hard Copy: 5/9/00
Fax: / /
Lab PM: Donna Ingersol

Refrig #	5	3
# Cont.	2	1
Volume	40ml	1L
Preserv	1	3

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOCs (8260B)	Arsenic / Hg (6010B/7470A)	EB
001		TB041100	4.11.00	0700	W	G	2		
002		EB041100	4.11.00	1630	W	G	3	1	
003		ST14-27WG11	4.11.00	1230	W	G	3		
004		WCHMHTA008WG11	4.11.00	1005	W	G	3		

Additional Analyses / Remarks

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	HydroGeologic	4.11.00	1700	[signature]	STL	4-12-00	1410
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneou
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl, Cool to 4°
2 H2SO4, Cool to 4°
3 HNO3, Cool to 4°
4 NaOH, Cool to 4°
5 NaOH/Zn Acetate, Cool to 4°
6 Cool to 4°
7 None

COMMENTS
EB/TB associated w/
AFC001-16BBD &
AFC001-33CBD, also.

Date Received 4/12/00
Courier FX
Hand Delivered ☐
Bill of Lading See attached

STL Chicago Chain of Custody CHI 27 09 231/4 5/96

568 118

AFCEE | CLP Like
int COC
EDD

VERN
RENT
TRVICES

hicago
ond Street
ity Park, IL 60466
708-534-5200
708-534-5211

Shaded Areas For Internal Use Only

Report To:
Contact: Kim Evers
Company: HydroGeologic
Address: 1155 Herndon Pkwy
Suite 900, Herndon VA 20170
Phone: 703/478-5186
Fax: 703/471-4180
E-Mail: KEVERS@HGL.COM

Bill To:
Contact: (same)
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab Lot# 9A10G899

Temperature Upon Receipt: (Yes) No
Samples Intact: Yes
Samples Chilled: (Yes) No
Temperature: 4
Within Hold Time: (Yes) No
Preservatives Verified: (Yes) No NA
Pos Check OK: (Yes) No NA
Res Cl2 Check OK: (Yes) No NA
Sample Labels and COC Agree: (Yes) No
COC not present

Sampler Name: Jennifer Wallace
Signature: Jennifer Wallace
Project Name: October 2000 Quarterly
Project Number: AFCOD1-33DDA
Project Location: FW JRB, Texas
PM: Anna Ingersol
Date Required
Hard Copy: ___/___/___
Fax: ___/___/___

Refrg #													
# / Cont.	2	2	1	1									
Volume	40mL	40mL	500mL	1L									
Preserv	1	1	2	7									

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Volatiles (SW8260B)	Methane, Ethane, Ethene RSK-175	TOC (SW9060)	Alkalinity, Anions E300.1 (Sulfate)							Additional Analyses / Remarks
		TB102700	10/27/00	0700	W	G	2										
		SD13-02WG13	10/27/00	0825	WG	G	3										
		ST14-W11WG13	10/27/00	1450	WG	G	3										
		DUP07WG13	10/27/00	1200	WG	G	3										
		ST14-03WG13	10/27/00	1104	WG	G	3										
		HN-123WG13	10/27/00	0919	WG	G	3	3	1	1							
		WHGLTA014WG13	10/27/00	1409	WG	G	3										
		WHGLTA012WG13	10/27/00	1149	WG	G	3										
		EB102700	10/27/00	1522	WG	G	3										

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	HGL	10/27/00	1595	[signature]	STL	10/28/00	0940
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
- Wastewater
- Water
- Soil
- Sludge
- Miscellaneous
- SE = Sediment
- SO = Solid
- DS = Drum Solid
- DL = Drum Liquid
- L = Leachate

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°

COMMENTS
EB102700 associated w/ WHGLTA012WG13 & WHGLTA01WG13

Date Received 10/28/00
Courier: FX
Hand Delivered ☐
Bill of Lading attached

568 119

AFCEE / CH LINE

int. COC

EDD

SEVERN TRENT SERVICES

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

Report To:
Contact: Lynn Evans
Company: [illegible]
Address: 115 [illegible] Blvd
[illegible] 22406
Phone: 703/479-5166
Fax: 703/471-4116
E-Mail: [illegible]

Bill To:
Contact: (Same)
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only ____ of ____

Lab Lot# 9A10G904

Package Sealed	Samples Sealed
Yes No	Yes No
Received on Ice	**Samples Intact**
Yes No	Yes No

Temperature °C of Cooler 4.0

Within Hold Time	Preserv. Indicated
Yes No	Yes No NA
pH Check OK	**Res Cl_2 Check OK**
Yes No NA	Yes No NA

Sample Labels and COC Agree: Yes No COC not present

Sampler Name: Kent Dunn
Signature: Kent Dunn
Project Name: October 2000 HF1001 - Quarterly
Project Number: AF1001-33DD4
Project Location: NASFW JRB, Texas
Lab PM: Donna Trogdon
Date Required Hard Copy: __/__/__ Fax: __/__/__

Refrg #														
# / Cont.	2													
Volume	40mL													
Preserv														

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Volatiles (Sample Bottles)	Additional Analyses / Remarks
001		TB103000	10/30/00	0830	W	G	2	
002		EB103000	10/30/00	1733	W	G	3	
003		ST14-27WG13	10/30/00	1406	WG	G	3	
004		ST14-W16WG13	10/30/00	1238	WG	G	3	
1		ST14-W16WG13MS	10/30/00	1238	WG	G	3	
—		ST14-W16WG13MSD	10/30/00	1238	WG	G	3	
005		WCHMHTAQ4WG13	10/30/00	1624	WG	G	3	

568 120

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	[illegible]	[illegible]	[illegible]	[signature]	STL	10/31/00	1000
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl, Cool to 4
2 H2SO4, Cool to 4
3 HNO3, Cool to 4
4 NaOH, Cool to 4°
5 NaOH/Zn, Cool to 4°
6 Cool to 4
7 None

COMMENTS
EB103000 Associated w/ ST14-27 & W16WG13 only

Date Received 10 / 31 / 00
Courier: FX **Hand Delivered** ☐
Bill of Lading attached

AFCEE ICLP Line

int. COC

EDD

STL
Committed To Your Success

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: Kim Evers
Company: Hydrogeologic
Address: 11150 Herndon Pkwy Suite 900, Herndon, VA 20170
Phone: 703-471-5300
Fax: 703-471-4160
E-Mail: KEVERS@HGI.COM

Bill To:
Contact: (Same)
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use of

Lab Lot # 9A11G927

Package Sealed: Yes (Yes circled) No	Samples Sealed: Yes No (No circled)
Received on Ice: Yes (Yes circled) No	Samples Intact: Yes (Yes circled) No
Temperature °C of Cooler: 3.5	
Within Hold Time: Yes (Yes circled) No	Preserv. Indicated: Yes (Yes circled) No NA
pH Check ok: Yes No NA (NA circled)	Res. Cl_2 Check ok: Yes No NA (NA circled)
Sample Labels and COC Agree: Yes (Yes circled) No COC not present	

Sampler Name: JENNIFER WALLACE
Signature: Jennifer Wallace
Project Name: Camp Pendleton Wetlands
Project Number: AFCEE-33DDA
Project Location: MASON FRB, TEXAS
Date Required: Hard Copy: __/__/__ Fax: __/__/__
Lab PM: DENNA TINGERSOLL

Refrg #
Cont. 3
Volume 40ml
Preserv 1

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Volume (Containers)	Additional Analyses / Remarks
001		TB103100	10/31/00	0545	W	G	3	
002		WCHMHTA001WG13	10/31/00	1110	W	G	3	
003		AB103100	10/31/00	1115	W	G	3	
004		DUPLWG13	10/31/00	1200	W	G	3	
005		ST14-W21WG13	10/31/00	0903	W	G	3	
006		SD13-01WG13	10/31/00	0716	W	G	3	
007		SD13-04WG13	10/31/00	0712	W	G	3	
008		WHGLTA004WG13	10/31/00	1310	W	G	3	
009		AB103100A	10/31/00	1315	W	G	3	
010		WHGLTA010WG13	10/31/00	1024	W	G	3	
011		EB103100	10/31/00	1203	W	G	3	

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Kent Denver	HGL	10/31/00	1752	[illegible]	STL	11/2/00	0950
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl, Cool to 4°
2 H2SO4, Cool to 4°
3 HNO3, Cool to 4°
4 NaOH, Cool to 4°
5 NaOH/Zn Acetate, Cool to 4°
6 Cool to 4°
7 None

COMMENTS:
* EB103100 Associated w/ WHGLTA010, WHGLTA004, WCHMHTA001, DUPLC only
** AB103100 w/ sample WCHMHTA001 only
*** AB103100A w/ WHGLTA004 only

Date Received 11 / 2 / 00
Courier FX
Hand Delivered ☐
Bill of Lading: attached

STL Chicago Chain of Custody CHI 22-09 231/A 5/99

568 121

TAB

APPENDIX B

APPENDIX B

INVESTIGATION DERIVED WASTE RECORDS

Fax Cover Sheet

Date: 07/05/2000

Project Number:

Time:

Number of Pages: 27

TO:

Karen McElroy

Of: Navy Environmental

Fax Number: 817.782.6486

Copy to:

FROM:

Brad Nielsen

Of: HydroGeoLogic, Inc.
13740 Research Blvd
Suite N-5
Austin, TX 78750

Fax #: (512) 336 - 0178

SPECIAL INSTRUCTIONS:

- ☐ Confidential
- ☐ Urgent
- ☒ Please Reply
- ☐ For your information
- ☐ Transmission Report

MESSAGE:

Karen, please find the following request for approval of a discharge event into the base sanitary sewer.

Brad

IF NOT RECEIVED CORRECTLY, PLEASE CALL (512) 336-1170

13740 Research Blvd, Suite N-5, Austin, TX 78750
TEL: (512) 336-1170 FAX: (512) 336-0178

.568 125

5 Jul 00

MEMO FOR RECORD

From: Karen McElroy, NAS JRB Fort Worth Water Program Manager
To: Brad Nielsen, HydroGeologic, Inc

Subj: DISCHARGE OF SAMPLING WATER FROM GROUNDWATER MONITORING

1. This memo is written to reflect Mr. Nielsen's request to discharge approximately 1200 gallons of sampling water collected from quarterly groundwater sampling events on the base.

2. After reviewing that analytical results of the above mentioned sampling events and verifying compliance with effluent limitations set forth in the Wastewater Discharge Permit, I have determined the subject water can be disposed on in the base sanitary sewer system.

3 This memo will serve as my authorization for Mr Nielsen to discharge approximately 1200 gallons of sampling water into the sewer system at Manhole #4 **As always, in order to complete the City's semi-annual pretreatment report due later this year, request you send me a report of the discharge event which includes exact amount discharged, discharge flowrate, date of evend and time start/stop.**

4. Please contact me at (817) 782-6477 for any questions or comments you may have. Thank you for your cooperation and assistance

Karen McElroy
Water Program Manager

HYDRO GeoLogic INC

August 31, 2000

Ms. Karen McElroy
Water Program Manager
Navy Environmental, Building 1501
NAS Fort Worth JRB, Texas 76127

via. Facsimile

Re: Request for Discharge of Wastewater into the Base Sanitary Sewer

Dear Ms McElroy

HydroGeoLogic, Inc would like to request approval for the discharge of approximately 1200 gallons of wastewater into the Base sanitary sewer system via. manway #4 located at the western side of Building 1337 The wastewater was produced during ground-water sampling events at the Base while under contract by the Air Force Center for Environmental Excellence. The wastewater is currently stored in an above ground poly-tank adjacent to Building 1337.

Two grab samples (IDW071100W and IDW072100W) were collected from the above ground poly-tank and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and PCBs, total metals, and total petroleum hydrocarbons (TPH). The sample IDW072100W was collected for TPH analysis only. These samples are considered to be representative of the wastewater to be discharged Please find the results in the attached copy of the analytical summary packages for your review.

If possible, discharge to the sanitary sewer will take place on September 6, 2000. The rate of discharge would be approximately 25 to 50 gallons per minute lasting for approximately 30 to 45 minutes. Following the event, your office will be notified of the activities indicating the date of discharge, total gallons discharged into the sanitary sewer, flow rate and total time of discharge.

Thank you very much for your assistance If you have any questions or comments, please do not hesitate to call me at 512/336-1170

Sincerely,

Brad Nielsen
Project Geologist

Enclosures

HydroGeoLogic, Inc.
13740 Research Blvd. • Unit N-5 • Austin, TX 78750 • USA
(512) 336-1170 • Fax (512) 336-0178 • http://www.hgl.com

31 Aug 00

MEMO FOR RECORD

From: Karen McElroy, NAS JRB Fort Worth Water Program Manager
To: Brad Nielsen, HydroGeologic, Inc

Subj: DISCHARGE OF SAMPLING WATER FROM GROUNDWATER MONITORING

1. This memo is written to reflect Mr. Nielsen's request to discharge approximately 1200 gallons of sampling water collected from quarterly groundwater sampling events on the base

2. After reviewing analytical results of the above mentioned sampling events and verifying compliance with effluent limitations set forth in the Wastewater Discharge Permit, I have determined the subject water can be disposed of in the base sanitary sewer system.

3. This memo will serve as my authorization for Mr. Nielsen to discharge approximately 1200 gallons of sampling water into the sewer system at Manhole #4. **As always, in order to complete the City's semi-annual pretreatment report due later this year, request you send me a report of the discharge event which includes exact amount discharge, discharge flowrate, date of event and time start/stop.**

4 Please contact me at (817) 782-6477 for any questions or comments you may have. Thank you for your cooperation and assistance.

Karen McElroy
Water Programs Manager

TAB

APPENDIX C

APPENDIX C.1

SWMU 68 And AOC 7 MONITORING WELL LABORATORY ANALYTICAL RESULTS

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	SD13-01 2000-04-05 N	SD13-01 2000-10-31 N	SD13-02 2000-04-05 N	SD13-02 2000-10-27 N	SD13-04 2000-04-05 N	SD13-04 2000-10-31 N
SW8260B	1,1,1,2-Tetrachloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,1-Trichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2,2-Tetrachloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2-Trichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloroethane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,1-Dichloroethene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloropropene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichlorobenzene	0.5	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,4-Trichlorobenzene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,2,4-Trimethylbenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromo-3-chloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromoethane (Ethylene dibromide)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichlorobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1,2-Dichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, cis	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, trans	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloropropane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3,5-Trimethylbenzene (Mesitylene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichlorobenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3-Dichloropropene, cis	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropene, trans	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,4-Dichlorobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1-Chlorohexane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2,2-Dichloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2-Chlorotoluene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	4-Chlorotoluene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Benzene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Bromobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Bromochloromethane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U

568 130

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	SD13-01 2000-04-05 N	SD13-01 2000-10-31 N	SD13-02 2000-04-05 N	SD13-02 2000-10-27 N	SD13-04 2000-04-05 N	SD13-04 2000-10-31 N
SW8260B	Bromodichloromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Bromoform	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Bromomethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Carbon tetrachloride	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chlorobenzene	0.4	2	1	0.4 U	0.4 U	0.8	0.4 U
SW8260B	Chloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chloroform	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Chloromethane	0.5	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromochloromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromomethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dichlorodifluoromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 R	0.5 U	0.5 U
SW8260B	Ethylbenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Hexachlorobutadiene	0.5	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Isopropylbenzene (Cumene)	0.5	16	9	9	0.5 U	42	13
SW8260B	m,p-Xylene (sum of isomers)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Methyl tert-butyl ether (MTBE)	0.5	0.5 U	0.5 R	1	0.5 U	0.5 R	0.5 U
SW8260B	Methylene chloride	0.5	0.5 U	0.5 R	0.5 U	0.5 U	0.5 U	0.5 R
SW8260B	Naphthalene	0.5	0.5 U	0.5 R	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	n-Butylbenzene	0.5	3	3	0.6	0.5 U	3	2
SW8260B	n-Propylbenzene	0.4	13	6	4	0.4 U	35	7
SW8260B	o-Xylene (1,2-Dimethylbenzene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	p-Cymene (p-Isopropyltoluene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	sec-Butylbenzene	0.5	10	8	2	0.5 U	8	5
SW8260B	Styrene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	tert-Butylbenzene	0.5	9	8	5	1	6	7
SW8260B	Tetrachloroethene (PCE)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Toluene	0.5	0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5 U
SW8260B	Trichloroethene (TCE)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichlorofluoromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Vinyl acetate	2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260B	Vinyl chloride	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	SD13-01 2000-04-05 N	SD13-01 2000-10-31 N	SD13-02 2000-04-05 N	SD13-02 2000-10-27 N	SD13-04 2000-04-05 N	SD13-04 2000-10-31 N

Notes
Results presented in μg/L.
F=The analyte was positively identified, but the associated numerical value is below the Reporting Limit
J=The analyte was positively identified, but the quantitation is an estimation.
R=The data are unusable due to deficiencies in the ability to analyze the sample and meet quality control criteria.
U=The analyte was analyzed for, but not detected The associated numerical value is at or below the Reporting Limit

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	ST14-03 2000-04-05 N	ST14-03 2000-10-27 FD	ST14-03 2000-10-27 N	ST14-27 2000-04-11 N	ST14-27 2000-10-30 N	ST14-W11 2000-04-05 N
SW8260B	1,1,1,2-Tetrachloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,1-Trichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2,2-Tetrachloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2-Trichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloroethane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,1-Dichloroethene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloropropene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichlorobenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,4-Trichlorobenzene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,2,4-Trimethylbenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromo-3-chloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromoethane (Ethylene dibromide)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichlorobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1,2-Dichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, cis	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, trans	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloropropane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3,5-Trimethylbenzene (Mesitylene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichlorobenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3-Dichloropropene, cis	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropene, trans	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,4-Dichlorobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1-Chlorohexane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2,2-Dichloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2-Chlorotoluene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	4-Chlorotoluene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Benzene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Bromobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Bromochloromethane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	ST14-03 2000-04-05 N	ST14-03 2000-10-27 FD	ST14-03 2000-10-27 N	ST14-27 2000-04-11 N	ST14-27 2000-10-30 N	ST14-W11 2000-04-05 N
SW8260B	Bromodichloromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Bromoform	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Bromomethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Carbon tetrachloride	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chlorobenzene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Chloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chloroform	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Chloromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromochloromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromomethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dichlorodifluoromethane	0.5	0.5 U	0.5 R	0.5 R	0.5 U	0.5 U	0.5 U
SW8260B	Ethylbenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Hexachlorobutadiene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Isopropylbenzene (Cumene)	0.5	0.5 U	0.7	0.7	0.5 U	0.5 U	0.5 U
SW8260B	m,p-Xylene (sum of isomers)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Methyl tert-butyl ether (MTBE)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Methylene chloride	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Naphthalene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	n-Butylbenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	n-Propylbenzene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	o-Xylene (1,2-Dimethylbenzene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	p-Cymene (p-Isopropyltoluene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	sec-Butylbenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Styrene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	tert-Butylbenzene	0.5	3	3	3	0.5 U	3	0.5 U
SW8260B	Tetrachloroethene (PCE)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Toluene	0.5	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichloroethene (TCE)	0.5	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichlorofluoromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Vinyl acetate	2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260B	Vinyl chloride	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

568 134

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	ST14-03 2000-04-05 N	ST14-03 2000-10-27 FD	ST14-03 2000-10-27 N	ST14-27 2000-04-11 N	ST14-27 2000-10-30 N	ST14-W11 2000-04-05 N

Notes
Results presented in μg/L.
F=The analyte was positively identified, but the associated numerical value is below the Reporting Limit
J=The analyte was positively identified, but the quantitation is an estimation
R=The data are unusable due to deficiencies in the ability to analyze the sample and meet quality control criteria
U=The analyte was analyzed for, but not detected The associated numerical value is at or below the Reporting Limit

568 135

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	ST14-W11 2000-10-27 N	ST14-W16 2000-04-04 N	ST14-W16 2000-04-04 FD	ST14-W16 2000-10-30 N	ST14-W21 2000-04-06 N	ST14-W21 2000-10-31 N
SW8260B	1,1,1,2-Tetrachloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,1-Trichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2,2-Tetrachloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2-Trichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2
SW8260B	1,1-Dichloroethane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,1-Dichloroethene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloropropene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichlorobenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,4-Trichlorobenzene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,2,4-Trimethylbenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromo-3-chloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromoethane (Ethylene dibromide)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichlorobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1,2-Dichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, cis	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, trans	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloropropane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3,5-Trimethylbenzene (Mesitylene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichlorobenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3-Dichloropropene, cis	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropene, trans	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,4-Dichlorobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1-Chlorohexane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2,2-Dichloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2-Chlorotoluene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	4-Chlorotoluene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Benzene	0.4	0.4 U	0.4 U	0.4 U	1	0.4 U	0.4 U
SW8260B	Bromobenzene	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Bromochloromethane	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U

568 136

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	ST14-W11 2000-10-27 N	ST14-W16 2000-04-04 N	ST14-W16 2000-04-04 FD	ST14-W16 2000-10-30 N	ST14-W21 2000-04-06 N	ST14-W21 2000-10-31 N
SW8260B	Bromodichloromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Bromoform	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Bromomethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Carbon tetrachloride	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chlorobenzene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Chloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chloroform	0.3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Chloromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromochloromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromomethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dichlorodifluoromethane	0.5	0.5 R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Ethylbenzene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Hexachlorobutadiene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Isopropylbenzene (Cumene)	0.5	0.5 U	10	9	7	15	17
SW8260B	m,p-Xylene (sum of isomers)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Methyl tert-butyl ether (MTBE)	0.5	0.5 U	0.5 U	0.5 U	0.5 R	0.5 U	0.5 R
SW8260B	Methylene chloride	0.5	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U	0.5 R
SW8260B	Naphthalene	0.5	0.5 U	5 J	4	2 J	0.5 U	0.5 R
SW8260B	n-Butylbenzene	0.5	0.5 U	0.3 F	0.3 F	0.5 U	0.5 U	0.5 U
SW8260B	n-Propylbenzene	0.4	0.4 U	8	8	6	0.9 J	0.9
SW8260B	o-Xylene (1,2-Dimethylbenzene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	p-Cymene (p-Isopropyltoluene)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	sec-Butylbenzene	0.5	0.5 U	0.6	0.6	0.5 U	0.5 U	0.4 F
SW8260B	Styrene	0.4	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	tert-Butylbenzene	0.5	0.5 U	5	5	5	4	3
SW8260B	Tetrachloroethene (PCE)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Toluene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichloroethene (TCE)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichlorofluoromethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Vinyl acetate	2	2 U	2 U	2 U	2 U	2 U	2 U
SW8260B	Vinyl chloride	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

568 137

Appendix C.1
SWMU 68 and AOC 7 Monitoring Well Laboratory Analytical Results
NAS Fort Worth JRB, Texas

Method	Analyte	Reporting Limit	ST14-W11 2000-10-27 N	ST14-W16 2000-04-04 N	ST14-W16 2000-04-04 FD	ST14-W16 2000-10-30 N	ST14-W21 2000-04-06 N	ST14-W21 2000-10-31 N

Notes

Results presented in μg/L.

F=The analyte was positively identified, but the associated numerical value is below the Reporting Limit

J=The analyte was positively identified, but the quantitation is an estimation

R=The data are unusable due to deficiencies in the ability to analyze the sample and meet quality control criteria

U=The analyte was analyzed for, but not detected The associated numerical value is at or below the Reporting Limit

568 138

APPENDIX C.2

SWMU 68 And AOC 7 MONITORING WELL LABORATORY QC RESULTS

Appendix C.2
SWMU 68 and AOC 7 Monitoring Well Laboratory QC Results
NAS Fort Worth JRB, Texas

Method	Analyte	TB040400A	TB040500A	TB040600A	EB041100A	TB041100A	EB102700A	TB102700A
SW8260B	1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,4-Trichlorobenzene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,2,4-Trimethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromoethane (Ethylene dibromide)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, cis	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, trans	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloropropane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3,5-Trimethylbenzene (Mesitylene)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3-Dichloropropene, cis	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropene, trans	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1-Chlorohexane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2-Chlorotoluene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	4-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Benzene	0.4 U	0.4 U	0.4 U	0.5	0.4 U	0.4 U	0.4 U
SW8260B	Bromobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Bromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

568 140

Appendix C.2
SWMU 68 and AOC 7 Monitoring Well Laboratory QC Results
NAS Fort Worth JRB, Texas

Method	Analyte	TB040400A	TB040500A	TB040600A	EB041100A	TB041100A	EB102700A	TB102700A
SW8260B	Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chlorobenzene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chloroform	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Hexachlorobutadiene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Isopropylbenzene (Cumene)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	m,p-Xylene (sum of isomers)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Methyl tert-butyl ether (MTBE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Methylene chloride	0.5 U	0.5 U	0.5 U	26	0.5 U	0.5 U	0.5 U
SW8260B	Naphthalene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	n-Propylbenzene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	o-Xylene (1,2-Dimethylbenzene)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	p-Cymene (p-Isopropyltoluene)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	sec-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Styrene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	tert-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Tetrachloroethene (PCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Vinyl acetate	2 U	2 U	2 U	2 U	2 U	2 U	2 U
SW8260B	Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes

Results presented in µg/L.

F=The analyte was positively identified, but the associated numerical value is below the Reporting Limit

Appendix C.2
SWMU 68 and AOC 7 Monitoring Well Laboratory QC Results
NAS Fort Worth JRB, Texas

Method	Analyte	TB040400A	TB040500A	TB040600A	EB041100A	TB041100A	EB102700A	TB102700A

J=The analyte was positively identified, but the quantitation is an estimation

R=The data are unusable due to deficiencies in the ability to analyze the sample and meet quality control criteria

U=The analyte was analyzed for, but not detected The associated numerical value is at or below the Reporting Limit

568 142

Appendix C.2
SWMU 68 and AOC 7 Monitoring Well Laboratory QC Results
NAS Fort Worth JRB, Texas

Method	Analyte	EB103000A	TB103000A	AB103100A	AB103100B	EB103100A	TB103100A
SW8260B	1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,1-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2,4-Trichlorobenzene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,2,4-Trimethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dibromoethane (Ethylene dibromide)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, cis	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloroethene, trans	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,2-Dichloropropane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3,5-Trimethylbenzene (Mesitylene)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	1,3-Dichloropropene, cis	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,3-Dichloropropene, trans	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	1-Chlorohexane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	2-Chlorotoluene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	4-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Benzene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Bromobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SW8260B	Bromochloromethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C.2
SWMU 68 and AOC 7 Monitoring Well Laboratory QC Results
NAS Fort Worth JRB, Texas

Method	Analyte	EB103000A	TB103000A	AB103100A	AB103100B	EB103100A	TB103100A
SW8260B	Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chlorobenzene	0 4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chloroform	0.3 U	0.3 U	0 3 U	0.3 U	0.3 U	0.3 U
SW8260B	Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Dibromomethane	0.5 U	0.5 U	0.5 U	0 5 U	0.5 U	0.5 U
SW8260B	Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0 5 U	0.5 U	0.5 U
SW8260B	Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0 5 U
SW8260B	Hexachlorobutadiene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Isopropylbenzene (Cumene)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	m,p-Xylene (sum of isomers)	0 5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Methyl tert-butyl ether (MTBE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0 5 U
SW8260B	Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.9	1
SW8260B	Naphthalene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	n-Propylbenzene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	o-Xylene (1,2-Dimethylbenzene)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	p-Cymene (p-Isopropyltoluene)	0.5 U	0.5 U	0.5 U	0 5 U	0.5 U	0.5 U
SW8260B	sec-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Styrene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	tert-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Tetrachloroethene (PCE)	0.5 U	0.5 U	0.5 U	0 5 U	0.5 U	0 5 U
SW8260B	Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichloroethene (TCE)	0.5 U	0 5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0 5 U	0.5 U	0.5 U
SW8260B	Vinyl acetate	2 U	2 U	2 U	2 U	2 U	2 U
SW8260B	Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes

Results presented in µg/L.

F=The analyte was positively identified, but the associated numerical value is below the Reporting Limit.

568 144

Appendix C.2
SWMU 68 and AOC 7 Monitoring Well Laboratory QC Results
NAS Fort Worth JRB, Texas

Method	Analyte	EB103000A	TB103000A	AB103100A	AB103100B	EB103100A	TB103100A

J=The analyte was positively identified, but the quantitation is an estimation

R=The data are unusable due to deficiencies in the ability to analyze the sample and meet quality control criteria

U=The analyte was analyzed for, but not detected The associated numerical value is at or below the Reporting Limit

TAB

APPENDIX D

APPENDIX D

SIGNED LABORATORY SUMMARY REPORTS

Committed To *Your* Success

received
5-5-00

Severn Trent Laboratories
2417 Bond Street
University Park, IL 60466

Tel· (708) 534-5200
Fax (708) 534-5211
www.stl-inc com

May 2, 2000

Mr. Christopher Camp
HydroGeoLogic, Inc.
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

RE: AFC001-33DBA
Analytical Report ~~& EDD~~
Lot 9A04G608

Dear Mr. Camp

The enclosed summary report is for the project and lot number listed above. If you have any questions, please contact me at 708-534-5200.

Sincerely,
Severn Trent Laboratories

Donna Ingersoll
Project Manager

sj

Enclosures: Summary Report & EDD

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By:

Michael J. Healy
General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All 633 pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G608

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
SULFATE BY IC	MB1	W	80GD4026	N/A	N/A	04/05/00	04/05/00
TOTAL ORGANIC CARBON	LCS BS	W	80GTC058	N/A	N/A	04/07/00	04/07/00
TOTAL ORGANIC CARBON	MB1	W	80GTC058	N/A	N/A	04/07/00	04/07/00

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G608

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
WITCTA024WG11							
ALKALINITY	005	W	80GAK032	04/04/00	04/05/00	04/12/00	04/12/00
ALKALINITY	005 MS	W	80GAK032	04/04/00	04/05/00	04/12/00	04/12/00
ALKALINITY	005 MSD	W	80GAK032	04/04/00	04/05/00	04/12/00	04/12/00
CHLORIDE BY IC	005	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
CHLORIDE BY IC	005 MS	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
CHLORIDE BY IC	005 MSD	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
NITRATE BY IC	005	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
NITRATE BY IC	005 MS	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
NITRATE BY IC	005 MSD	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
SULFATE BY IC	005	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
SULFATE BY IC	005 MS	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
SULFATE BY IC	005 MSD	W	80GD4026	04/04/00	04/05/00	04/06/00	04/06/00
TOTAL ORGANIC CARBON	005	W	80GTC058	04/04/00	04/05/00	04/07/00	04/07/00
TOTAL ORGANIC CARBON	005 MS	W	80GTC058	04/04/00	04/05/00	04/07/00	04/07/00
TOTAL ORGANIC CARBON	005 MSD	W	80GTC058	04/04/00	04/05/00	04/07/00	04/07/00
TOTAL ORGANIC CARBON	005	W	80GTC058	04/04/00	04/05/00	04/07/00	04/07/00
LAB QC.							
ALKALINITY	LCS BS	W	80GAK032	N/A	N/A	04/12/00	04/12/00
ALKALINITY	MB1	W	80GAK032	N/A	N/A	04/12/00	04/12/00
BROMIDE BY IC	LCS BS	W	80GD4026	N/A	N/A	04/05/00	04/05/00
CHLORIDE BY IC	LCS BS	W	80GD4026	N/A	N/A	04/05/00	04/05/00
FLUORIDE BY IC	LCS BS	W	80GD4026	N/A	N/A	04/05/00	04/05/00
NITRITE BY IC	LCS BS	W	80GD4026	N/A	N/A	04/05/00	04/05/00
NITRATE BY IC	LCS BS	W	80GD4026	N/A	N/A	04/05/00	04/05/00
PHOSPHATE BY IC	LCS BS	W	80GD4026	N/A	N/A	04/05/00	04/05/00
SULFATE BY IC	LCS BS	W	80GD4026	N/A	N/A	04/05/00	04/05/00
BROMIDE BY IC	MB1	W	80GD4026	N/A	N/A	04/05/00	04/05/00
CHLORIDE BY IC	MB1	W	80GD4026	N/A	N/A	04/05/00	04/05/00
FLUORIDE BY IC	MB1	W	80GD4026	N/A	N/A	04/05/00	04/05/00
NITRITE BY IC	MB1	W	80GD4026	N/A	N/A	04/05/00	04/05/00
NITRATE BY IC	MB1	W	80GD4026	N/A	N/A	04/05/00	04/05/00
PHOSPHATE BY IC	MB1	W	80GD4026	N/A	N/A	04/05/00	04/05/00

568 151

STL
Committed to Your Success

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

QC - AFCEE
Del - CLP-Like EDD
Int COC

Report To:
Contact: Lynn Morgan
Company: HydroGeoLogic
Address: 1155 Herndon Pkwy, Suite 900, Herndon, VA 20170
Phone: 703-478-5186
Fax: 703-471-4180
E-Mail: LMORGAN@HGL.com

Bill To:
Contact:
Company:
Address: (SAME)
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot # 9A0406608

Package Sealed: Yes No	Samples Sealed: Yes No
Received on Ice: Yes No	Samples Intact: Yes No
Temperature °C of Cooler: 2.0, 2.3	
Within Hold Time: Yes No	Preserv. indicated: Yes No NA
pH Check ok: Yes No NA	Res. Cl2 Check ok: Yes No NA
Sample Labels and COC Agree: Yes No COC not present	

Sampler Name: JENNIFER WALLACE
Signature: Jennifer Wallace
Project Name: April 2000 Quarterly
Project Number: AFC001-33DBA
Project Location: NASFW JRB Texas
Date Required Hard Copy: 5.2.00
Fax: / /
Lab PM: Donna Ingersol

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOCs SW8260B	TAL + Hg SW6010B/7470	Alkalinity/Anions (E310.1/SW9056)	TOC (SW9060)	Methane, Ethane, Ethene RSK175	Additional Analyses / Remarks
Refrg #							5	3	0	3	5/0	
#/Cont.							2	1	1	1	2	
Volume							40ml	1L	1L	500mL	40ml	
Preserv							1	3	6	2	1	
001		TB040400	04/04/00	0850	W		3					
002		WITCTA010WG11	04/04/00	1312	W		3	1				
002	X	WITCTA010WG11MS	04/04/00	1312	W		3	1				
002	X	WITCTA010WG11MSD	04/04/00	1312	W		3	1				
003		ST14-W16	04/04/00	1432	W		3					
004		DUP04	04/04/00	1200	W		3					
005		WITCTA024WG11	04/04/00	1440	W		3		1	1	3	Methane Ethane Ethene
005	X	WITCTA024WG11MS	04/04/00	1440	W		3		1	1	3	logged in under sep batch
005	X	WITCTA024WG11MSD	04/04/00	1440	W		3		1	1	3	9A0406610 per Donna Ingersol
006		GMI-22-07MWG11	04/04/00	1325	W		3					4.5.00

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Mark Wade	Hydrogeologic	4/4/00	1700	Sherri Scott	STL	4-5-00	1435
Michelle Yodu Bracken	STL	04/05/00	1700				

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl Cool to 4°
2 H2SO4 Cool to 4°
3 HNO3 Cool to 4°
4 NaOH, Cool to 4°
5 NaOH/Zn Acetate, Cool to 4°
6 Cool to 4°
7 None

COMMENTS
Serial Dilution on WITCTA010WG11

170000

Date Received: 4, 5, 00
Courier: Fed-X
Hand Delivered: ☐
Bill of Lading: See attached

Severn Trent Laboratories Chicago
GC/MS Case Narrative

AFC001 – 33DBA
STL# 9A04G608
VOA DATA:

1. All volatile sample analyses were performed within the recommended hold times.

2. All Method Blank target compounds were below reporting limits.

3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. All of the required spike recoveries were within the QAPP specified QC limits in the LCS samples.

4. Matrix Spike/Matrix Spike Duplicate analyses was performed on samples 9A04G608-001 and 005. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. All of the required spike recoveries and RPD values were within the QAPP specified QC limits in the samples 9a04G608-002 MS/MSD and 005 MS/MSD.

5. All volatile samples had surrogate recoveries within the QAPP specified QC limits.

6. The water sample was prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The second source initial calibration verification was included and all target compounds met the +/- 25% expected value acceptance criteria except the compounds Dichlorodifluoromethane, Chloromethane, Acetone and Vinyl acetate, n-Propylbenzene, sec-Butylbenzene and n-Butylbenzene were outside of the acceptance criteria. The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference acceptance criteria or 20% Drift acceptance criteria for first or higher regression curves. All of the other compounds met the +/- 25% expected value acceptance criteria or +/- 50% for the exception compounds specified in the QAPP.

7. All internal standard areas and retention times were within acceptance limits as compared to the corresponding continuing calibration standard.

8. The water samples were analyzed without dilution using a 25 mL purge volume.

Gregory L. Goodwin
GC/MS Section Manager

5/2/00
Date

Severn Trent Laboratories Chicago
GC/MS Case Narrative

AFC001 – 33DBA
STL# 9A04G608
VOA DATA:

1. All volatile sample analyses were performed within the recommended hold times.

2. All Method Blank target compounds were below reporting limits.

3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. All of the required spike recoveries were within the QAPP specified QC limits in the LCS samples.

4. Matrix Spike/Matrix Spike Duplicate analyses was performed on samples 9A04G608-001 and 005. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. All of the required spike recoveries and RPD values were within the QAPP specified QC limits in the samples 9a04G608-002 MS/MSD and 005 MS/MSD.

5. All volatile samples had surrogate recoveries within the QAPP specified QC limits.

6. The water sample was prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The second source initial calibration verification was included and all target compounds met the +/- 25% expected value acceptance criteria except the compounds Dichlorodifluoromethane, Chloromethane, Acetone and Vinyl acetate, n-Propylbenzene, sec-Butylbenzene and n-Butylbenzene were outside of the acceptance criteria. The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference acceptance criteria or 20% Drift acceptance criteria for first or higher regression curves. All of the other compounds met the +/- 25% expected value acceptance criteria or +/- 50% for the exception compounds specified in the QAPP.

7. All internal standard areas and retention times were within acceptance limits as compared to the corresponding continuing calibration standard.

8. The water samples were analyzed without dilution using a 25 mL purge volume.

Gregory L. Goodwin
GC/MS Section Manager

5/2/00
Date

Severn Trent Laboratories Chicago
Internal Sample Custody Transfer Record

Sample Lot#: 9A046608 Client: AFC001-33DBA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
5	IC	Sherri Scott	[illegible]	4-5-00	1455	
1-6	8260	Sherri Scott	[illegible]	4-5-00	1505	
5	IC	[illegible]	Sherri Scott	4/5/00	16:00	
2	Hg	Sherri Scott	[illegible]	4/6/00	08:45	
2	Hg	[illegible]	Sherri Scott	4/6/00	09:40	
4	IC	Sherri Scott	[illegible]	4/6/00	10:00	
2	IC	[illegible]	Sherri Scott	4/7/00	9:50	
2	metals	Sherri Scott	[illegible]	4/10/00	[illegible]	
2	metals	[illegible]	[illegible]	4/10/00	7:55	
5	TOC	[illegible]	[illegible]	4/10/00	14:25	
2	metals	[illegible]	[illegible]	4/10/00	15:05	
2	metals	[illegible]	[illegible]	[illegible]	16:00	
5	ALL	[illegible]	J Kelch	4-12-00	09:20	
5	ALL	J Kelch	[illegible]	4/13/00	13:00	

568 154

CHI-22-11-001/C-1/99

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

Project # 00000-000-000-0000
Lab Batch: 9A04G608

Inorganic Method Blank Data Report

Sample	Lab ID	Parameter	Result		Units	Reporting Limit
Blank 1	80GAK032-MB1	Alkalinity	5.0	u	mg/L	5.0
Blank 1	80GD4026-MB1	Bromide BY IC	0.10	u	mg/L	0.10
		Chloride by IC	0.20	u	mg/L	0 20
		Fluoride by IC	0.10	u	mg/L	0.10
		Nitrite-N by IC	0 10	u	mg/L	0 10
		Nitrate-N by IC	0.10	u	mg/L	0 10
		Phosphate by IC	0.10	u	mg/L	0 10
		Sulfate by IC	0.20	u	mg/L	0.20
Blank 1	80GTC058-MB1	Total Organic Carbon	1.0	u	mg/L	1.0

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

RE: WITCTA024WG11
Project # 00000-000-000-0000
Lab ID: 9A04G608-005
Sample Date: 04/04/00
Date Received: 04/05/00

Inorganic Data Report

Parameters	Result		Units	Reporting Limit
Alkalinity	349		mg/L	5.0
Chloride by IC	122		mg/L	4.0
Nitrate-N by IC	0.10	u	mg/L	0.10
Sulfate by IC	2.1		mg/L	0.20
Total Organic Carbon	2.4		mg/L	1.0
TOC Test 2	2.3		mg/L	1.0

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

Project # 00000-000-000-0000
Lab Batch: 9A04G608

Inorganic Duplicate Spike Report

Sample	Site ID	Parameter	Spike #1 % Recov	Spike #2 % Recov	RPD
-005	WITCTA024WG11	Alkalinity	92 2	98.9	7.0
		Chloride by IC	136	136	0 40
		Nitrate-N by IC	96.6	95 8	0 90
		Sulfate by IC	94.0	95.3	1.4
		TOC	96.1	93 0	3 3

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

Project # 00000-000-000-0000
Lab Batch: 9A04G608

Inorganic Accuracy Data Report

Sample	Site ID	Parameter	Spiked Sample	Initial Result		Spiked Amount	% Recov
-005	WITCTA024WG11	Alkalinity	441	349		100	92.2
		Alkalinity MSD	448	349		100	98.9
		Chloride by IC	204	122		60 0	136
		Chloride by IC MSD	204	122		60.0	136
		Nitrate-N by IC	1.9	0.10	u	2.0	90.0
		Nitrate-N by IC MSD	1.9	0.10	u	2.0	95 8
		Sulfate by IC	6.8	2 1		5.0	94.0
		Sulfate by IC MSD	6.9	2.1		5.0	95 3
		TOC	12.0	2.4		10.0	96.1
		TOC MSD	11.7	2.4		10.0	93.0

Severn Trent Laboratories Chicago
Wet Chemistry Case Narrative

Client: **HydroGeoLogic NAS Ft. Worth AFC001-33DBA**
RFW Lot: **9A04G608** Date Rec'd. 04/05/00

1 This narrative covers the analysis of the samples in the above RFW Lot by the following methods.

Alkalinity – EPA Method 310.1
Anions by Ion Chromatography – SW 846 Method 9056
Chloride
Nitrate as N
Sulfate as SO_4
TOC – SW 846 Method 9060
All TOC analysis was done by duplicate injection.

2. The EPA holding times were met. Refer to the Laboratory Chronicle Page for dates of sampling, receipt, and analysis.

3. The initial and continuing calibration verification standards and blanks were in control.

4. The method blanks were below the detection limits.

5. All LCS recoveries were within control limits. Please see the LCS Summary Pages of this report for additional details.

6. Matrix QC was done as requested on this sample The chloride spikes were both biased high, at 136%.

Diane L. Harper
Wet Chemistry Section Manager

4-20-00
Date

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

Project # 00000-000-000-0000
Lab Batch: 9A04G608

Inorganic Laboratory Control Standards Report

Lab ID	Parameter	Spiked Amount	Units	Spike #1 % Recov.	Spike #2 % Recov.	RPD
80GAK032-LCS	Alkalinity	100	mg/L	106	NA	NA
80GD4026-LCS	Bromide BY IC	2.0	mg/L	103	NA	NA
	Chloride by IC	3.0	mg/L	91 3	NA	NA
	Fluoride by IC	1 0	mg/L	94.7	NA	NA
	Nitrite-N by IC	2.0	mg/L	94.2	NA	NA
	Nitrate-N by IC	2.0	mg/L	103	NA	NA
	Phosphate by IC	2.0	mg/L	105	NA	NA
	Sulfate by IC	5.0	mg/L	100	NA	NA
80GTC058-LCS	TOC	5.0	mg/L	96.3	NA	NA

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G608

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
COPPER, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
COPPER, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
IRON, SERIAL DILUTIO	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
IRON, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
IRON, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
IRON, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MERCURY, TOTAL	002	W	9AHG0046	04/04/00	04/05/00	04/06/00	04/06/00
MERCURY, TOTAL	002 REP	W	9AHG0046	04/04/00	04/05/00	04/06/00	04/06/00
MERCURY, TOTAL	002 MS	W	9AHG0046	04/04/00	04/05/00	04/06/00	04/06/00
POTASSIUM, SERIAL DI	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
POTASSIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
POTASSIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
POTASSIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MAGNESIUM, SERIAL DI	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MAGNESIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MAGNESIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MAGNESIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MANGANESE, SERIAL DI	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MANGANESE, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MANGANESE, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MANGANESE, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
Molybdenum, Serial D	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MOLYBDENUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MOLYBDENUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
MOLYBDENUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
SODIUM, SERIAL DILUT	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
SODIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
SODIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
SODIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
NICKEL, SERIAL DILUT	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
NICKEL, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
NICKEL, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
NICKEL, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
LEAD, TOTAL	002	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/11/00
LEAD, TOTAL	002 MS	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/13/00
LEAD, TOTAL	002 MSD	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/13/00
ANTIMONY, TOTAL	002	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/12/00
ANTIMONY, TOTAL	002 MS	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/12/00
ANTIMONY, TOTAL	002 MSD	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/12/00
SELENIUM, TOTAL	002	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/12/00

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G608

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
WITCTA010WG11							
SILVER, SERIAL DILUT	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
SILVER, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
SILVER, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
SILVER, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ALUMINUM, SERIAL DIL	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ALUMINUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ALUMINUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ALUMINUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ARSENIC, SERIAL DILU	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ARSENIC, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ARSENIC, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ARSENIC, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
BARIUM, SERIAL DILUT	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
BARIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
BARIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
BARIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
BERYLLIUM, SERIAL DI	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
BERYLLIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
BERYLLIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
BERYLLIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CALCIUM, SERIAL DILU	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CALCIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CALCIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CALCIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CADMIUM, SERIAL DILU	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CADMIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CADMIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CADMIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
COBALT, SERIAL DILUT	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
COBALT, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
COBALT, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
COBALT, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
CHROMIUM, TOTAL	002	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/11/00
CHROMIUM, TOTAL	002 MS	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/11/00
CHROMIUM, TOTAL	002 MSD	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/11/00
COPPER, SERIAL DILUT	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
COPPER, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client AFC001 – 33DBA
STL# 9A04G608
SDG# U04608

WO# 00000-000-000-0000
Date Rec'd 04/05/00

1 This narrative covers the analysis of 1 Water sample for the following metals

ICP Ag,Al,As,Ba,Be,Ca,Cd,Co,Cu,Fe,K,Mg,Mn,Mo,Na,Ni,Tl,V,Zn
GFAA Cr,Pb,Sb,Se
CVAA Hg
Method Ref NAS Fort Worth JRB, Texas QAPP

2 All analyses were performed within the required holding times

3 All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limits

4 All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits

5 All ICP Interference Check Samples (ICSA and ICSAB) were within control limits

6 All Laboratory Control Samples (LCS) were within the 80-120% control limits

7 All Method blanks were within control limits

8 All Serial Dilution analysis were within control limits

9 All MS/MSD recoveries were within the 80-120% control limits (control limits are not applicable when the sample concentration exceed the spike added concentration by a factor of 4 or more) except for Antimony (MSD) and Selenium (MS/MSD)

10 GFAA metals All Analytical spike recoveries were within control limits except for Antimony and Selenium

11 Please note The last 6 digits of the client sample ID's were used in all CLP Forms to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP forms Please refer to the Cover Page of the CLP Forms to correlate the modified sample ID's and to the COC to correlate the Lab ID #'s to the client ID

Mani S Iyer
Metals Section Manager

4/26/00
Date

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G608

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
SELENIUM, TOTAL	002 MS	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/12/00
SELENIUM, TOTAL	002 MSD	W	9AGF0103	04/04/00	04/05/00	04/10/00	04/12/00
THALLIUM, SERIAL DIL	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
THALLIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
THALLIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
THALLIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
VANADIUM, SERIAL DIL	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
VANADIUM, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
VANADIUM, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
VANADIUM, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ZINC, SERIAL DILUTIO	002 L	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ZINC, TOTAL	002	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ZINC, TOTAL	002 MS	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00
ZINC, TOTAL	002 MSD	W	9AGI0332	04/04/00	04/05/00	04/10/00	04/20/00

NY CERTIFICATION # 11006

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

10WG11

Lab Name: STL_CHICAGO Contract: _____
Lab Code: STL___ Case No.: _____ SAS No.: _____ SDG No.: U04608
Matrix (soil/water): WATER Lab Sample ID: 9A04G608-002
Level (low/med): LOW__ Date Received: 04/05/00
% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	43.9	B		P_
7440-36-0	Antimony_	2.6	U	WN	F_
7440-38-2	Arsenic__	17.5	B		P_
7440-39-3	Barium___	151	B		P_
7440-41-7	Beryllium	0.60	U		P_
7440-43-9	Cadmium__	0.40	U		P_
7440-70-2	Calcium__	93000			P_
7440-47-3	Chromium_	1.2	U		F_
7440-48-4	Cobalt___	2.0	U		P_
7440-50-8	Copper___	1.2	U		P_
7439-89-6	Iron_____	9330			P_
7439-92-1	Lead_____	1.6	U		F_
7439-95-4	Magnesium	11400			P_
7439-96-5	Manganese	2070			P_
7439-97-6	Mercury__	0.20	U		CV
7439-95-4	Molybdenu	2.9	B		P_
7440-02-0	Nickel___	1.6	U		P_
7440-09-7	Potassium	4380	B		P_
7782-49-2	Selenium_	1.7	U	WN	F_
7440-22-4	Silver___	2.5	U		P_
7440-23-5	Sodium___	39700			P_
7440-28-0	Thallium_	4.8	U		P_
7440-31-5	Tin_____				NR
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6_	Zinc_____	8.5	U		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
ITCTA010WG11

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL_CHICAGO Contract: _____

Lab Code: STL___ Case No.: _____ SAS No.: _____ SDG No.:U04608

SOW No.: ILM03

EPA Sample No.	Lab Sample ID
_10WG11_____	_9A04G608-002___
_10WG11S_____	_9A04G608-002S__
_10WG11T_____	_9A04G608-002T__

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Mani S. Iyer Name: MANI S. IYER

Date: 4/26/00 Title: Metals Section Mgr.

568 167

STL
Committed to Your Success

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

QC-AFCEE
Del-CLP-Like
EDD
Int COC

Report To.
Contact: Lynn Morgan
Company: HydroGeoLogic
Address: 1155 Herndon Pkwy, Suite 900, Herndon, VA 20170
Phone: 703-478-5186
Fax: 703-471-4180
E-Mail: LMORGAN@HGL.com

Bill To:
Contact:
Company:
Address: (SAME)
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot # 9A0466608

Package Sealed: Yes No — Initials
Samples Sealed: Yes No
Received on Ice: Yes No
Samples Intact: Yes No
Temperature °C of Cooler: 2.0, 2.3
Within Hold Time: Yes No
Preserv. indicated: Yes No NA
pH Check ok: Yes No NA
Res. Cl2 Check ok: Yes No NA
Sample Labels and COC Agree: Yes No COC not present

Sampler Name: JENNIFER WALLACE
Signature: Jennifer Wallace
Project Name: April 2000 Quarterly
Project Number: AFC001-33DBA
Project Location: NASFW JRB Texas
Date Required Hard Copy: 5.2.00
Fax: / /
Lab PM: Donna Ingersol

Refrg #	5	3	P	3	S/D
# Cont	2	1	1	1	2
Volume	40ml	1L	1L	40ml	40ml
Preserv	1	3	6	2	1

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOC, SW8260B	TAL + Hg SW6010B/SW7470	Alkalinity/Anions E300.1/Sw9056	TOC (SW9060)	Methane, Ethane, Ethene RSK-175	Additional Analyses / Remarks
001		TB040400	04/04/00	0850	W		~~3~~ 2					
002		WITCTA010WG11	04/04/00	1312	W		3	1				
002	X	WITCTA010WG11MS	04/04/00	1312	W		3	1				
002	X	WITCTA010WG11MSD	04/04/00	1312	W		3	1				
003		ST14-W16	04/04/00	1432	W		3					
004		DUP04	04/04/00	1200	W		3					
005		WITCTA024WG11	04/04/00	1440	W		3		1	1	3	Methane Ethane Ethene
005	X	WITCTA024WG11MS	04/04/00	1440	W		3		1	1	3	logged in wrong sep batch
005	X	WITCTA024WG11MSD	04/04/00	1440	W		3		1	1	3	9A0466610 per Donna Ingersol
006		GMI-22-07MWG11	04/04/00	1325	W		3					4500 pm

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Mark Hale	HydroGeologic	4/4/00	1700	[illegible]	STL	4-5-00	1435
Michele Jodie Brackin	STL	04/05/00	1700				

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
= _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl Cool to 4
2 H2SO4 Cool to 4
3 HNO3 Cool to 4
4 NaOH Cool to 4
5 NaOH/Zn Acetate Cool to 4
6 Cool to 4
7 None

COMMENTS
Serial Dilution on WITCTA010WG11

170000

Date Received: 4, 5, 00
Courier: Fed-X
Hand Delivered: ☐
Bill of Lading: See attached

Cl NC; SiO4

Severn Trent Laboratories Chicago
Internal Sample Custody Transfer Record

Sample Lot#: 9A04608 Client: AFC001-33DBA

Sample No.	Analysis	Relinquished by:	Received by	Date	Time	Comments
5	IC	Sherri Scott	Matt	4-5-00	1455	
1-6	8260	Sherri Scott	[illegible]	4-5-00	1505	
5	IC	Matt	Sherri Scott	4/5/00	[illegible]	
2	Hg	Sherri Scott	[illegible]	4/6/00	0545	
2	Hg	[illegible]	Sherri Scott	4/6/00	0540	
5	IC	Sherri Scott	Matt	4/6/00	[illegible]	
5	IC	Matt	Sherri Scott	4/7/00	[illegible]	
2	metals	Sherri Scott	[illegible]	4/10/00	[illegible]	
2	metals	[illegible]	[illegible]	4/10/00	[illegible]	
5	TOC	Matt	[illegible]	4/10/00	1425	
2	metals	[illegible]	[illegible]	4/10/00	[illegible]	
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5	ALL	[illegible]	J Kelch	4-12-00	[illegible]	
5	ALL	J Kelch	[illegible]	4/13/00	1300	

CHI-22-11-001/C-1/99

568 168

Severn Trent Laboratories Chicago
8260 ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G608

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB040400	001	W	80GVB126	04/04/00	04/05/00	N/A	04/18/00
WITCTA010WG11	002	W	80GVB126	04/04/00	04/05/00	N/A	04/18/00
WITCTA010WG11	002 MS	W	80GVB126	04/04/00	04/05/00	N/A	04/18/00
WITCTA010WG11	002 MSD	W	80GVB126	04/04/00	04/05/00	N/A	04/18/00
ST14-W16	003	W	80GVB126	04/04/00	04/05/00	N/A	04/18/00
DUP04	004	W	80GVB126	04/04/00	04/05/00	N/A	04/18/00
WITCTA024WG11	005	W	80GVB128	04/04/00	04/05/00	N/A	04/18/00
WITCTA024WG11	005 MS	W	80GVB127	04/04/00	04/05/00	N/A	04/18/00
WITCTA024WG11	005 MSD	W	80GVB127	04/04/00	04/05/00	N/A	04/18/00
GMI-22-07MWG11	006	W	80GVB126	04/04/00	04/05/00	N/A	04/18/00
LAB QC.							
VBLKKW	MB1	W	80GVB126	N/A	N/A	N/A	04/17/00
VBLKKW	MB1 BS	W	80GVB126	N/A	N/A	N/A	04/17/00
VBLKKS	MB1	W	80GVB128	N/A	N/A	N/A	04/18/00
VBLKKS	MB1 BS	W	80GVB128	N/A	N/A	N/A	04/19/00
VBLKKU	MB1	W	80GVB127	N/A	N/A	N/A	04/18/00
VBLKKU	MB1 BS	W	80GVB127	N/A	N/A	N/A	04/18/00

NY CERTIFICATION # 11006

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G608 Client: AFC001-33DBA Work Order: 00000-000-000-0

Report Date: 05/01/00 20:54
Page: 1a

Sample Information	Cust ID:	TB040400	WITCTA010WG1 1	WITCTA010WG1 1	WITCTA010WG1 1	ST14-W16	DUP04
	RFW#:	001	002	002 MS	002 MSD	003	004
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1	1	1	1	1	1
	Units:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Surrogate Recovery	1,2-Dichloroethane-d4	84 %	85 %	82 %	80 %	82 %	83 %
	Toluene-d8	93 %	94 %	91 %	95 %	96 %	95 %
	4-Bromofluorobenzene	94 %	94 %	90 %	96 %	96 %	96 %
	Dibromofluoromethane	84 %	82 %	79 %	82 %	84 %	82 %
Dichlorodifluoromethane		0 5 U	0.5 U	71 %	71 %	0.5 U	0.5 U
Chloromethane		0.5 U	0.5 U	68 %	69 %	0.5 U	0.5 U
Vinyl chloride		0.5 U	1	85 %	86 %	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	90 %	92 %	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	85 %	87 %	0.5 U	0.5 U
Trichlorofluoromethane		0.5 U	0.5 U	84 %	83 %	0 5 U	0.5 U
1,1-Dichloroethene		0.5 U	0.5 U	101 %	102 %	0.5 U	0.5 U
Methylene Chloride		0.5 U	0.5 U	86 %	90 %	0.5 U	0.5 U
trans-1,2-Dichloroethene		0.5 U	2	94 %	96 %	0.5 U	0 5 U
1,1-Dichloroethane		0.4 U	0.4 U	90 %	91 %	0.4 U	0.4 U
Vinyl acetate		2 U	2 U	61 * %	61 * %	2 U	2 U
cis-1,2-Dichloroethene		0.5 U	2	88 %	90 %	0.5 U	0.5 U
2,2-Dichloropropane		0.5 U	0.5 U	97 %	95 %	0.5 U	0 5 U
Bromochloromethane		0.4 U	0.4 U	92 %	96 %	0.4 U	0.4 U
Chloroform		0.3 U	0.3 U	87 %	87 %	0.3 U	0.3 U
1,1,1-Trichloroethane		0.5 U	0.5 U	93 %	91 %	0.5 U	0.5 U
1,1-Dichloropropene		0.5 U	0.5 U	106 %	106 %	0.5 U	0.5 U
Carbon Tetrachloride		0.5 U	0.5 U	109 %	105 %	0.5 U	0.5 U
Benzene		0.4 U	0.4 U	99 %	100 %	0.4 U	0.4 U
1,2-Dichloroethane		0.5 U	0.5 U	88 %	86 %	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	101 %	102 %	0.5 U	0.5 U
1,2-Dichloropropane		0 4 U	0.4 U	94 %	97 %	0.4 U	0.4 U
Dibromomethane		0.5 U	0 5 U	92 %	94 %	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	96 %	96 %	0 5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0 5 U	98 %	99 %	0.5 U	0.5 U

*= Outside of EPA CLP QC limits.

568 170

RFW Batch Number: 9A04G608 Client: AFC001-33DBA Work Order: 00000-000-000-0 Page: 1b

Cust ID:	TB040400	WITCTA010WG1 1	WITCTA010WG1 1	WITCTA010WG1 1	ST14-W16	DUP04
RFW#:	001	002	002 MS	002 MSD	003	004
Toluene	0.5 U	0.5 U	96 %	97 %	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	91 %	91 %	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	86 %	91 %	0.5 U	0.5 U
1,3-Dichloropropane	0.4 U	0.4 U	95 %	98 %	0.4 U	0.4 U
Tetrachloroethene	0.5 U	0.5 U	111 %	111 %	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	101 %	103 %	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	93 %	97 %	0.5 U	0.5 U
1-Chlorohexane	0.5 U	0.5 U	102 %	105 %	0.5 U	0.5 U
Chlorobenzene	0.4 U	0.4 U	102 %	105 %	0.4 U	0.4 U
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	98 %	100 %	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	102 %	104 %	0.5 U	0.5 U
m/p-Xylene	0.5 U	0.5 U	101 %	102 %	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	99 %	100 %	0.5 U	0.5 U
Styrene	0.4 U	0.4 U	103 %	106 %	0.4 U	0.4 U
Bromoform	0.5 U	0.5 U	102 %	104 %	0.5 U	0.5 U
Isopropylbenzene	0.5 U	0.5 U	109 %	112 %	10	9
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	98 %	105 %	0.5 U	0.5 U
Bromobenzene	0.3 U	0.3 U	103 %	107 %	0.3 U	0.3 U
1,2,3-Trichloropropane	0.5 U	0.5 U	91 %	98 %	0.5 U	0.5 U
n-Propylbenzene	0.4 U	0.4 U	111 %	114 %	8	8
2-Chlorotoluene	0.4 U	0.4 U	112 %	114 %	0.4 U	0.4 U
1,3,5-Trimethylbenzene	0.5 U	0.5 U	100 %	103 %	0.5 U	0.5 U
4-Chlorotoluene	0.5 U	0.5 U	100 %	102 %	0.5 U	0.5 U
tert-Butylbenzene	0.5 U	0.5 U	107 %	110 %	5	5
1,2,4-Trimethylbenzene	0.5 U	0.5 U	103 %	105 %	0.5 U	0.5 U
sec-Butylbenzene	0.5 U	0.5 U	114 %	116 %	0.6	0.6
1,3-Dichlorobenzene	0.5 U	0.5 U	100 %	103 %	0.5 U	0.5 U
p-Isopropyltoluene	0.5 U	0.5 U	105 %	107 %	0.5 U	0.5 U
1,4-Dichlorobenzene	0.3 U	0.3 U	102 %	105 %	0.3 U	0.3 U
n-Butylbenzene	0.5 U	0.5 U	110 %	111 %	0.3 J	0.3 J
1,2-Dichlorobenzene	0.3 U	0.3 U	100 %	103 %	0.3 U	0.3 U
1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	88 %	91 %	0.5 U	0.5 U
1,2,4-Trichlorobenzene	0.4 U	0.4 U	104 %	108 %	0.4 U	0.4 U
Hexachlorobutadiene	0.5 U	0.5 U	111 %	117 %	0.5 U	0.5 U
Naphthalene	0.5 U	0.5 U	99 %	104 %	5	4
1,2,3-Trichlorobenzene	0.5 U	0.5 U	100 %	105 %	0.5 U	0.5 U

*= Outside of EPA CLP QC limits.

568 171

RFW Batch Number: 9A04G608 Client: AFC001-33DBA Work Order: 00000-000-000-0 Page: 1c

Cust ID:	TB040400	WITCTA010WG1 1	WITCTA010WG1 1	WITCTA010WG1 1	ST14-W16	DUP04
RFW#:	001	002	002 MS	002 MSD	003	004
Methyl-tert-butyl ether	0.5 U	0.5 U	89 %	90 %	0.5 U	0.5 U

*= Outside of EPA CLP QC limits.

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G608 Client: AFC001-33DBA Work Order. 00000-000-000-0 Report Date. 05/01/00 20:54 Page: 2a

Sample Information	Cust ID:	WITCTA024WG1		WITCTA024WG1		WITCTA024WG1		GMI-22-07MWG		VBLKKW		VBLKKW BS	
		1		1		1		11					
	RFW#:	005		005 MS		005 MSD		006		80GVB126-MB1		80GVB126-MB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	1		1		1		1		1		1	
	Units:	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
Surrogate Recovery	1,2-Dichloroethane-d4	80	%	80	%	86	%	79	%	84	%	84	%
	Toluene-d8	88	%	96	%	97	%	95	%	90	%	95	%
	4-Bromofluorobenzene	88	%	96	%	96	%	95	%	91	%	97	%
	Dibromofluoromethane	80	%	85	%	85	%	82	%	83	%	82	%
Dichlorodifluoromethane		0.5	U	71	%	68	%	0.5	U	0.5	U	69	%
Chloromethane		0.5	U	74	%	71	%	0.5	U	0.5	U	69	%
Vinyl chloride		2		90	%	88	%	0.5	U	0.5	U	86	%
Bromomethane		0.5	U	95	%	93	%	0.5	U	0.5	U	88	%
Chloroethane		0.5	U	91	%	89	%	0.5	U	0.5	U	85	%
Trichlorofluoromethane		0.5	U	83	%	82	%	0.5	U	0.5	U	81	%
1,1-Dichloroethene		0.5	U	107	%	105	%	0.5	U	0.5	U	105	%
Methylene Chloride		0.5	U	95	%	93	%	0.5	U	0.5	U	87	%
trans-1,2-Dichloroethene		0.5	U	104	%	103	%	0.5	U	0.5	U	96	%
1,1-Dichloroethane		0.4	U	96	%	95	%	0.4	U	0.4	U	92	%
Vinyl acetate		2	U	76 *	%	74 *	%	2	U	2	U	62 *	%
cis-1,2-Dichloroethene		0.5	U	98	%	98	%	0.5	U	0.5	U	90	%
2,2-Dichloropropane		0.5	U	101	%	98	%	0.5	U	0.5	U	101	%
Bromochloromethane		0.4	U	98	%	103	%	0.4	U	0.4	U	89	%
Chloroform		0.3	U	92	%	90	%	0.3	U	0.3	U	87	%
1,1,1-Trichloroethane		0.5	U	94	%	94	%	0.5	U	0.5	U	96	%
1,1-Dichloropropene		0.5	U	111	%	110	%	0.5	U	0.5	U	109	%
Carbon Tetrachloride		0.5	U	106	%	106	%	0.5	U	0.5	U	110	%
Benzene		0.4	U	102	%	102	%	0.4	U	0.4	U	97	%
1,2-Dichloroethane		0.5	U	89	%	87	%	0.5	U	0.5	U	89	%
Trichloroethene		0.5	U	106	%	106	%	0.5	U	0.5	U	103	%
1,2-Dichloropropane		0.4	U	100	%	100	%	0.4	U	0.4	U	95	%
Dibromomethane		0.5	U	98	%	96	%	0.5	U	0.5	U	91	%
Bromodichloromethane		0.5	U	100	%	98	%	0.5	U	0.5	U	97	%
cis-1,3-Dichloropropene		0.5	U	104	%	103	%	0.5	U	0.5	U	99	%

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G608 Client: AFC001-33DBA Work Order: 00000-000-000-0 Page: 2b

Cust ID:	WITCTA024WG1		WITCTA024WG1		WITCTA024WG1		GMI-22-07MWG		VBLKKW		VBLKKW BS	
	1		1		1		11					
RFW#:	005		005 MS		005 MSD		006		80GVB126-MB1		80GVB126-MB1	
Toluene	0.5	U	100	%	102	%	0.5	U	0.5	U	97	%
trans-1,3-Dichloropropene	0 5	U	94	%	91	%	0.5	U	0.5	U	91	%
1,1,2-Trichloroethane	0.5	U	93	%	92	%	0.5	U	0.5	U	83	%
1,3-Dichloropropane	0.4	U	101	%	100	%	0.4	U	0.4	U	97	%
Tetrachloroethene	0.5	U	115	%	114	%	0.5	U	0.5	U	116	%
Dibromochloromethane	0.5	U	104	%	104	%	0.5	U	0.5	U	104	%
1,2-Dibromoethane	0.5	U	100	%	100	%	0.5	U	0.5	U	94	%
1-Chlorohexane	0.5	U	107	%	112	%	0.5	U	0.5	U	104	%
Chlorobenzene	0.4	U	108	%	107	%	0.4	U	0.4	U	105	%
1,1,1,2-Tetrachloroethane	0.5	U	102	%	101	%	0.5	U	0.5	U	100	%
Ethylbenzene	0.5	U	106	%	106	%	0.5	U	0.5	U	104	%
m/p-Xylene	0.5	U	105	%	103	%	0.5	U	0.5	U	104	%
o-Xylene	0.5	U	104	%	103	%	0.5	U	0.5	U	102	%
Styrene	0.4	U	110	%	109	%	0.4	U	0.4	U	105	%
Bromoform	0.5	U	107	%	104	%	0 5	U	0.5	U	103	%
Isopropylbenzene	0.5	U	112	%	112	%	0.5	U	0.5	U	109	%
1,1,2,2-Tetrachloroethane	0.5	U	108	%	106	%	0.5	U	0.5	U	97	%
Bromobenzene	0.3	U	112	%	110	%	0.3	U	0.3	U	106	%
1,2,3-Trichloropropane	0.5	U	97	%	98	%	0.5	U	0.5	U	97	%
n-Propylbenzene	0.4	U	118	%	117	%	0.4	U	0.4	U	114	%
2-Chlorotoluene	0.4	U	117	%	116	%	0.4	U	0.4	U	114	%
1,3,5-Trimethylbenzene	0.5	U	106	%	105	%	0.5	U	0 5	U	103	%
4-Chlorotoluene	0.5	U	106	%	104	%	0.5	U	0.5	U	103	%
tert-Butylbenzene	2		113	%	115	%	0.5	U	0.5	U	112	%
1,2,4-Trimethylbenzene	0.5	U	110	%	108	%	0.5	U	0.5	U	107	%
sec-Butylbenzene	0.5	U	121	%	122	%	0.5	U	0 5	U	117	%
1,3-Dichlorobenzene	0.5	U	106	%	106	%	0.5	U	0.5	U	103	%
p-Isopropyltoluene	0.5	U	110	%	111	%	0.5	U	0.5	U	110	%
1,4-Dichlorobenzene	0.3	U	110	%	109	%	0.3	U	0.3	U	104	%
n-Butylbenzene	0.5	U	114	%	116	%	0.5	U	0.5	U	114	%
1,2-Dichlorobenzene	0.3	U	107	%	106	%	0.3	U	0.3	U	103	%
1,2-Dibromo-3-chloropropane	0.5	U	90	%	89	%	0.5	U	0.5	U	91	%
1,2,4-Trichlorobenzene	0.4	U	109	%	108	%	0.4	U	0.4	U	108	%
Hexachlorobutadiene	0.5	U	114	%	115	%	0.5	U	0.5	U	125	%
Naphthalene	0.5	U	105	%	105	%	0.5	U	0.5	U	99	%
1,2,3-Trichlorobenzene	0.5	U	102	%	104	%	0.5	U	0.5	U	103	%

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G608 Client: AFC001-33DBA Work Order: 00000-000-000-0 Page: 2c

Cust ID:	WITCTA024WG1 1	WITCTA024WG1 1	WITCTA024WG1 1	GMI-22-07MWG 11	VBLKKW	VBLKKW BS
RFW#:	005	005 MS	005 MSD	006	80GVB126-MB1	80GVB126-MB1
Methyl-tert-butyl ether	0.5 U	88 %	92 %	0.5 U	0 5 U	84 %

*= Outside of EPA CLP QC limits.

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G608 Client: AFC001-33DBA Work Order 00000-000-000-0 Report Date: 05/01/00 20:54 Page: 3a

	Cust ID:	VBLKKS		VBLKKS BS		VBLKKU		VBLKKU BS	
Sample Information	RFW#:	80GVB128-MB1		80GVB128-MB1		80GVB127-MB1		80GVB127-MB1	
	Matrix:	WATER		WATER		WATER		WATER	
	D.F.:	1		1		1		1	
	Units:	UG/L		UG/L		UG/L		UG/L	
Surrogate Recovery	1,2-Dichloroethane-d4	84	%	81	%	80	%	86	%
	Toluene-d8	91	%	92	%	91	%	93	%
	4-Bromofluorobenzene	92	%	92	%	93	%	92	%
	Dibromofluoromethane	87	%	83	%	80	%	86	%
Dichlorodifluoromethane		0.5	U	64	%	0.5	U	68	%
Chloromethane		0.5	U	65	%	0.5	U	78	%
Vinyl chloride		0.5	U	80	%	0.5	U	92	%
Bromomethane		0.5	U	74	%	0.5	U	98	%
Chloroethane		0.5	U	79	%	0.5	U	94	%
Trichlorofluoromethane		0.5	U	73	%	0.5	U	83	%
1,1-Dichloroethene		0.5	U	88	%	0.5	U	113	%
Methylene Chloride		0.5	U	84	%	0.5	U	107	%
trans-1,2-Dichloroethene		0.5	U	89	%	0.5	U	113	%
1,1-Dichloroethane		0.4	U	86	%	0.4	U	109	%
Vinyl acetate		2	U	62 *	%	2	U	77 *	%
cis-1,2-Dichloroethene		0.5	U	87	%	0.5	U	108	%
2,2-Dichloropropane		0.5	U	86	%	0.5	U	109	%
Bromochloromethane		0.4	U	90	%	0.4	U	108	%
Chloroform		0.3	U	83	%	0.3	U	105	%
1,1,1-Trichloroethane		0.5	U	82	%	0.5	U	107	%
1,1-Dichloropropene		0.5	U	93	%	0.5	U	121	%
Carbon Tetrachloride		0.5	U	89	%	0.5	U	116	%
Benzene		0.4	U	90	%	0.4	U	111	%
1,2-Dichloroethane		0.5	U	81	%	0.5	U	103	%
Trichloroethene		0.5	U	91	%	0.5	U	116	%
1,2-Dichloropropane		0.4	U	91	%	0.4	U	112	%
Dibromomethane		0.5	U	88	%	0.5	U	110	%
Bromodichloromethane		0.5	U	89	%	0.5	U	113	%
cis-1,3-Dichloropropene		0.5	U	92	%	0.5	U	115	%

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G608 Client AFC001-33DBA Work Order: 00000-000-000-0 Page: 3b

Cust ID:	VBLKKS		VBLKKS BS		VBLKKU		VBLKKU BS	
RFW#:	80GVB128-MB1		80GVB128-MB1		80GVB127-MB1		80GVB127-MB1	
Toluene	0.5	U	88	%	0.5	U	110	%
trans-1,3-Dichloropropene	0.5	U	84	%	0.5	U	105	%
1,1,2-Trichloroethane	0.5	U	82	%	0.5	U	103	%
1,3-Dichloropropane	0 4	U	91	%	0.4	U	110	%
Tetrachloroethene	0.5	U	97	%	0.5	U	118	%
Dibromochloromethane	0.5	U	95	%	0.5	U	117	%
1,2-Dibromoethane	0.5	U	90	%	0.5	U	111	%
1-Chlorohexane	0.5	U	91	%	0.5	U	107	%
Chlorobenzene	0.4	U	96	%	0.4	U	114	%
1,1,1,2-Tetrachloroethane	0.5	U	92	%	0.5	U	113	%
Ethylbenzene	0.5	U	92	%	0.5	U	112	%
m/p-Xylene	0.5	U	91	%	0.5	U	112	%
o-Xylene	0.5	U	91	%	0.5	U	112	%
Styrene	0.4	U	97	%	0.4	U	117	%
Bromoform	0.5	U	96	%	0 5	U	118	%
Isopropylbenzene	0.5	U	95	%	0.5	U	112	%
1,1,2,2-Tetrachloroethane	0.5	U	95	%	0.5	U	111	%
Bromobenzene	0.3	U	98	%	0.3	U	116	%
1,2,3-Trichloropropane	0.5	U	93	%	0 5	U	107	%
n-Propylbenzene	0.4	U	98	%	0.4	U	117	%
2-Chlorotoluene	0.4	U	102	%	0.4	U	122	%
1,3,5-Trimethylbenzene	0.5	U	90	%	0.5	U	108	%
4-Chlorotoluene	0.5	U	92	%	0.5	U	110	%
tert-Butylbenzene	0.5	U	96	%	0.5	U	115	%
1,2,4-Trimethylbenzene	0.5	U	94	%	0.5	U	112	%
sec-Butylbenzene	0.5	U	98	%	0.5	U	118	%
1,3-Dichlorobenzene	0.5	U	93	%	0.5	U	112	%
p-Isopropyltoluene	0.5	U	93	%	0.5	U	112	%
1,4-Dichlorobenzene	0.3	U	95	%	0.3	U	114	%
n-Butylbenzene	0.5	U	94	%	0.5	U	115	%
1,2-Dichlorobenzene	0.3	U	95	%	0 3	U	113	%
1,2-Dibromo-3-chloropropane	0.5	U	81	%	0.5	U	102	%
1,2,4-Trichlorobenzene	0.4	U	96	%	0 4	U	116	%
Hexachlorobutadiene	0.5	U	94	%	0.5	U	120	%
Naphthalene	0.5	U	92	%	0.5	U	108	%
1,2,3-Trichlorobenzene	0.5	U	92	%	0 5	U	111	%

*= Outside of EPA CLP QC limits.

568 177

RFW Batch Number: 9A04G608 Client: AFC001-33DBA Work Order: 00000-000-000-0 Page: 3c

Cust ID:	VBLKKS	VBLKKS BS	VBLKKU	VBLKKU BS
RFW#:	80GVB128-MB1	80GVB128-MB1	80GVB127-MB1	80GVB127-MB1
Methyl-tert-butyl ether	0.5 U	80 %	0.5 U	95 %

Committed To *Your* Success

received
5-5-00

Severn Trent Laboratories
2417 Bond Street
University Park, IL 60466

Tel: (708) 534-5200
Fax. (708) 534-5211
www.stl-inc.com

May 3, 2000

Mr. Christopher Camp
HydroGeoLogic, Inc
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

RE. AFC001-33DBA
Analytical Report & EDD
Lot 9A04G628

Dear Mr. Camp:

The enclosed summary report is for the project and lot number listed above If you have any questions, please contact me at 708-534-5200.

Sincerely,
Severn Trent Laboratories

Donna Ingersoll
Project Manager

sj

Enclosures· Summary Report & EDD

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By

for Michael J. Healy
General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All 457 pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

568 180

STL Committed To *Your* Success

AFCEE
CLP-Like
EDD
Int COC

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

Report To:
Contact Lynn Morgan
Company HydroGeologic
Address 1155 Herndon PKwy, Suite 400
Herndon, VA 20170
Phone 703-478-5186
Fax 703-471-4180
E Mail lmorgan@hgl.com

Bill To:
Contact Chris Camp
Company
Address (SAME)
Phone
Fax
PO# Quote

Shaded Areas For Internal Use Only 1 of 1

Lab Lot # 9A04628

Package Sealed Yes No — Samples Sealed Yes No
Received on Ice Yes No — Samples Intact Yes No
Temperature °C of Cooler

Sampler Name Jen Wallace / ~~Nicole Hade~~
Signature
Project Name April 2000 Quarterly
Project Number AFC001-33DBA
Project Location NASEW JRB, Texas
Date Required Hard Copy ___/___/___ Fax ___/___/___
Lab PM Donna Ingersol

Within Hold Time Yes No — Preserv indicated Yes No NA
pH Check ok Yes No NA — Res Cl_2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOCs (SW8260B)	Methane, Ethane (RSK-175)	Alkalinity (Method 310.1 Page 2)	TOC (SW9060)	Additional Analyses / Remarks
Refrg #											
#/Cont.							2	2	1	1	
Volume							40ml	40ml	1L	500mL	
Preserv							1	1	6	2	
001		TB040500	4/5/00	730	W	G	2				
		~~SD13-01WG01~~	~~4/5/00~~	~~946~~	~~W~~	~~G~~	~~3~~				
		~~SD13-03WG01~~	~~4/5/00~~	~~1107~~	~~W~~	~~G~~	~~3~~				
002		DUP01	4/5/00	1200	W	G	3				1 vial broken
003		GMI-22-04MW11	4/5/00	0945	W	G	3				
004		WJETA535WG11	4/5/00	1108	W	G	3	3	1	1	
005		HM-123WG11	4/5/00	1540	W	G	3	3	1	1	
006		SD13-04WG11	4/5/00	1250	W	G	3				
007		ST14-03WG01	4/5/00	1401	W	G	3				1 vial broken
008		SD13-01WG01	4/5/00	0946	W	G	3				
009		ST14-W11WG01	4/5/00	1545	W	G	3				1 vial broken
010		SD13-02WG01	4/5/00	1107	W	G	3				

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Nicole Hade	HydroGeologic	4/5/00		Sherri Scott	STL	4-6-00	1140
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellan[illegible]
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl Cool to 4°
2 H2SO4 Cool to 4°
3 HNO3, Cool to 4°
4 NaOH, Cool to 4°
5 NaOH/Zn Acetate Cool
6 Cool to 4°
7 None

COMMENTS
All samples end in WG11. If labeled WG01 please ignore it should be WG-11

Date Received 4.6.00
Courier Fed-X Hand Delivered ☐
Bill of Lading S[illegible] attached

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G628

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TOTAL ORGANIC CARBON	LCS BS	W	80GTC058	N/A	N/A	04/07/00	04/07/00
TOTAL ORGANIC CARBON	MB1	W	80GTC058	N/A	N/A	04/07/00	04/07/00

NY CERTIFICATION # 11006

Severn Trent Laboratories Chicago
Internal Sample Custody Transfer Record

Sample Lot#: 9A04G628 Client: AFC001 - 33DBA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
4,5	TC	Sherri Scott	[illegible]	4/6/00 ~~15:40~~	1540	
4,5	TC	[illegible]	Sherri Scott	4/7/00	9:50	
4,5	TOC	Sherri Scott	[illegible]	4/7/00	9:50	
4,5	TOC	[illegible]	[illegible]	4/10/00	14:25	
4,5	AKL	J. Ritchie	J. Ritchie	4-11-00	0910	
4,5	AKL	J. Ritchie	[illegible]	4/13-00	1340	

CHI-22-11-001/C-1/99

5

568 182

Severn Trent Laboratories Chicago
Internal Sample Custody Transfer Record

Sample Lot#: 9A0466 28 Client: AFC001-33DBA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
4-5	Anions	Sherri Scott	Paul Matter	4-6-00	1145	
1-10	8260	Sherri Scott	Kimberly Vann	4-6-00	1150	
4-5	ALKL	[illegible]	[illegible]	04-12-00	0920	
~~2-6, 8-10~~	Metals		[illegible]	~~04/10/00~~	~~850~~	
AR 1/18/00						

CHI-22-11-001/C-1/99

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

RE: WJETA535WG11
Project # 60025-001-001-0001
Lab ID: 9A04G628-004
Sample Date: 04/05/00
Date Received. 04/06/00

Inorganic Data Report

Parameters	Result		Units	Reporting Limit
Alkalinity	349		mg/L	5.0
Chloride by IC	17.1		mg/L	4 0
Nitrate-N by IC	2.3		mg/L	0.10
Sulfate by IC	46.4		mg/L	4 0
Total Organic Carbon	1 0	u	mg/L	1 0
TOC Test 2	1.0	u	mg/L	1.0

To. AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn· Mr. Ken Rapuano

Date: Thursday April 20th, 2000

RE: HM-123WG11
Project # 60025-001-001-0001
Lab ID: 9A04G628-005
Sample Date. 04/05/00
Date Received. 04/06/00

Inorganic Data Report

Parameters	Result		Units	Reporting Limit
Alkalinity	334		mg/L	5.0
Chloride by IC	18.7		mg/L	4.0
Nitrate-N by IC	2 8		mg/L	0 10
Sulfate by IC	59.8		mg/L	4.0
Total Organic Carbon	1.0	u	mg/L	1.0
TOC Test 2	1 0	u	mg/L	1.0

To. AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn· Mr. Ken Rapuano

Date: Thursday April 20th, 2000

Project # 60025-001-001-0001
Lab Batch: 9A04G628

Inorganic Method Blank Data Report

Sample	Lab ID	Parameter	Result		Units	Reporting Limit
Blank 1	80GAK032-MB1	Alkalinity	5.0	u	mg/L	5.0
Blank 1	80GD4027-MB1	Bromide BY IC	0.10	u	mg/L	0.10
		Chloride by IC	0.20	u	mg/L	0.20
		Fluoride by IC	0 10	u	mg/L	0.10
		Nitrite-N by IC	0.10	u	mg/L	0.1C
		Nitrate-N by IC	0.10	u	mg/L	0.10
		Phosphate by IC	0.10	u	mg/L	0.10
		Sulfate by IC	0.20	u	mg/L	0 20
Blank 1	80GTC058-MB1	Total Organic Carbon	1 0	u	mg/L	1.0

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn Mr. Ken Rapuano

Date: Thursday April 20th, 2000

Project # 60025-001-001-0001
Lab Batch: 9A04G628

Inorganic Laboratory Control Standards Report

Lab ID	Parameter	Spiked Amount	Units	Spike #1 % Recov.	Spike #2 % Recov.	RPD
80GAK032-LCS	Alkalinity	100	mg/L	106	NA	NA
80GD4027-LCS	Bromide BY IC	2 0	mg/L	104	NA	NA
	Chloride by IC	3 0	mg/L	92.8	NA	NA
	Fluoride by IC	1 0	mg/L	93.6	NA	NA
	Nitrite-N by IC	2.0	mg/L	94.5	NA	NA
	Nitrate-N by IC	2 0	mg/L	104	NA	NA
	Phosphate by IC	2.0	mg/L	104	NA	NA
	Sulfate by IC	5 0	mg/L	102	NA	NA
80GTC058-LCS	TOC	5 0	mg/L	96.3	NA	NA

Severn Trent Laboratories Chicago
8260 ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G628

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB040500	001	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
DUP01	002	W	80GVB127	04/05/00	04/06/00	N/A	04/18/00
DUP01	002 D1	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
GMI-22-04MW11	003	W	80GVB127	04/05/00	04/06/00	N/A	04/18/00
GMI-22-04MW11	003 D1	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
WJETA535WG11	004	W	80GVB128	04/05/00	04/06/00	N/A	04/19/00
WJETA535WG11	004 MS	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
WJETA535WG11	004 MSD	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
HM-123WG11	005	W	80GVB128	04/05/00	04/06/00	N/A	04/19/00
HM-123WG11	005 D1	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
SD13-04WG11	006	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
SD13-04WG11	006 D1	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
ST14-03WG11	007	W	80GVB128	04/05/00	04/06/00	N/A	04/19/00
ST14-03WG11	007 R1	W	80GVB129	04/05/00	04/06/00	N/A	04/19/00
SD13-01WG11	008	W	80GVB128	04/05/00	04/06/00	N/A	04/19/00
ST14-W11WG11	009	W	80GVB128	04/05/00	04/06/00	N/A	04/19/00
SD13-02WG11	010	W	80GVB128	04/05/00	04/06/00	N/A	04/19/00
VBLKLC	MB1	W	80GVB129	N/A	N/A	N/A	04/19/00
VBLKLC	MB1 BS	W	80GVB129	N/A	N/A	N/A	04/19/00
VBLKKU	MB1	W	80GVB127	N/A	N/A	N/A	04/18/00
VBLKKU	MB1 BS	W	80GVB127	N/A	N/A	N/A	04/18/00
VBLKKS	MB1	W	80GVB128	N/A	N/A	N/A	04/18/00
VBLKKS	MB1 BS	W	80GVB128	N/A	N/A	N/A	04/19/00

Severn Trent Laboratories Chicago
Wet Chemistry Case Narrative

Client: **HydroGeoLogic NAS Ft. Worth AFC001-33DBA**
RFW Lot: **9A04G628** Date Rec'd. 04/06/00

1. This narrative covers the analysis of the samples in the above RFW Lot by the following methods.

   Alkalinity – EPA Method 310 1
   Anions by Ion Chromatography – SW 846 Method 9056
   - Chloride
   - Nitrate as N
   - Sulfate as SO_4

   TOC – SW 846 Method 9060
   - All TOC analysis was done by duplicate injection.

2. The EPA holding times were met Refer to the Laboratory Chronicle Page for dates of sampling, receipt, and analysis.

3. The initial and continuing calibration verification standards and blanks were in control.

4. The method blanks were below the detection limits

5. All LCS recoveries were within control limits. Please see the LCS Summary Pages of this report for additional details.

6. Matrix QC was not requested or done on these samples.

Diane L. Harper
Wet Chemistry Section Manager

4-20-00
Date

STL Chicago
METHOD 8260 VOLATILES

Report Date. 05/01/00 20.52
Page: 1a

RFW Batch Number: 9A04G628 Client AFC001-33DBA Work Order: 60025-001-001-0

Sample Information																													
Cust ID:	TB040500			DUP01			DUP01			GMI-22-04MW1			GMI-22-04MW1			WJETA535WG11		
RFW#:	001			002			002 DL			003			003 DL			004		
Matrix:	WATER			WATER			WATER			WATER			WATER			WATER		
D.F.:	1			1			50			1			25			1		
Units:	UG/L			UG/L			UG/L			UG/L			UG/L			UG/L		
Surrogate Recovery																		
1,2-Dichloroethane-d4	72	%		75	%		86	%		74	%		79	%		80	%	
Toluene-d8	99	%		93	%		97	%		84	%		93	%		93	%	
4-Bromofluorobenzene	94	%		93	%		98	%		86	%		94	%		92	%	
Dibromofluoromethane	76	%		80	%		89	%		75	%		89	%		85	%	
Dichlorodifluoromethane	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Chloromethane	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Vinyl chloride	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Bromomethane	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Chloroethane	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Trichlorofluoromethane	0.5	U		0.8			NA			0.6			NA			0.5	U	
1,1-Dichloroethene	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Methylene Chloride	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
trans-1,2-Dichloroethene	0.5	U		5			NA			5			NA			0.4	U	
1,1-Dichloroethane	0.4	U		0.4	U		NA			0.4	U		NA			2	U	
Vinyl acetate	2	U		2	U		NA			2	U		NA			0.5	U	
cis-1,2-Dichloroethene	0.5	U			E		75				E		84			0.5	U	
2,2-Dichloropropane	0.5	U		0.5	U		NA			0.5	U		NA			0.4	U	
Bromochloromethane	0.4	U		0.4	U		NA			0.4	U		NA			0.3	U	
Chloroform	0.3	U		0.4			NA			0.4			NA			0.5	U	
1,1,1-Trichloroethane	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
1,1-Dichloropropene	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Carbon Tetrachloride	0.5	U		0.5	U		NA			0.5	U		NA			0.4	U	
Benzene	0.4	U		0.4	U		NA			0.4	U		NA			0.5	U	
1,2-Dichloroethane	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Trichloroethene	0.5	U			E		470				E		500			0.4	U	
1,2-Dichloropropane	0.4	U		0.4	U		NA			0.4	U		NA			0.5	U	
Dibromomethane	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
Bromodichloromethane	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	
cis-1,3-Dichloropropene	0.5	U		0.5	U		NA			0.5	U		NA			0.5	U	

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order. 60025-001-001-0 Page: 1b

Cust ID.	TB040500	DUP01	DUP01	GMI-22-04MW1 1	GMI-22-04MW1 1	WJETA535WG11
RFW#:	001	002	002 DL	003	003 DL	004
Toluene	0.5 U	0.5 U	NA	0 5 U	NA	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
1,1,2-Trichloroethane	0.5 U	0 5 U	NA	0.5 U	NA	0 5 U
1,3-Dichloropropane	0.4 U	0.4 U	NA	0.4 U	NA	0.4 U
Tetrachloroethene	0 5 U	1	NA	1	NA	0.5 U
Dibromochloromethane	0.5 U	0.5 U	NA	0 5 U	NA	0.5 U
1,2-Dibromoethane	0 5 U	0.5 U	NA	0.5 U	NA	0 5 U
1-Chlorohexane	0.5 U	0.5 U	NA	0.5 U	NA	0 5 U
Chlorobenzene	0.4 U	0.4 U	NA	0 4 U	NA	0 4 U
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
Ethylbenzene	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
m/p-Xylene	0.5 U	0.5 U	NA	0.5 U	NA	0 5 U
o-Xylene	0.5 U	0.5 U	NA	0 5 U	NA	0.5 U
Styrene	0.4 U	0.4 U	NA	0.4 U	NA	0.4 U
Bromoform	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
Isopropylbenzene	0.5 U	0 5 U	NA	0.5 U	NA	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
Bromobenzene	0.3 U	0 3 U	NA	0.3 U	NA	0.3 U
1,2,3-Trichloropropane	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
n-Propylbenzene	0.4 U	0.4 U	NA	0.4 U	NA	0.4 U
2-Chlorotoluene	0.4 U	0.4 U	NA	0.4 U	NA	0.4 U
1,3,5-Trimethylbenzene	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
4-Chlorotoluene	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
tert-Butylbenzene	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
1,2,4-Trimethylbenzene	0.5 U	0.5 U	NA	0 5 U	NA	0.5 U
sec-Butylbenzene	0.5 U	0.5 U	NA	0 5 U	NA	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U
p-Isopropyltoluene	0.5 U	0.5 U	NA	0 5 U	NA	0 5 U
1,4-Dichlorobenzene	0 3 U	0.3 U	NA	0.3 U	NA	0.3 U
n-Butylbenzene	0.5 U	0.5 U	NA	0.5 U	NA	0 5 U
1,2-Dichlorobenzene	0.3 U	0.3 U	NA	0 3 U	NA	0 3 U
1,2-Dibromo-3-chloropropane	0 5 U	0.5 U	NA	0.5 U	NA	0 5 U
1,2,4-Trichlorobenzene	0.4 U	0.4 U	NA	0.4 U	NA	0.4 U
Hexachlorobutadiene	0.5 U	0.5 U	NA	0.5 U	NA	0 5 U
Naphthalene	0.5 U	0.5 U	NA	0 5 U	NA	0 5 U
1,2,3-Trichlorobenzene	0 5 U	0.5 U	NA	0.5 U	NA	0.5 U

*= Outside of EPA CLP QC limits

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order 60025-001-001-0

Cust ID.	TB040500	DUP01	DUP01	GMI-22-04MW1 1	GMI-22-04MW1 1	WJETA535WG11
RFW#:	001	002	002 DL	003	003 DL	004
Methyl-tert-butyl ether	0.5 U	0.5 U	NA	0.5 U	NA	0.5 U

*= Outside of EPA CLP QC limits.

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order: 60025-001-001.0 Report Date: 05/01/00 20:52 Page: 2a

	Cust ID.	WJETA535WG11	WJETA535WG11	HM-123WG11	HM-123WG11	SD13-04WG11	SD13-04WG11
Sample Information	RFW#:	004 MS	004 MSD	005	005 DL	006	006 DL
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1	1	1	100	1	5
	Units:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Surrogate Recovery	1,2-Dichloroethane-d4	79 %	86 %	90 %	86 %	91 %	75 %
	Toluene-d8	93 %	100 %	99 %	101 %	106 %	92 %
	4-Bromofluorobenzene	91 %	99 %	102 %	102 %	87 %	89 %
	Dibromofluoromethane	84 %	91 %	96 %	90 %	82 %	82 %
		fl	fl	fl	fl	fl	fl
Dichlorodifluoromethane		75 %	68 %	0.5 U	NA	0.5 U	NA
Chloromethane		80 %	74 %	0.5 U	NA	0.5 U	NA
Vinyl chloride		98 %	90 %	3	NA	0.5 U	NA
Bromomethane		102 %	93 %	0.5 U	NA	0.5 U	NA
Chloroethane		98 %	90 %	0.5 U	NA	0.5 U	NA
Trichlorofluoromethane		91 %	83 %	0.5 U	NA	0.5 U	NA
1,1-Dichloroethene		65 * %	64 * %	3	NA	0.5 U	NA
Methylene Chloride		74 * %	75 %	0.5 U	NA	0.5 U	NA
trans-1,2-Dichloroethene		80 %	80 %	14	NA	0.5 U	NA
1,1-Dichloroethane		80 %	81 %	0.9	NA	0.4 U	NA
Vinyl acetate		50 * %	50 * %	2 U	NA	2 U	NA
cis-1,2-Dichloroethene		86 %	86 %	E	540	0.5 U	NA
2,2-Dichloropropane		82 %	82 %	0.5 U	NA	0.5 U	NA
Bromochloromethane		110 %	113 %	0.4 U	NA	0.4 U	NA
Chloroform		84 %	84 %	0.6	NA	0.3 U	NA
1,1,1-Trichloroethane		82 %	83 %	0.5 U	NA	0.5 U	NA
1,1-Dichloropropene		94 %	94 %	0.5 U	NA	0.5 U	NA
Carbon Tetrachloride		88 %	88 %	0.5 U	NA	0.5 U	NA
Benzene		88 %	87 %	0.4 U	NA	0.4 U	NA
1,2-Dichloroethane		76 %	77 %	0.5 U	NA	0.5 U	NA
Trichloroethene		95 %	94 %	E	3100	0.5 U	NA
1,2-Dichloropropane		92 %	93 %	0.4 U	NA	0.4 U	NA
Dibromomethane		86 %	88 %	0.5 U	NA	0.5 U	NA
Bromodichloromethane		90 %	91 %	0.5 U	NA	0.5 U	NA
cis-1,3-Dichloropropene		92 %	93 %	0.5 U	NA	0.5 U	NA

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order: 60025-001-001-0 Page: 2b

Cust ID:	WJETA535WG11	WJETA535WG11	HM-123WG11	HM-123WG11	SD13-04WG11	SD13-04WG11
RFW#:	004 MS	004 MSD	005	005 DL	006	006 DL
Toluene	94 %	95 %	0.5 U	NA	0.5 U	NA
trans-1,3-Dichloropropene	85 %	85 %	0.5 U	NA	0.5 U	NA
1,1,2-Trichloroethane	88 %	90 %	0.5 U	NA	0.5 U	NA
1,3-Dichloropropane	94 %	96 %	0.4 U	NA	0.4 U	NA
Tetrachloroethene	108 %	109 %	0.7	NA	0.5 U	NA
Dibromochloromethane	100 %	100 %	0.5 U	NA	0.5 U	NA
1,2-Dibromoethane	93 %	94 %	0.5 U	NA	0.5 U	NA
1-Chlorohexane	124 %	126 * %	0.5 U	NA	0.5 U	NA
Chlorobenzene	104 %	105 %	0.4 U	NA	0.8	NA
1,1,1,2-Tetrachloroethane	98 %	100 %	0.5 U	NA	0.5 U	NA
Ethylbenzene	103 %	104 %	0.5 U	NA	0.5 U	NA
m/p-Xylene	101 %	101 %	0.5 U	NA	0.5 U	NA
o-Xylene	99 %	101 %	0.5 U	NA	0.5 U	NA
Styrene	99 %	93 %	0.4 U	NA	0.4 U	NA
Bromoform	100 %	101 %	0.5 U	NA	0.5 U	NA
Isopropylbenzene	109 %	108 %	0.5 U	NA	E	42
1,1,2,2-Tetrachloroethane	103 %	103 %	0.5 U	NA	0.5 U	NA
Bromobenzene	108 %	108 %	0.3 U	NA	0.3 U	NA
1,2,3-Trichloropropane	100 %	99 %	0.5 U	NA	0.5 U	NA
n-Propylbenzene	116 %	115 %	0.4 U	NA	35	NA
2-Chlorotoluene	111 %	110 %	0.4 U	NA	0.4 U	NA
1,3,5-Trimethylbenzene	105 %	103 %	0.5 U	NA	0.5 U	NA
4-Chlorotoluene	105 %	104 %	0.5 U	NA	0.5 U	NA
tert-Butylbenzene	112 %	110 %	0.5 U	NA	6	NA
1,2,4-Trimethylbenzene	106 %	105 %	0.5 U	NA	0.5 U	NA
sec-Butylbenzene	116 %	116 %	0.5 U	NA	8	NA
1,3-Dichlorobenzene	104 %	103 %	0.5 U	NA	0.5 U	NA
p-Isopropyltoluene	110 %	109 %	0.5 U	NA	0.5 U	NA
1,4-Dichlorobenzene	106 %	106 %	0.3 U	NA	0.3 U	NA
n-Butylbenzene	111 %	111 %	0.5 U	NA	3	NA
1,2-Dichlorobenzene	101 %	102 %	0.3 U	NA	0.3 U	NA
1,2-Dibromo-3-chloropropane	91 %	91 %	0.5 U	NA	0.5 U	NA
1,2,4-Trichlorobenzene	106 %	106 %	0.4 U	NA	0.4 U	NA
Hexachlorobutadiene	113 %	114 %	0.5 U	NA	0.5 U	NA
Naphthalene	98 %	98 %	0.5 U	NA	0.5 U	NA
1,2,3-Trichlorobenzene	100 %	102 %	0.5 U	NA	0.5 U	NA

*= Outside of EPA CLP QC limits

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order: 60025-001-001-0 Page: 2c

Cust ID:	WJETA535WG11	WJETA535WG11	HM-123WG11	HM-123WG11	SD13-04WG11	SD13-04WG11
RFW#:	004 MS	004 MSD	005	005 DL	006	006 DL
Methyl-tert-butyl ether	91 %	92 %	0.5 U	NA	0.5 U	NA

*= Outside of EPA CLP QC limits.

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order: 60025-001-001-0 Report Date: 05/01/00 20:52 Page: 3a

Sample Information	Cust ID:	ST14-03WG11	ST14-03WG11	SD13-01WG11	ST14-W11WG11	SD13-02WG11	VBLKLC
	RFW#:	007	007	008	009	010	80GVB129-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1	1	1	1	1	1
	Units:	UG/L	UG/L REPREP	UG/L	UG/L	UG/L	UG/L
Surrogate Recovery	1,2-Dichloroethane-d4	82 %	67 %	85 %	73 %	78 %	86 %
	Toluene-d8	92 %	78 %	101 %	87 %	95 %	100 %
	4-Bromofluorobenzene	95 %	80 %	87 %	89 %	94 %	101 %
	Dibromofluoromethane	85 %	72 * %	84 %	79 %	84 %	91 %
Dichlorodifluoromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Vinyl acetate		2 U	2 U	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Chloroform		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dibromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order: 60025-001-001-0 Page: 3b

Cust ID:	ST14-03WG11	ST14-03WG11	SD13-01WG11	ST14-W11WG11	SD13-02WG11	VBLKLC
RFW#:	007	007 REPREP	00B	009	010	B0GVB129-MB1
Toluene	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1-Chlorohexane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.4 U	0.4 U	2	0.4 U	0.4 U	0.4 U
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	0.5 U	0.5 U	16	0.5 U	9	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene	0.4 U	0.4 U	13	0.4 U	4	0.4 U
2-Chlorotoluene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,3,5-Trimethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	3	4	9	0.5 U	5	0.5 U
1,2,4-Trimethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	0.5 U	0.5 U	10	0.5 U	2	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Isopropyltoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
n-Butylbenzene	0.5 U	0.5 U	3	0.5 U	0.6	0.5 U
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Hexachlorobutadiene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order: 60025-001-001-0 Page: 3c

Cust ID:	ST14-03WG11	ST14-03WG11	SD13-01WG11	ST14-W11WG11	SD13-02WG11	VBLKLC
RFW#:	007	007 REPREP	008	009	010	80GVB129-MB1
Methyl-tert-butyl ether	0.5 U	0.5 U	0.5 U	0 5 U	1	0.5 U

*= Outside of EPA CLP QC limits.

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G628 Client: AFC001-33DBA Work Order: 60025-001-001-0 Report Date: 05/01/00 20.52 Page: 4a

Sample Information	Cust ID:	VBLKLC BS	VBLKKU	VBLKKU BS	VBLKKS	VBLKKS BS
	RFW#	80GVB129-MB1	80GVB127-MB1	80GVB127-MB1	80GVB128-MB1	80GVB128-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER
	D F.:	1	1	1	1	1
	Units:	UG/L	UG/L	UG/L	UG/L	UG/L
Surrogate Recovery	1,2-Dichloroethane-d4	88 %	80 %	86 %	84 %	81 %
	Toluene-d8	100 %	91 %	93 %	91 %	92 %
	4-Bromofluorobenzene	99 %	93 %	92 %	92 %	92 %
	Dibromofluoromethane	92 %	80 %	86 %	87 %	83 %
Dichlorodifluoromethane		75 %	0.5 U	68 %	0 5 U	64 %
Chloromethane		80 %	0 5 U	78 %	0.5 U	65 %
Vinyl chloride		96 %	0.5 U	92 %	0.5 U	80 %
Bromomethane		101 %	0 5 U	98 %	0.5 U	74 %
Chloroethane		99 %	0.5 U	94 %	0.5 U	79 %
Trichlorofluoromethane		90 %	0.5 U	83 %	0.5 U	73 %
1,1-Dichloroethene		75 %	0.5 U	113 %	0.5 U	88 %
Methylene Chloride		86 %	0 5 U	107 %	0.5 U	84 %
trans-1,2-Dichloroethene		91 %	0.5 U	113 %	0.5 U	89 %
1,1-Dichloroethane		92 %	0 4 U	109 %	0 4 U	86 %
Vinyl acetate		66 * %	2 U	77 * %	2 U	62 * %
cis-1,2-Dichloroethene		97 %	0 5 U	108 %	0.5 U	87 %
2,2-Dichloropropane		97 %	0.5 U	109 %	0.5 U	86 %
Bromochloromethane		111 %	0.4 U	108 %	0.4 U	90 %
Chloroform		96 %	0.3 U	105 %	0.3 U	83 %
1,1,1-Trichloroethane		95 %	0.5 U	107 %	0.5 U	82 %
1,1-Dichloropropene		107 %	0.5 U	121 %	0.5 U	93 %
Carbon Tetrachloride		102 %	0.5 U	116 %	0.5 U	89 %
Benzene		99 %	0 4 U	111 %	0.4 U	90 %
1,2-Dichloroethane		92 %	0 5 U	103 %	0.5 U	81 %
Trichloroethene		106 %	0.5 U	116 %	0.5 U	91 %
1,2-Dichloropropane		105 %	0.4 U	112 %	0.4 U	91 %
Dibromomethane		102 %	0 5 U	110 %	0.5 U	88 %
Bromodichloromethane		107 %	0.5 U	113 %	0 5 U	89 %
cis-1,3-Dichloropropene		109 %	0.5 U	115 %	0.5 U	92 %

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G628 Client. AFC001-33DBA Work Order: 60025-001-001-0 Page: 4b

Cust ID:	VBLKLC BS		VBLKKU		VBLKKU BS		VBLKKS		VBLKKS BS	
RFW#:	80GVB129-MB1		80GVB127-MB1		80GVB127-MB1		80GVB128-MB1		80GVB128-MB1	
Toluene	105	%	0.5	U	110	%	0 5	U	88	%
trans-1,3-Dichloropropene	100	%	0.5	U	105	%	0.5	U	84	%
1,1,2-Trichloroethane	102	%	0.5	U	103	%	0.5	U	82	%
1,3-Dichloropropane	109	%	0.4	U	110	%	0.4	U	91	%
Tetrachloroethene	116	%	0.5	U	118	%	0.5	U	97	%
Dibromochloromethane	116	%	0.5	U	117	%	0.5	U	95	%
1,2-Dibromoethane	109	%	0.5	U	111	%	0.5	U	90	%
1-Chlorohexane	119	%	0.5	U	107	%	0.5	U	91	%
Chlorobenzene	114	%	0.4	U	114	%	0.4	U	96	%
1,1,1,2-Tetrachloroethane	111	%	0 5	U	113	%	0.5	U	92	%
Ethylbenzene	111	%	0.5	U	112	%	0.5	U	92	%
m/p-Xylene	110	%	0.5	U	112	%	0.5	U	91	%
o-Xylene	108	%	0 5	U	112	%	0.5	U	91	%
Styrene	117	%	0.4	U	117	%	0.4	U	97	%
Bromoform	118	%	0.5	U	118	%	0.5	U	96	%
Isopropylbenzene	112	%	0.5	U	112	%	0.5	U	95	%
1,1,2,2-Tetrachloroethane	115	%	0.5	U	111	%	0.5	U	95	%
Bromobenzene	116	%	0.3	U	116	%	0.3	U	98	%
1,2,3-Trichloropropane	108	%	0.5	U	107	%	0.5	U	93	%
n-Propylbenzene	119	%	0.4	U	117	%	0.4	U	98	%
2-Chlorotoluene	115	%	0 4	U	122	%	0.4	U	102	%
1,3,5-Trimethylbenzene	108	%	0.5	U	108	%	0.5	U	90	%
4-Chlorotoluene	110	%	0.5	U	110	%	0.5	U	92	%
tert-Butylbenzene	118	%	0.5	U	115	%	0.5	U	96	%
1,2,4-Trimethylbenzene	114	%	0.5	U	112	%	0.5	U	94	%
sec-Butylbenzene	121	%	0.5	U	118	%	0.5	U	98	%
1,3-Dichlorobenzene	113	%	0.5	U	112	%	0.5	U	93	%
p-Isopropyltoluene	117	%	0.5	U	112	%	0.5	U	93	%
1,4-Dichlorobenzene	116	%	0.3	U	114	%	0.3	U	95	%
n-Butylbenzene	119	%	0.5	U	115	%	0 5	U	94	%
1,2-Dichlorobenzene	112	%	0.3	U	113	%	0.3	U	95	%
1,2-Dibromo-3-chloropropane	106	%	0 5	U	102	%	0 5	U	81	%
1,2,4-Trichlorobenzene	120	%	0 4	U	116	%	0.4	U	96	%
Hexachlorobutadiene	125	%	0 5	U	120	%	0.5	U	94	%
Naphthalene	112	%	0.5	U	108	%	0.5	U	92	%
1,2,3-Trichlorobenzene	113	%	0.5	U	111	%	0.5	U	92	%

*= Outside of EPA CLP QC limits.

Cust ID:	VBLKLC BS	VBLKKU	VBLKKU BS	VBLKKS	VBLKKS BS
RFW#:	80GVB129-MB1	80GVB127-MB1	80GVB127-MB1	80GVB128-MB1	80GVB128-MB1
Methyl-tert-butyl ether	96 %	0.5 U	95 %	0.5 U	80 %

568 201

Severn Trent Laboratories Chicago
GC/MS Case Narrative

AFC001 – 33DBA
STL# 9A04G628
VOA DATA:

1. All volatile sample analyses were performed within the recommended hold times.

2. All Method Blank target compounds were below reporting limits

3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. All of the required spike recoveries were within the QAPP specified QC limits in the LCS samples.

4. Matrix Spike/Matrix Spike Duplicate analyses was performed on samples 9A04G628-004. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recoveries were below the QC limits for 1,1-Dichloroethene in both of the samples 9A04G628-004 MS/MSD, for Methylene chloride in the sample 9A04G628-004 MS and above the QC limits for 1-Chlorohexane in the sample 9A04G628-004 MSD. Since the LCS samples exhibited acceptable spike recoveries, further corrective action was not required. All of the other required spike recoveries and RPD values were within the QAPP specified QC limits in the samples 9a04G628-004 MS/MSD

5. The reanalyzed sample 9A04G628-007 RE had one surrogate recovery below the QC limits. The original sample 9A04G628-007 had all surrogate recoveries within the QC limits. Due to suspected carry-over in the original sample, both the original and reanalyzed results were reported on the sample 9A04G628-007. All other volatile samples had surrogate recoveries within the QAPP specified QC limits.

6 The water sample was prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds) The low point in the initial calibration verifies the base reporting limits. The second source initial calibration verification was included and all target compounds met the +/- 25% expected value acceptance criteria except the compounds Dichlorodifluoromethane, Chloromethane, Acetone and Vinyl acetate, n-Propylbenzene, sec-Butylbenzene and n-Butylbenzene were outside of the acceptance criteria. The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference acceptance criteria or 20% Drift acceptance criteria for first or higher regression curves. All of the other compounds met the +/- 25% expected value acceptance criteria or +/- 50% for the exception compounds specified in the QAPP.

7. All internal standard areas and retention times were within acceptance limits as compared to the corresponding continuing calibration standard.

8 The water samples were initially analyzed without dilution using a 25 mL purge volume. Secondary dilutions for target compounds were performed on the samples 9A04G628-002 (1/50), 003 (1/25), 005 (1/100) and 006 (1/5). The results and reporting limits were adjusted to account for the dilutions performed.

Gregory L. Goodwin
GC/MS Section Manager

5/2/00
Date

Committed To *Your* Success

received

Severn Trent Laboratories
2417 Bond Street
University Park, IL 60466

Tel (708) 534-5200
Fax (708) 534-5211
www stl-inc com

May 5, 2000

Mr. Christopher Camp
HydroGeoLogic, Inc.
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

RE. AFC001-33DBA
Analytical Report & EDD
Lot 9A04G732

Dear Mr. Camp:

The enclosed summary report is for the project and lot number listed above. If you have any questions, please contact me at 708-534-5200.

Sincerely,
Severn Trent Laboratories

Donna Ingersoll
Project Manager

pmb

Enclosures: Summary Report & EDD

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By.

Michael J Healy
General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All 338 pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Severn Trent Laboratories Chicago
GC/MS Case Narrative

AFC001 – 33DBA
STL# 9A04G732
VOA DATA:

1. All volatile sample analyses were performed within the recommended hold times.

2. All Method Blank target compounds were below reporting limits.

3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. All of the required spike recoveries were within the QAPP specified QC limits in the LCS samples.

4. Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set

5. All volatile samples had surrogate recoveries within the QAPP specified QC limits.

6 The water sample was prepared using Method 5030B All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference acceptance criteria or 20% Drift acceptance criteria for first or higher regression curves All of the other compounds met the +/- 25% expected value acceptance criteria or +/- 50% for the exception compounds specified in the QAPP In the CCV YA424 the compound Methyl-tert-butyl ether exceeded the +/-25% or 50% expected value acceptance criteria

7. All internal standard areas and retention times were within acceptance limits as compared to the corresponding continuing calibration standard.

8. The water samples were initially analyzed without dilution using a 25 mL purge volume. A secondary dilution for target compounds was performed on the sample 9A04G732-004 (1/10). The results and reporting limits were adjusted to account for the dilution performed.

Gregory L. Goodwin
GC/MS Section Manager

5/4/00
Date

Committed To *Your* Success

received

Severn Trent Laboratories
2417 Bond Street
University Park, IL 60466

Tel (708) 534-5200
Fax (708) 534-5211
www stl-inc com

May 5, 2000

Mr. Christopher Camp
HydroGeoLogic, Inc.
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

RE AFC001-33DBA
Analytical Report & EDD
Lot 9A04G732

Dear Mr. Camp·

The enclosed summary report is for the project and lot number listed above If you have any questions, please contact me at 708-534-5200.

Sincerely,
Severn Trent Laboratories

Donna Ingersoll
Project Manager

pmb

Enclosures Summary Report & EDD

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By:

Michael J. Healy
General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All 338 pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G732

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
EB041100							
ARSENIC, TOTAL	002	W	9AGI0362	04/11/00	04/12/00	04/17/00	04/20/00
MERCURY, TOTAL	002	W	9AHG071	04/11/00	04/12/00	04/13/00	04/13/00

NY CERTIFICATION # 11006

568 208

193000

STL Committed To Your Success

AFCEE Custom

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

Int Use

Report To: Chris Camp
Contact ~~Lynn Morgan~~ (PM)
Company HydroGeologic
Address 1155 Herndon Pkwy Suite 700
Herndon, VA 20170
Phone 703-478-5186
Fax 703-471-4186
E-Mail lmorgan@hgl.com

Bill To:
Contact Chris Camp
Company
Address (same)
Phone
Fax
PO# Quote

Shaded Areas For Internal Use Only 1 of 1

Lab Lot # 9A4B732

Package Sealed (Yes) No	Samples Sealed Yes (No)
Received on Ice (Yes) No	Samples Intact (Yes) No
Temperature °C of Cooler (1.5, 2.1, 1.0)	
Within Hold Time (Yes) No	Preserv. Indicated (Yes) No NA
pH Check ok (Yes) No NA	Res. Cl_2 Check ok Yes No (NA)
Sample Labels and COC Agree (Yes) No COC not present	

Sampler Name: JENNIFER WALLACE
Signature: J Wallace
Project Name: Quarterly Sampling - April
Project Number: AFC-001-33DBA
Project Location: NASFW JRB, Texas
Date Required Hard Copy: 5/9/00
Fax: / /
Lab PM: Donna Ingersol

Refrig #	5	3
# Cont.	2	1
Volume	40ml	1L
Preserv	1	3

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOCs (8260B)	Arsenic / Hg (6010B/7470A)	EB	Additional Analyses / Remarks
001		TB041100	4.11.00	0700	W	G	2			
002		EB041100	4.11.00	1630	W	G	3	1		
003		ST14-27WG11	4.11.00	1230	W	G	3			
004		WCHMHTA008WG11	4.11.00	1005	W	G	3			

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	HydroGeologic	4.11.00	1700	[signature]	STL	4-12-00	1410
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl, Cool to 4°
2 H2SO4, Cool to 4°
3 HNO3, Cool to 4°
4 NaOH, Cool to 4°
5 NaOH/Zn Acetate, Cool to 4°
6 Cool to 4°
7 None

COMMENTS
EB/TB associated w/ AFC001-16BBD & AFC001-33CBD, also.

Date Received 4/12/00
Courier FX
Hand Delivered ☐
Bill of Lading Self-Hauled

Severn Trent Laboratories Chicago
Internal Sample Custody Transfer Record

Sample Lot#: 9A04G732 Client: AFCC01 33DBA

4

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-4	8260	[illegible]	[illegible]	4/12/00	1500	
2	Hg	[illegible]	[illegible]	4/13/00	08:05	
2	Hg	[illegible]	[illegible]	4/13/00	09:15	
2	metals	Sherrie Scott	Mat Reiger	4/17/00	830	
2	Mtal	[illegible]	Sherrie Scott	4/17/00	1045	

568 209

CHI-22-11-001/C-1/99

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client· AFC001-33DBA
STL# 9A04G732
SDG#: U04732

WO#: 60025-001-001-0001
Date Rec'd. 04/12/00

1 This narrative covers the analysis of 1 Water sample for following metal·

ICP .. As

Method Ref NAS Fort Worth JRB, Texas QAPP

2. All analyses were performed within the required holding times

3 All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limit.

4 All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.

5. All ICP Interference Check Samples (ICSA and ICSAB) were within control limits

6 Laboratory Control Sample (LCS) recovery was within the 80-120% control limits.

7 Method blank was less than the CRDL

8. Sample was not designated for Serial dilution and/or MS/MSD analysis

9 Please note. The last 6 digits of the client sample ID's were used in all CLP Forms to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP forms Please refer to the Cover Page of the CLP Forms to correlate the modified sample ID's and to the COC to correlate the Lab ID #'s to the client ID.

Mani S Iyer
Metals Section Manager

5/2/00
Date

7A

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL_CHICAGO_____ Contract: _____

Lab Code: STL___ Case No.: _____ SAS No.: _____ SDG No.:U04732

SOW No.: ILM03

EPA Sample No.	Lab Sample ID
_041100_____	_9A04G732-002___

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Mani S. Iyer Name: MANI S. IYER

Date: 5/2/00 Title: Metals Section Mgr.

568 212

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

041100

Lab Name: STL_CHICAGO Contract: _____
Lab Code: STL___ Case No.: _____ SAS No.: _____ SDG No.: U04732
Matrix (soil/water): WATER Lab Sample ID: 9A04G732-002
Level (low/med): LOW__ Date Received: 04/12/00
% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	3.7	U		P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron_____				NR
7439-92-1	Lead_____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__	0.20	U		CV
7439-95-4	Molybdenu				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-31-5	Tin_____				NR
7440-62-2	Vanadium_				NR
7440-66-6_	Zinc_____				NR
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
EB041100

Severn Trent Laboratories Chicago
8260 ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G732

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB041100	001	W	80GVB136	04/11/00	04/12/00	N/A	04/25/00
EB041100	002	W	80GVB136	04/11/00	04/12/00	N/A	04/25/00
ST14-27WG11	003	W	80GVB136	04/11/00	04/12/00	N/A	04/25/00
WCHMHTA008WG11	004	W	80GVB136	04/11/00	04/12/00	N/A	04/25/00
WCHMHTA008WG11	004 D1	W	80GVB137	04/11/00	04/12/00	N/A	04/25/00
LAB QC:							
VBLKPP	MB1	W	80GVB136	N/A	N/A	N/A	04/24/00
VBLKPP	MB1 BS	W	80GVB136	N/A	N/A	N/A	04/25/00
VBLKPN	MB1	W	80GVB137	N/A	N/A	N/A	04/25/00
VBLKPN	MB1 BS	W	80GVB137	N/A	N/A	N/A	04/25/00

NY CERTIFICATION # 11006

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number 9A04G732 Client: AFC001-33DBA Work Order 60025-001-001-0 Report Date 05/03/00 16 00 Page. 1a

Sample Information																	
Cust ID:	TB041100		EB041100		ST14-27WG11		WCHMHTA008WG 11		WCHMHTA008WG 11		VBLKPP	
RFW#.	001		002		003		004		004 DL		80GVB136-MB1	
Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
D.F.	1		1		1		1		10		1	
Units	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
Surrogate Recovery												
1,2-Dichloroethane-d4	79	%	87	%	86	%	100	%	78	%	89	%
Toluene-d8	88	%	98	%	106	%	108	%	93	%	96	%
4-Bromofluorobenzene	87	%	97	%	105	%	95	%	93	%	98	%
Dibromofluoromethane	85	%	104	%	101	%	109	%	80	%	101	%
		fl		fl		fl		fl		fl		fl
Dichlorodifluoromethane	0 5	U	0 5	U	0 5	U	0.5	U	NA		0.5	U
Chloromethane	0 5	U	0 5	U	0 5	U	0.5	U	NA		0.5	U
Vinyl chloride	0 5	U	0 5	U	0 5	U	0.5	U	NA		0 5	U
Bromomethane	0.5	U	0 5	U	0 5	U	0 5	U	NA		0.5	U
Chloroethane	0 5	U	0.5	U	0 5	U	0.5	U	NA		0.5	U
Trichlorofluoromethane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0 5	U
1,1-Dichloroethene	0.5	U	0 5	U	0 5	U	0.5	U	NA		0.5	U
Methylene Chloride	0.5	U	26		0 5	U	0.5	U	NA		0.5	U
trans-1,2-Dichloroethene	0.5	U	0.5	U	0 5	U	0.5	U	NA		0.5	U
1,1-Dichloroethane	0.4	U	0.4	U	0 4	U	0.4	U	NA		0 4	U
Vinyl acetate	2	U	2	U	2	U	2	U	NA		2	U
cis-1,2-Dichloroethene	0.5	U	0.5	U	0.5	U	2		NA		0.5	U
2,2-Dichloropropane	0.5	U	0 5	U	0 5	U	0.5	U	NA		0.5	U
Bromochloromethane	0.4	U	0.4	U	0.4	U	0.4	U	NA		0.4	U
Chloroform	0.3	U	0.3	U	0.3	U	0 3	U	NA		0 3	U
1,1,1-Trichloroethane	0.5	U	0.5	U	0 5	U	0.5	U	NA		0.5	U
1,1-Dichloropropene	0 5	U	0.5	U	0 5	U	0.5	U	NA		0 5	U
Carbon Tetrachloride	0 5	U	0 5	U	0 5	U	0.5	U	NA		0.5	U
Benzene	0 4	U	0 5		0 4	U		E	130		0.4	U
1,2-Dichloroethane	0 5	U	0 5	U	0 5	U	0 5	U	NA		0.5	U
Trichloroethene	0.5	U	0.5	U	0 5	U		E	27		0 5	U
1,2-Dichloropropane	0 4	U	0 4	U	0 4	U	0.4	U	NA		0 4	U
Dibromomethane	0.5	U	0.5	U	0.5	U	0 5	U	NA		0 5	U
Bromodichloromethane	0.5	U	0 5	U	0 5	U	0 5	U	NA		0.5	U
cis-1,3-Dichloropropene	0.5	U	0 5	U	0 5	U	0 5	U	NA		0.5	U

*=Outside of EPA CLP QC limits.

RFW Batch Number: 9A04G732 Client AFC001-33DBA Work Order 60025-001-001-0 Page 1b

Cust ID	TB041100		EB041100		ST14-27WG11		WCHMHTA008WG 11		WCHMHTA008WG 11		VBLKPP	
RFW#	001		002		003		004		004 DL		80GVB136-MB1	
Toluene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
trans-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
1,1,2-Trichloroethane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
1,3-Dichloropropane	0.4	U	0.4	U	0.4	U	0.4	U	NA		0.4	U
Tetrachloroethene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
Dibromochloromethane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
1,2-Dibromoethane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
1-Chlorohexane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
Chlorobenzene	0.4	U	0.4	U	0.4	U	0.4	U	NA		0.4	U
1,1,1,2-Tetrachloroethane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
Ethylbenzene	0.5	U	0.5	U	0.5	U		E	130		0.5	U
m/p-Xylene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
o-Xylene	0.5	U	0.5	U	0.5	U	0.6		NA		0.5	U
Styrene	0.4	U	0.4	U	0.4	U	0.4	U	NA		0.4	U
Bromoform	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
Isopropylbenzene	0.5	U	0.5	U	0.5	U	18		NA		0.5	U
1,1,2,2-Tetrachloroethane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
Bromobenzene	0.3	U	0.3	U	0.3	U	0.3	U	NA		0.3	U
1,2,3-Trichloropropane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
n-Propylbenzene	0.4	U	0.4	U	0.4	U	21		NA		0.4	U
2-Chlorotoluene	0.4	U	0.4	U	0.4	U	0.4	U	NA		0.4	U
1,3,5-Trimethylbenzene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
4-Chlorotoluene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
tert-Butylbenzene	0.5	U	0.5	U	0.5	U	1		NA		0.5	U
1,2,4-Trimethylbenzene	0.5	U	0.5	U	0.5	U		E	150		0.5	U
sec-Butylbenzene	0.5	U	0.5	U	0.5	U	4		NA		0.5	U
1,3-Dichlorobenzene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
p-Isopropyltoluene	0.5	U	0.5	U	0.5	U	2		NA		0.5	U
1,4-Dichlorobenzene	0.3	U	0.3	U	0.3	U	0.3	U	NA		0.3	U
n-Butylbenzene	0.5	U	0.5	U	0.5	U	2		NA		0.5	U
1,2-Dichlorobenzene	0.3	U	0.3	U	0.3	U	0.3	U	NA		0.3	U
1,2-Dibromo-3-chloropropane	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
1,2,4-Trichlorobenzene	0.4	U	0.4	U	0.4	U	0.4	U	NA		0.4	U
Hexachlorobutadiene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
Naphthalene	0.5	U	0.5	U	0.5	U		E	46		0.5	U
1,2,3-Trichlorobenzene	0.5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U

*= Outside of EPA CLP QC limits

RFW Batch Number 9A04G732 Client: AFC001-33DBA Work Order: 60025-001-001-0 Page: 1c

Cust ID.	TB041100	EB041100	ST14-27WG11	WCHMHTA008WG 11	WCHMHTA008WG 11	VBLKPP
RFW#	001	002	003	004	004 DL	80GVB136-MB1
Methyl-tert-butyl ether	0 5 U	0.5 U	0 5 U	0.5 U	NA	0.5 U

*= Outside of EPA CLP QC limits

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G732 Client: AFC001-33DBA Work Order 60025-001-001-0 Report Date. 05/03/00 16 00 Page 2a

Sample Information	Cust ID.	VBLKPP BS		VBLKPN		VBLKPN BS	
	RFW#.	80GVB136-MB1		80GVB137-MB1		80GVB137-MB1	
	Matrix.	WATER		WATER		WATER	
	D.F.:	1		1		1	
	Units:	UG/L		UG/L		UG/L	
Surrogate Recovery	1,2-Dichloroethane-d4	85	%	81	%	84	%
	Toluene-d8	99	%	92	%	96	%
	4-Bromofluorobenzene	99	%	94	%	95	%
	Dibromofluoromethane	92	%	84	%	89	%
Dichlorodifluoromethane		61	%	0.5	U	59	%
Chloromethane		61	%	0.5	U	60	%
Vinyl chloride		76	%	0.5	U	75	%
Bromomethane		82	%	0.5	U	82	%
Chloroethane		79	%	0.5	U	77	%
Trichlorofluoromethane		76	%	0.5	U	72	%
1,1-Dichloroethene		79	%	0.5	U	100	%
Methylene Chloride		82	%	0.5	U	94	%
trans-1,2-Dichloroethene		89	%	0.5	U	98	%
1,1-Dichloroethane		86	%	0.4	U	92	%
Vinyl acetate		62 *	%	2	U	69 *	%
cis-1,2-Dichloroethene		91	%	0 5	U	95	%
2,2-Dichloropropane		84	%	0.5	U	91	%
Bromochloromethane		93	%	0.4	U	88	%
Chloroform		87	%	0.3	U	88	%
1,1,1-Trichloroethane		87	%	0.5	U	88	%
1,1-Dichloropropene		98	%	0.5	U	101	%
Carbon Tetrachloride		95	%	0 5	U	95	%
Benzene		92	%	0.4	U	94	%
1,2-Dichloroethane		83	%	0.5	U	84	%
Trichloroethene		98	%	0 5	U	96	%
1,2-Dichloropropane		96	%	0.4	U	96	%
Dibromomethane		94	%	0.5	U	97	%
Bromodichloromethane		96	%	0.5	U	95	%
cis-1,3-Dichloropropene		97	%	0.5	U	99	%

*= Outside of EPA CLP QC limits.

Cust ID:	VBLKPP BS		VBLKPN		VBLKPN BS	
RFW#:	80GVB136-MB1		80GVB137-MB1		80GVB137-MB1	
Toluene	94	%	0.5	U	93	%
trans-1,3-Dichloropropene	88	%	0 5	U	92	%
1,1,2-Trichloroethane	92	%	0.5	U	92	%
1,3-Dichloropropane	96	%	0.4	U	95	%
Tetrachloroethene	107	%	0 5	U	100	%
Dibromochloromethane	103	%	0 5	U	100	%
1,2-Dibromoethane	99	%	0.5	U	100	%
1-Chlorohexane	105	%	0.5	U	98	%
Chlorobenzene	103	%	0.4	U	98	%
1,1,1,2-Tetrachloroethane	99	%	0 5	U	95	%
Ethylbenzene	101	%	0.5	U	95	%
m/p-Xylene	99	%	0 5	U	92	%
o-Xylene	97	%	0.5	U	93	%
Styrene	104	%	0 4	U	101	%
Bromoform	103	%	0.5	U	102	%
Isopropylbenzene	107	%	0 5	U	98	%
1,1,2,2-Tetrachloroethane	106	%	0 5	U	103	%
Bromobenzene	108	%	0 3	U	102	%
1,2,3-Trichloropropane	100	%	0.5	U	102	%
n-Propylbenzene	112	%	0.4	U	102	%
2-Chlorotoluene	114	%	0 4	U	98	%
1,3,5-Trimethylbenzene	102	%	0.5	U	94	%
4-Chlorotoluene	102	%	0 5	U	94	%
tert-Butylbenzene	107	%	0.5	U	88	%
1,2,4-Trimethylbenzene	107	%	0 5	U	98	%
sec-Butylbenzene	113	%	0 5	U	102	%
1,3-Dichlorobenzene	102	%	0 5	U	97	%
p-Isopropyltoluene	105	%	0.5	U	96	%
1,4-Dichlorobenzene	103	%	0.3	U	101	%
n-Butylbenzene	107	%	0 5	U	98	%
1,2-Dichlorobenzene	104	%	0.3	U	100	%
1,2-Dibromo-3-chloropropane	93	%	0.5	U	90	%
1,2,4-Trichlorobenzene	104	%	0.4	U	100	%
Hexachlorobutadiene	108	%	0.5	U	97	%
Naphthalene	103	%	0 5	U	98	%
1,2,3-Trichlorobenzene	101	%	0 5	U	97	%

*= Outside of EPA CLP QC limits.

Cust ID:	VBLKPP BS	VBLKPN	VBLKPN BS
RFW#	80GVB136-MB1	80GVB137-MB1	80GVB137-MB1
Methyl-tert-butyl ether	86 %	0.5 U	84 %

Committed To *Your* Success

received

Severn Trent Laboratories
2417 Bond Street
University Park, IL 60466

Tel (708) 534-5200
Fax· (708) 534-5211
www stl-inc com

May 4, 2000

Mr. Christopher Camp
HydroGeoLogic, Inc.
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

RE: AFC001-33DBA
Analytical Report & EDD
Lot 9A04G656

Dear Mr Camp·

The enclosed summary report is for the project and lot number listed above If you have any questions, please contact me at 708-534-5200.

Sincerely,
Severn Trent Laboratories

Donna Ingersoll
Project Manager

pmb

Enclosures Summary Report & EDD

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By.

Michael J Healy
General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested All 538 pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G656

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN DATE	REC	EXT/PREP	ANALYSIS
DUP02							
ALKALINITY	008	W	80GAK032	04/06/00	04/07/00	04/12/00	04/12/00
CHLORIDE BY IC	008	W	80GD4028	04/06/00	04/07/00	04/07/00	04/07/00
NITRATE BY IC	008	W	80GD4028	04/06/00	04/07/00	04/07/00	04/07/00
SULFATE BY IC	008	W	80GD4028	04/06/00	04/07/00	04/07/00	04/07/00
TOTAL ORGANIC CARBON	008	W	80GTC059	04/06/00	04/07/00	04/10/00	04/10/00
TOTAL ORGANIC CARBON	008	W	80GTC059	04/06/00	04/07/00	04/10/00	04/10/00
LF05-5GWG11							
ALKALINITY	009	W	80GAK032	04/06/00	04/07/00	04/12/00	04/12/00
CHLORIDE BY IC	009	W	80GD4028	04/06/00	04/07/00	04/07/00	04/08/00
NITRATE BY IC	009	W	80GD4028	04/06/00	04/07/00	04/07/00	04/07/00
SULFATE BY IC	009	W	80GD4028	04/06/00	04/07/00	04/07/00	04/08/00
TOTAL ORGANIC CARBON	009	W	80GTC059	04/06/00	04/07/00	04/10/00	04/10/00
TOTAL ORGANIC CARBON	009	W	80GTC059	04/06/00	04/07/00	04/10/00	04/10/00
HM-112WG11							
ALKALINITY	010	W	80GAK032	04/06/00	04/07/00	04/12/00	04/12/00
CHLORIDE BY IC	010	W	80GD4028	04/06/00	04/07/00	04/07/00	04/08/00
NITRATE BY IC	010	W	80GD4028	04/06/00	04/07/00	04/07/00	04/08/00
SULFATE BY IC	010	W	80GD4028	04/06/00	04/07/00	04/07/00	04/08/00
TOTAL ORGANIC CARBON	010	W	80GTC059	04/06/00	04/07/00	04/10/00	04/10/00
TOTAL ORGANIC CARBON	010	W	80GTC059	04/06/00	04/07/00	04/10/00	04/10/00

LAB QC:

ALKALINITY	LCS BS	W	80GAK032	N/A	N/A	04/12/00	04/12/00
ALKALINITY	MB1	W	80GAK032	N/A	N/A	04/12/00	04/12/00
BROMIDE BY IC	LCS BS	W	80GD4028	N/A	N/A	04/07/00	04/07/00
CHLORIDE BY IC	LCS BS	W	80GD4028	N/A	N/A	04/07/00	04/07/00
FLUORIDE BY IC	LCS BS	W	80GD4028	N/A	N/A	04/07/00	04/07/00
NITRITE BY IC	LCS BS	W	80GD4028	N/A	N/A	04/07/00	04/07/00
NITRATE BY IC	LCS BS	W	80GD4028	N/A	N/A	04/07/00	04/07/00

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G656

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
PHOSPHATE BY IC	LCS BS	W	80GD4028	N/A	N/A	04/07/00	04/07/00
SULFATE BY IC	LCS BS	W	80GD4028	N/A	N/A	04/07/00	04/07/00
BROMIDE BY IC	MB1	W	80GD4028	N/A	N/A	04/07/00	04/07/00
CHLORIDE BY IC	MB1	W	80GD4028	N/A	N/A	04/07/00	04/07/00
FLUORIDE BY IC	MB1	W	80GD4028	N/A	N/A	04/07/00	04/07/00
NITRITE BY IC	MB1	W	80GD4028	N/A	N/A	04/07/00	04/07/00
NITRATE BY IC	MB1	W	80GD4028	N/A	N/A	04/07/00	04/07/00
PHOSPHATE BY IC	MB1	W	80GD4028	N/A	N/A	04/07/00	04/07/00
SULFATE BY IC	MB1	W	80GD4028	N/A	N/A	04/07/00	04/07/00
TOTAL ORGANIC CARBON	LCS BS	W	80GTC059	N/A	N/A	04/10/00	04/10/00
TOTAL ORGANIC CARBON	MB1	W	80GTC059	N/A	N/A	04/10/00	04/10/00

STL
Committed To Your Success

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

AFCEE
CLP-Like
EDD
Inf COC

Report To:
Contact: Lynn Morgan
Company: HydroGeologic
Address: 1155 Herndon Pkwy, Suite 900
Herndon, VA 20170
Phone: 703-478-5186
Fax: 703-471-4180
E-Mail: lmorgan@hgl.com

Bill To:
Contact: Chris Camp
Company:
Address: (SAME)
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

568 223

Lab Lot # 9A0466 56

Package Sealed: Yes No
Samples Sealed: Yes No
Received on Ice: Yes No
Samples Intact: Yes No
Temperature °C of Cooler: 3.4 °C
Within Hold Time: Yes No
Preserv. indicated: Yes No NA
pH Check ok: Yes No NA
Res. Cl2 Check ok: Yes No NA
Sample Labels and COC Agree: Yes No COC not present

Sampler Name: JENNIFER WALLACE
Signature: Jennifer Wallace
Project Name: April 2000 Quarterly
Project Number: AFC001-33DBA
Project Location: NASFW JRB, Texas
Date Required Hard Copy: 5/4/00
Fax: / /
Lab PM: Donna Ingersol

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	VOCs (SW8260B)	SVOCs (SW8270)	Chromium/Hg (SW7471, SW6010B)	Alkalinity/Anions (E310.1/SW9056)	Methane, Ethane, Ethene (RSK-175)	TOC (SW9060)	Chromium (SW6010B)					Additional Analyses / Remarks
		Refrg #																
		#/Cont.					2		2	1	2	1	2					
		Volume					40ml		1L	1L	40ml	500ml	1L					
		Preserv					1		3	6	1	2	3					
001		TB040600	4-6-00	0100	W	G	2											
002		LF03-3DWG11	4-6-00	1434	W	G	3		1									
003		ST14-W21WG11	4-6-00	1300	W	G	3											
004		LF05-01WG11	4-6-00	1405	W	G	3											
005		W-153WG11	4-6-00	1300	W	G	3											
006		HM-116WG11	4-6-00	1150	W	G	3		Tl				1					
007		WHGLTA025WG11	4-6-00	1043	W	G	3											
008		DUP02	4-6-00	1200	W	G	3			1	3	1						
009		LF05-5GWG11	4-6-00	0900	W	G	3			1	3	1						
010		HM-112WG11	4-6-00	1555	W	G	3			1	3	1						
~~011~~																		

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Mark Hick	HydroGeologic	4-6-00	1730	Jeffrey A Clamer	STL	4-7-00	1350
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other

Preservative Key
1 HCl, Cool to 4°
2 H2SO4 Cool to 4°
3 HNO3, Cool to 4°
4 NaOH Cool to 4°
5 NaOH/Zn Acetate, Cool to 4°
6 Cool to 4°

COMMENTS

19 1500

Date Received: 4/7/00
Courier: FX
Hand Delivered: ☐
Bill of Lading: Samples

Severn Trent Laboratories Chicago
Internal Sample Custody Transfer Record

Sample Lot#: 9A046656 Client: AFC001-33DBA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-10	8260	[illegible]	[illegible]	4-7-00	1405	
8-10	IC	[illegible]	[illegible]	4-7-00	1410	
8-10	IC	[illegible]	[illegible]	4/8/00	10 30	
8,9,10	TOC	[illegible]	[illegible]	4/10/00	14:25	
2,6	metals	[illegible]	[illegible]	4/10/00	15.05	
2,6	metals	[illegible]	[illegible]	4/10/00	16 30	
2	Hg	[illegible]	[illegible]	4/12/00	0830	
8,9,10	TOC	[illegible]	[illegible]	4/12/00	9:15	
8,9,10	AKL	[illegible]	[illegible]	4/12-	0920	
2	Hg	[illegible]	[illegible]	4/12/00	10.30	
8,9,10	AKL	[illegible]	[illegible]	4/13/00	1200	

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

RE: DUP02
Project # 60025-001-001-0001
Lab ID: 9A04G656-008
Sample Date: 04/06/00
Date Received: 04/07/00

Inorganic Data Report

Parameters	Result		Units	Reporting Limit
Alkalinity	410		mg/L	5.0
Chloride by IC	46 5		mg/L	4 0
Nitrate-N by IC	0.10	u	mg/L	0.10
Sulfate by IC	47.6		mg/L	4 0
Total Organic Carbon	4.6		mg/L	1.0
TOC Test 2	3.8		mg/L	1 0

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

RE. LF05-5GWG11
Project # 60025-001-001-0001
Lab ID: 9A04G656-009
Sample Date: 04/06/00
Date Received: 04/07/00

Inorganic Data Report

Parameters	Result		Units	Reporting Limit
Alkalinity	409		mg/L	5.0
Chloride by IC	46.2		mg/L	4 0
Nitrate-N by IC	0.10	u	mg/L	0.10
Sulfate by IC	44.2		mg/L	4.0
Total Organic Carbon	3.7		mg/L	1 0
TOC Test 2	3.5		mg/L	1.0

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn: Mr. Ken Rapuano

Date: Thursday April 20th, 2000

RE: HM-112WG11
Project # 60025-001-001-0001
Lab ID: 9A04G656-010
Sample Date: 04/06/00
Date Received: 04/07/00

Inorganic Data Report

Parameters	Result		Units	Reporting Limit
Alkalinity	294		mg/L	5.0
Chloride by IC	27.1		mg/L	4.0
Nitrate-N by IC	7.6		mg/L	2 0
Sulfate by IC	83.5		mg/L	4.0
Total Organic Carbon	1 0	u	mg/L	1.0
TOC Test 2	1.0	u	mg/L	1.0

To: AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn Mr. Ken Rapuano

Date: Thursday April 20th, 2000

Project # 60025-001-001-0001
Lab Batch: 9A04G656

Inorganic Method Blank Data Report

Sample	Lab ID	Parameter	Result		Units	Reporting Limit
Blank 1	80GAK032-MB1	Alkalinity	5.0	u	mg/L	5.0
Blank 1	80GD4028-MB1	Bromide BY IC	0.10	u	mg/L	0 10
		Chloride by IC	0.20	u	mg/L	0 20
		Fluoride by IC	0 10	u	mg/L	0 10
		Nitrite-N by IC	0.10	u	mg/L	0.10
		Nitrate-N by IC	0.10	u	mg/L	0 10
		Phosphate by IC	0.10	u	mg/L	0.10
		Sulfate by IC	0.20	u	mg/L	0.20
Blank 1	80GTC059-MB1	Total Organic Carbon	1.0	u	mg/L	1.0

To. AFC001-33DBA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn· Mr. Ken Rapuano

Date: Thursday April 20th, 2000

Project # 60025-001-001-0001
Lab Batch: 9A04G656

Inorganic Laboratory Control Standards Report

Lab ID	Parameter	Spiked Amount	Units	Spike #1 % Recov.	Spike #2 % Recov.	RPD
80GAK032-LCS	Alkalinity	100	mg/L	106	NA	NA
80GD4028-LCS	Bromide BY IC	2.0	mg/L	104	NA	NA
	Chloride by IC	3.0	mg/L	93.8	NA	NA
	Fluoride by IC	1 0	mg/L	94.0	NA	NA
	Nitrite-N by IC	2 0	mg/L	95.2	NA	NA
	Nitrate-N by IC	2 0	mg/L	104	NA	NA
	Phosphate by IC	2 0	mg/L	105	NA	NA
	Sulfate by IC	5.0	mg/L	102	NA	NA
80GTC059-LCS	TOC	5 0	mg/L	101	NA	NA

Severn Trent Laboratories Chicago
Wet Chemistry Case Narrative

Client. **HydroGeoLogic NAS Ft. Worth AFC001-33DBA**
RFW Lot: **9A04G656** Date Rec'd· 04/07/00

1. This narrative covers the analysis of the samples in the above RFW Lot by the following methods.

   Alkalinity – EPA Method 310.1
   Anions by Ion Chromatography – SW 846 Method 9056
   - Chloride
   - Nitrate as N
   - Sulfate as SO_4

   TOC – SW 846 Method 9060
   - All TOC analysis was done by duplicate injection

2. The EPA holding times were met Refer to the Laboratory Chronicle Page for dates of sampling, receipt, and analysis.

3. The initial and continuing calibration verification standards and blanks were in control.

4 The method blanks were below the detection limits.

5 All LCS recoveries were within control limits Please see the LCS Summary Pages of this report for additional details

6. Matrix QC was not requested or done on these samples.

Diane L. Harper
Wet Chemistry Section Manager

4-20-00
Date

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # .9A04G656

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
LF03-3DWG11							
CHROMIUM, TOTAL	002	W	9AGF0103	04/06/00	04/07/00	04/10/00	04/11/00
MERCURY, TOTAL	002	W	9AHG069	04/06/00	04/07/00	04/12/00	04/12/00
HM-116WG11							
CHROMIUM, TOTAL	006	W	9AGF0103	04/06/00	04/07/00	04/10/00	04/11/00

NY CERTIFICATION # 11006

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client AFC001-33DBA
STL# 9A04G656
SDG#. U04656

WO# 60025-001-001-0001
Date Rec'd 04/07/00

1. This narrative covers the analysis of 2 Water samples for following metals:

Sample 002.	Sample 006:
GFAA .. Cr	GFAA . Cr
CVAA Hg	

Method Ref NAS Fort Worth JRB, Texas QAPP

2 All analyses were performed within the required holding times

3 All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limit

4 All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits

5. All ICP Interference Check Samples (ICSA and ICSAB) were within control limits

6. All Laboratory Control Samples (LCS) were within the 80-120% control limits

7 All Method blanks were less than the CRDL

8 No sample from this SDG was designated for MS/MSD analysis.

9 GFAA (Cr)
All Analytical spike recoveries were within control limits except for sample 002

10 Please note The first 6 digits of the client sample ID's were used in all CLP Forms to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP forms Please refer to the Cover Page of the CLP Forms to correlate the modified sample ID's and to the COC to correlate the Lab ID #'s to the client ID

Mani S. Iyer
Metals Section Manager

4/24/00
Date

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL_CHICAGO_____ Contract: _____

Lab Code: STL___ Case No.: _____ SAS No.: _____ SDG No.:U04656

SOW No.: ILM03

EPA Sample No.	Lab Sample ID
_116WG1_____	_9A04G656-006___
_3DWG11_____	_9A04G656-002___

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] Name: MANI S. IYER

Date: 4/24/10 Title: Metals Section Mgr

Severn Trent Laboratories Chicago
8260 ANALYTICAL DATA PACKAGE FOR
AFC001-33DBA

LOT # :9A04G656

CLIENT ID	SAMPLE #		MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB040600	001		W	80GVB130	04/06/00	04/07/00	N/A	04/20/00
LF03-3DWG11	002		W	80GVB130	04/06/00	04/07/00	N/A	04/20/00
ST14-W21WG11	003		W	80GVB130	04/06/00	04/07/00	N/A	04/20/00
LF05-01WG11	004		W	80GVB130	04/06/00	04/07/00	N/A	04/20/00
LF05-01WG11	004	D1	W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
W-153WG11	005		W	80GVB130	04/06/00	04/07/00	N/A	04/20/00
W-153WG11	005	D1	W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
HM-116WG11	006		W	80GVB130	04/06/00	04/07/00	N/A	04/20/00
HM-116WG11	006	D1	W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
WHGLTA025WG11	007		W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
DUP02	008		W	80GVB130	04/06/00	04/07/00	N/A	04/20/00
DUP02	008	D1	W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
LF05-5GWG11	009		W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
LF05-5GWG11	009	D1	W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
HM-112WG11	010		W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
HM-112WG11	010	D1	W	80GVB131	04/06/00	04/07/00	N/A	04/20/00
HM-112WG11	010	D2	W	80GVB132	04/06/00	04/07/00	N/A	04/20/00
LAB QC:								
VBLKNM	MB1		W	80GVB130	N/A	N/A	N/A	04/19/00
VBLKNM	MB1	BS	W	80GVB130	N/A	N/A	N/A	04/20/00
VBLKNO	MB1		W	80GVB131	N/A	N/A	N/A	04/20/00
VBLKNO	MB1	BS	W	80GVB131	N/A	N/A	N/A	04/20/00
VBLKNK	MB1		W	80GVB132	N/A	N/A	N/A	04/20/00
VBLKNK	MB1	BS	W	80GVB132	N/A	N/A	N/A	04/21/00

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G656 Client AFC001-33DBA Work Order: 60025-001-001-0

Report Date 05/03/00 16 44
Page. 1a

Sample Information	Cust ID:	TB040600		LF03-3DWG11		ST14-W21WG11		LF05-01WG11		LF05-01WG11		W-153WG11	
	RFW#	001		002		003		004		004 DL		005	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D F..	1		1		1		1		10		1	
	Units	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
Surrogate Recovery	1,2-Dichloroethane-d4	84	%	92	%	87	%	83	%	74	%	83	%
	Toluene-d8	93	%	100	%	93	%	98	%	86	%	93	%
	4-Bromofluorobenzene	93	%	102	%	96	%	98	%	86	%	96	%
	Dibromofluoromethane	85	%	94	%	90	%	92	%	74 *	%	92	%
	Dichlorodifluoromethane	0.5	U	0.5	U	0 5	U	0 5	U	NA		0.5	U
	Chloromethane	0 5	U	0 5	U	0.5	U	0.5	U	NA		0.5	U
	Vinyl chloride	0 5	U	0.5	U	0 5	U		E	200		0.5	U
	Bromomethane	0.5	U	0.5	U	0 5	U	0 5	U	NA		0.5	U
	Chloroethane	0 5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
	Trichlorofluoromethane	0.5	U	0 5	U	0.5	U	0 5	U	NA		4	
	1,1-Dichloroethene	0.5	U	0 5	U	0 5	U	0 7		NA		2	
	Methylene Chloride	0.5	U	0.5	U	0 5	U	0.5	U	NA		0.5	U
	trans-1,2-Dichloroethene	0.5	U	0 5	U	0.5	U	9		NA		2	
	1,1-Dichloroethane	0.4	U	0 4	U	0 4	U	0 7		NA		0 5	
	Vinyl acetate	2	U	2	U	2	U	2	U	NA		2	U
	cis-1,2-Dichloroethene	0.5	U	0.5	U	0.5	U		E	180			E
	2,2-Dichloropropane	0.5	U	0.5	U	0.5	U	0 5	U	NA		0 5	U
	Bromochloromethane	0.4	U	0.4	U	0 4	U	0 4	U	NA		0 4	U
	Chloroform	0.3	U	0 3	U	0.3	U	0.3	U	NA		0 6	
	1,1,1-Trichloroethane	0.5	U	0.5	U	0 5	U	0.5	U	NA		0.5	U
	1,1-Dichloropropene	0 5	U	0.5	U	0.5	U	0.5	U	NA		0.5	U
	Carbon Tetrachloride	0.5	U	0 5	U	0.5	U	0.5	U	NA		0 5	U
	Benzene	0.4	U	0.4	U	0.4	U	0.4		NA		0.4	U
	1,2-Dichloroethane	0.5	U	0 5	U	0 5	U	0.5	U	NA		0 5	U
	Trichloroethene	0.5	U	0 5	U	0 5	U	4		NA			E
	1,2-Dichloropropane	0.4	U	0.4	U	0.4	U	0 4	U	NA		0.4	U
	Dibromomethane	0.5	U	0 5	U	0 5	U	0.5	U	NA		0.5	U
	Bromodichloromethane	0 5	U	0.5	U	0.5	U	0 5	U	NA		0 5	U
	cis-1,3-Dichloropropene	0.5	U	0 5	U	0 5	U	0 5	U	NA		0.5	U

*= Outside of EPA CLP QC Limits

RFW Batch Number 9A04G656 Client: AFC001-33DBA Work Order 60025-001-001-0 Page: 1b

Cust ID	TB040600	LF03-3DWG11	ST14-W21WG11	LF05-01WG11	LF05-01WG11	W-153WG11
RFW#	001	002	003	004	004 DL	005
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1,3-Dichloropropane	0.4 U	0.4 U	0.4 U	0.4 U	NA	0.4 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U	NA	5
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1-Chlorohexane	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Chlorobenzene	0.4 U	0.4 U	0.4 U	0.4 U	NA	0.4 U
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Styrene	0.4 U	0.4 U	0.4 U	0.4 U	NA	0.4 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Isopropylbenzene	0.5 U	0.5 U	15	0.5 U	NA	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Bromobenzene	0.3 U	0.3 U	0.3 U	0.3 U	NA	0.3 U
1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
n-Propylbenzene	0.4 U	0.4 U	0.9	0.4 U	NA	0.4 U
2-Chlorotoluene	0.4 U	0.4 U	0.4 U	0.4 U	NA	0.4 U
1,3,5-Trimethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
4-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
tert-Butylbenzene	0.5 U	0.5 U	4	0.5 U	NA	0.5 U
1,2,4-Trimethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
sec-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
p-Isopropyltoluene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	NA	0.3 U
n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3	NA	0.3 U
1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1,2,4-Trichlorobenzene	0.4 U	0.4 U	0.4 U	0.4 U	NA	0.4 U
Hexachlorobutadiene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
Naphthalene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U

*= Outside of EPA CLP QC limits

RFW Batch Number. 9A04G656 Client AFC001-33DBA Work Order: 60025-001-001-0 Page: 1c

Cust ID:	TB040600	LF03-3DWG11	ST14-W21WG11	LF05-01WG11	LF05-01WG11	W-153WG11
RFW#:	001	002	003	004	004 DL	005
Methyl-tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U

*= Outside of EPA CLP QC limits

STL Chicago
METHOD 8260 VOLATILES

RFW Batch Number: 9A04G656 Client: AFC001-33DBA Work Order 60025-001-001-0 Report Date 05/03/00 16:44 Page: 4a

	Cust ID:	VBLKNM BS	VBLKNO	VBLKNO BS	VBLKNK	VBLKNK BS
Sample Information	RFW#:	80GVB130-MB1	80GVB131-MB1	80GVB131-MB1	80GVB132-MB1	80GVB132-MB1
	Matrix	WATER	WATER	WATER	WATER	WATER
	D.F..	1	1	1	1	1
	Units:	UG/L	UG/L	UG/L	UG/L	UG/L
Surrogate Recovery	1,2-Dichloroethane-d4	91 %	77 %	82 %	90 %	74 %
	Toluene-d8	102 %	88 %	94 %	93 %	78 %
	4-Bromofluorobenzene	100 %	89 %	94 %	95 %	80 %
	Dibromofluoromethane	94 %	79 %	85 %	83 %	70 * %
		fl	fl	fl	fl	fl
Dichlorodifluoromethane		89 %	0 5 U	67 %	0.5 U	72 %
Chloromethane		94 %	0 5 U	71 %	0.5 U	69 %
Vinyl chloride		115 %	0 5 U	86 %	0 5 U	85 %
Bromomethane		116 %	0.5 U	89 %	0.5 U	88 %
Chloroethane		113 %	0 5 U	85 %	0.5 U	84 %
Trichlorofluoromethane		110 %	0.5 U	83 %	0 5 U	88 %
1,1-Dichloroethene		123 %	0.5 U	98 %	0.5 U	95 %
Methylene Chloride		108 %	0 5 U	87 %	0 5 U	85 %
trans-1,2-Dichloroethene		120 %	0 5 U	97 %	0 5 U	95 %
1,1-Dichloroethane		114 %	0.4 U	92 %	0.4 U	91 %
Vinyl acetate		79 * %	2 U	60 * %	2 U	58 * %
cis-1,2-Dichloroethene		114 %	0 5 U	91 %	0.5 U	89 %
2,2-Dichloropropane		125 %	0.5 U	92 %	0.5 U	104 %
Bromochloromethane		115 %	0.4 U	91 %	0.4 U	76 %
Chloroform		110 %	0.3 U	88 %	0 3 U	90 %
1,1,1-Trichloroethane		118 %	0 5 U	94 %	0 5 U	100 %
1,1-Dichloropropene		134 * %	0 5 U	108 %	0.5 U	110 %
Carbon Tetrachloride		131 * %	0.5 U	107 %	0 5 U	118 %
Benzene		116 %	0 4 U	95 %	0.4 U	96 %
1,2-Dichloroethane		107 %	0.5 U	87 %	0.5 U	95 %
Trichloroethene		133 * %	0.5 U	101 %	0 5 U	104 %
1,2-Dichloropropane		115 %	0.4 U	93 %	0.4 U	96 %
Dibromomethane		112 %	0.5 U	89 %	0 5 U	94 %
Bromodichloromethane		116 %	0.5 U	95 %	0.5 U	101 %
cis-1,3-Dichloropropene		120 %	0 5 U	96 %	0.5 U	100 %

*= Outside of EPA CLP QC limits.

Cust ID	VBLKNM BS	VBLKNO	VBLKNO BS	VBLKNK	VBLKNK BS
RFW#.	80GVB130-MB1	80GVB131-MB1	80GVB131-MB1	80GVB132-MB1	80GVB132-MB1
Toluene	117 %	0 5 U	95 %	0.5 U	98 %
trans-1,3-Dichloropropene	110 %	0 5 U	86 %	0.5 U	92 %
1,1,2-Trichloroethane	107 %	0.5 U	83 %	0 5 U	82 %
1,3-Dichloropropane	113 %	0.4 U	96 %	0.4 U	98 %
Tetrachloroethene	132 * %	0.5 U	116 %	0.5 U	119 %
Dibromochloromethane	120 %	0 5 U	103 %	0 5 U	106 %
1,2-Dibromoethane	117 %	0 5 U	92 %	0.5 U	95 %
1-Chlorohexane	127 * %	0.5 U	104 %	0.5 U	90 %
Chlorobenzene	120 %	0.4 U	104 %	0.4 U	105 %
1,1,1,2-Tetrachloroethane	115 %	0.5 U	98 %	0 5 U	102 %
Ethylbenzene	118 %	0.5 U	103 %	0 5 U	105 %
m/p-Xylene	119 %	0 5 U	103 %	0.5 U	107 %
o-Xylene	117 %	0.5 U	101 %	0 5 U	105 %
Styrene	123 %	0.4 U	106 %	0.4 U	107 %
Bromoform	121 %	0.5 U	102 %	0.5 U	107 %
Isopropylbenzene	121 %	0.5 U	109 %	0.5 U	107 %
1,1,2,2-Tetrachloroethane	111 %	0.5 U	95 %	0 5 U	96 %
Bromobenzene	119 %	0.3 U	106 %	0.3 U	104 %
1,2,3-Trichloropropane	108 %	0.5 U	92 %	0.5 U	94 %
n-Propylbenzene	127 * %	0.4 U	114 %	0.4 U	114 %
2-Chlorotoluene	127 * %	0.4 U	107 %	0.4 U	114 %
1,3,5-Trimethylbenzene	115 * %	0.5 U	103 %	0.5 U	103 %
4-Chlorotoluene	114 %	0 5 U	101 %	0.5 U	103 %
tert-Butylbenzene	123 %	0 5 U	112 %	0.5 U	112 %
1,2,4-Trimethylbenzene	116 %	0.5 U	105 %	0.5 U	104 %
sec-Butylbenzene	128 * %	0.5 U	117 %	0.5 U	115 %
1,3-Dichlorobenzene	114 %	0 5 U	102 %	0 5 U	102 %
p-Isopropyltoluene	122 %	0 5 U	111 %	0 5 U	109 %
1,4-Dichlorobenzene	116 %	0.3 U	104 %	0.3 U	101 %
n-Butylbenzene	124 %	0.5 U	113 %	0.5 U	113 %
1,2-Dichlorobenzene	113 %	0 3 U	102 %	0.3 U	101 %
1,2-Dibromo-3-chloropropane	105 %	0.5 U	87 %	0.5 U	94 %
1,2,4-Trichlorobenzene	117 %	0 4 U	105 %	0.4 U	106 %
Hexachlorobutadiene	132 * %	0.5 U	118 %	0.5 U	126 * %
Naphthalene	108 %	0.5 U	95 %	0.5 U	96 %
1,2,3-Trichlorobenzene	113 %	0.5 U	102 %	0 5 U	102 %

*= Outside of EPA CLP QC limits.

Cust ID:	VBLKNM BS	VBLKNO	VBLKNO BS	VBLKNK	VBLKNK BS
RFW#:	80GVB130-MB1	80GVB131-MB1	80GVB131-MB1	80GVB132-MB1	80GVB132-MB1
Methyl-tert-butyl ether	101 %	0.5 U	73 %	0.5 U	64 * %

*= Outside of EPA CLP QC limits

Severn Trent Laboratories Chicago
GC/MS Case Narrative

AFC001 – 33DBA
STL# 9A04G656
VOA DATA:

1. All volatile sample analyses were performed within the recommended hold times.

2 All Method Blank target compounds were below reporting limits.

3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recovery was above the QC limits for Hexachlorobutadiene in the LCS sample 80GVB133-MB1 BS. Since the spike recovery was above the QC limits and Hexachlorobutadiene was not detected in the associated samples, further corrective action was not performed. There were ten spike recoveries above the QC limits in the LCS sample 80GVB130-MB1 BS. The results for these compounds can be considered slightly biased high in the associated samples. The spike recoveries were below the QC limits for Methyl-tert-butyl ether in the LCS samples 80GVB131-MB1 BS and 80GVB133-MB1 BS. The results and reporting limits for this compound can be considered biased in the associated samples. All of the other required spike recoveries were within the QAPP specified QC limits in the LCS samples

4. Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set.

5. The sample 9A04G656-004 DL and the LCS sample 80GVB132-MB1 BS had one surrogate recovery below the QC limits. The original sample 9A04G656-004 had all surrogate recoveries within the QC limits; therefore corrective action was not required. Corrective action was not performed on the LCS sample. All other volatile samples had surrogate recoveries within the QAPP specified QC limits.

6. The water sample was prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The second source initial calibration verification was included and all target compounds met the +/- 25% expected value acceptance criteria except the compounds Dichlorodifluoromethane, Chloromethane, Acetone and Vinyl acetate, n-Propylbenzene, sec-Butylbenzene and n-Butylbenzene were outside of the acceptance criteria. The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference acceptance criteria or 20% Drift acceptance criteria for first or higher regression curves. All of the other compounds met the +/- 25% expected value acceptance criteria or +/- 50% for the exception compounds specified

568 242

Page(s) Missing
From the Official
Government Document

SEVERN
TRENT
SERVICES

STL Chicago
2417 Bond Street
University Park, IL 60466

Tel 708 534 5200
Fax 708 534 5211
www stl-inc com

November 27, 2000

Ms Kim Evers
HydroGeoLogic, Inc
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

received
11-26-00

RE AFC001-33DDA
Analytical Report
Lot 9A10G899

Dear Ms Evers

The enclosed summary report is for the project and lot number listed above The sub analysis was sent November 22nd The volatile results will be reported on form 1s instead of a spreadsheet format due to LIMS limitations The EDD and error report will be transferred via E-mail when completed If you have any questions, please contact me at 708-534-5200

Sincerely,

Severn Trent Laboratories

Mary McDonald

for Donna Ingersoll
Project Manager

pmb

Enclosures Summary Report

CLP Report & Data Summary-Nancy Weaver /EDS

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested All pages of this report are integral parts of the analytical data Therefore, this report should be reproduced only in its entirety

Severn Trent Laboratories Chicago
INORGANIC ANALYTICAL DATA PACKAGE FOR
AFC001-33DDA

LOT # 9A10G899

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
HM-123WG13							
ALKALINITY	006	W	80GAK116	10/27/00	10/28/00	11/09/00	11/09/00
CHLORIDE BY IC	006	W	80GD4126	10/27/00	10/28/00	10/29/00	10/29/00
NITRATE BY IC	006	W	80GD4126	10/27/00	10/28/00	10/29/00	10/29/00
SULFATE BY IC	006	W	80GD4126	10/27/00	10/28/00	10/29/00	10/29/00
TOTAL ORGANIC CARBON	006	W	80GTC270	10/27/00	10/28/00	11/01/00	11/01/00
TOTAL ORGANIC CARBON	006	W	80GTC270	10/27/00	10/28/00	11/01/00	11/01/00
SUB-OUT TEST FOR SUB	006	W		10/27/00	10/28/00		
LAB QC							
ALKALINITY	LCS BS	W	80GAK116	N/A	N/A	11/09/00	11/09/00
ALKALINITY	LCS BSD	W	80GAK116	N/A	N/A	11/09/00	11/09/00
ALKALINITY	MB1	W	80GAK116	N/A	N/A	11/09/00	11/09/00
CHLORIDE BY IC	LCS BS	W	80GD4126	N/A	N/A	10/29/00	10/29/00
NITRATE BY IC	LCS BS	W	80GD4126	N/A	N/A	10/29/00	10/29/00
SULFATE BY IC	LCS BS	W	80GD4126	N/A	N/A	10/29/00	10/29/00
CHLORIDE BY IC	MB1	W	80GD4126	N/A	N/A	10/29/00	10/29/00
NITRATE BY IC	MB1	W	80GD4126	N/A	N/A	10/29/00	10/29/00
SULFATE BY IC	MB1	W	80GD4126	N/A	N/A	10/29/00	10/29/00
TOTAL ORGANIC CARBON	LCS BS	W	80GTC270	N/A	N/A	11/01/00	11/01/00
TOTAL ORGANIC CARBON	MB1	W	80GTC270	N/A	N/A	11/01/00	11/01/00

NY CERTIFICATION # 11006

REF | CLP like in COC EDD

SEVERN TRENT SERVICES

STL Chicago
417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: Kim Evers
Company: HydroGeologic
Address: 1155 Herndon Pkwy Suite 900, Herndon VA 20170
Phone: 703/478-5186
Fax: 703/471-4180
E-Mail: KEVERS@HGL.com

Bill To:
Contact: (same)
Company:
Address
Phone
Fax
PO#: Quote:

Shaded Areas For Internal Use Only

Lab L t# 9A10G899

Sampler Name: Jennifer Wallace
Signature: Jennifer Wallace
Project Name: October 2000 Quarterly
Project Number: AFC001-33DDA
Project Location: NASPW JRB, Texas
Lab PM: Donna Ingersol
Date Required
Hard Copy: ___/___/___
Fax: ___/___/___

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Volatiles (SW8260B)	Methanol, Ethanol, Ethanol RSK-175	TOC (SW9060)	Alkalinity, Anions E310.1 Sulfate	Additional Analyses / Remarks
001		TB102700	10/27/00	0700	W	G	2				
002		SD13-02WG13	10/27/00	0825	WG	G	3				
003		ST14-W11WG13	10/27/00	1450	WG	G	3				
004		DUP07WG13	10/27/00	1200	WG	G	3				
005		ST14-03WG13	10/27/00	1104	WG	G	3				
006		HN-123WG13	10/27/00	0919	WG	G	3	3	1	1	
007		WHGLTA014WG13	10/27/00	1409	WG	G	3				
008		WHGLTA012WG13	10/27/00	1149	WG	G	3				
009		EB102700	10/27/00	1522	WG	G	3				

Refrg #														
# / Cont.	2	2	1	1										
Volume	40mL	40mL	500mL	1L										
Preserv	1	1	2	7										

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	HGL	10/27/00	1595	[signature]	STL	10/28/00	0940
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OI = Oil
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe

Container Key
1 Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6 Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3 HNO3, Cool to 4°
4 NaOH, Cool to 4°
5 NaOH/Zn, Cool to 4°
6 Cool to 4°

COMMENTS
EB102700 associated w/ WHGLTA012WG13 & WHGLTA014WG13

Date Received 10 / 28 / 00
Courier: FX
Hand Delivered ☐
Bill of Lading attached

Best Available Copy

568 245

To: AFC001-33DDA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn Mr. Ken Rapuano

Date. Monday November 27th, 2000

RE. HM-123WG13
Project # 60025-001-001-0001
Lab ID. 9A10G899-006
Sample Date 10/27/00
Date Received 10/28/00

Inorganic Data Report

Parameters	Result	Units	Reporting Limit
Alkalinity	305	mg/L	5 0
Chloride by IC	18 6	mg/L	2 0
Nitrate-N by IC	3 0	mg/L	0 10
Sulfate by IC	62 8	mg/L	2 0
Total Organic Carbon	1 7	mg/L	1 0
TOC Test 2	1 7	mg/L	1 0

To AFC001-33DDA
c/o HydroGeoLogic, Inc.
1155 Herndon Parkway, Ste. 900
Herndon, VA 20170

Attn Mr. Ken Rapuano

Date Monday November 27th, 2000

Project # 60025-001-001-0001
Lab Batch 9A10G899

Inorganic Method Blank Data Report

Sample	Lab ID	Parameter	Result		Units	Reporting Limit
Blank 1	80GAK116-MB1	Alkalinity	5 0	u	mg/L	5 0
Blank 1	80GD4126-MB1	Chloride by IC	0 20	u	mg/L	0 20
		Nitrate-N by IC	0 10	u	mg/L	0 10
		Sulfate by IC	0 20	u	mg/L	0 20
Blank 1	80GTC270-MB1	Total Organic Carbon	1 0	u	mg/L	1 0

STL Chicago
Wet Chemistry Case Narrative

Client **AFC001-33DDA**
RFW Lot **9A10G899** Date Rec'd· 10/28/00

1 This narrative covers the analysis of the sample in the above RFW Lot by the following methods

Alkalinity – EPA Method 310 1
Anions by Ion Chromatography – SW 846 Method 9056
Chloride
Nitrate as N
Sulfate
TOC – SW 846 Method 9060
This sample was done for TOC by duplicate injection

2. The EPA holding times were met.

3 The initial and continuing calibration verification standards and blanks were in control

4 The method blanks were below the detection limits

5 All LCS recoveries were within control limits. Please see the LCS Summary Pages of this report for additional details

6 No matrix QC was done on this sample

Diane L Harper
Wet Chemistry Section Manager

11-22-00
Date

Severn Trent Laboratories Chicago
8260 ANALYTICAL DATA PACKAGE FOR
AFC001-33DDA

LOT # 9A10G899

CLIENT ID	SAMPLE #		MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB102700	001		W	80GVC299	10/27/00	10/28/00	N/A	11/07/00
SD13-02WG13	002		W	80GVC299	10/27/00	10/28/00	N/A	11/07/00
ST14-W11WG13	003		W	80GVC299	10/27/00	10/28/00	N/A	11/07/00
DUP07WG13	004		W	80GVC299	10/27/00	10/28/00	N/A	11/07/00
ST14-03WG13	005		W	80GVC299	10/27/00	10/28/00	N/A	11/07/00
HM-123WG13	006		W	80GVC299	10/27/00	10/28/00	N/A	11/07/00
HM-123WG13	006	D1	W	80GVC303	10/27/00	10/28/00	N/A	11/09/00
WHGLTA014WG13	007		W	80GVC301	10/27/00	10/28/00	N/A	11/08/00
WHGLTA014WG13	007	D1	W	80GVC303	10/27/00	10/28/00	N/A	11/09/00
WHGLTA012WG13	008		W	80GVC301	10/27/00	10/28/00	N/A	11/08/00
WHGLTA012WG13	008	R1	W	80GVC303	10/27/00	10/28/00	N/A	11/09/00
EB102700	009		W	80GVC303	10/27/00	10/28/00	N/A	11/09/00
LAB QC								
VBLKDT	MB1		W	80GVC299	N/A	N/A	N/A	11/06/00
VBLKDT	MB1	BS	W	80GVC299	N/A	N/A	N/A	11/06/00
[illegible]KEL	MB1		W	80GVC303	N/A	N/A	N/A	11/08/00
[illegible]LKEL	MB1	BS	W	80GVC303	N/A	N/A	N/A	11/08/00
VBLKJH	MB1		W	80GVC301	N/A	N/A	N/A	11/08/00
VBLKJH	MB1	BS	W	80GVC301	N/A	N/A	N/A	11/08/00

NY CERTIFICATION # 11006

AFCEE | CLP Like
int COC
EDD

SEVERN TRENT SERVICES

TL Chicago
417 Bond Street
nversity Park, IL 60466
hone: 708-534-5200
ax: 708-534-5211

Report To:
Contact: Kim Evers
Company: HydroGeologic
Address: 1155 Herndon Pkwy
Suite 900, Herndon VA 20170
Phone: 703/478-5186
Fax: 703/471-4180
E-Mail: KEVERS@HGL.com

Bill To:
Contact: (same)
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only ____ of ____

Lab Lot# 9A10G899

Sampler Name: Jennifer Wallace
Signature: Jennifer Wallace
Project Name: October 2000 Quarterly
Project Number: AFC001-33DDA
Project Location: NASEW JRB, Texas
Date Required: Hard Copy: __/__/__ Fax: __/__/__
Lab PM: Donna Ingersol

Refrig #														
# / Cont.	2	2	1	1										
Volume	40mL	40mL	500mL	1L										
Preserv	1	1	2	7										

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Volatiles (SW8260B)	Methane, Ethane, Ethene RSK-175	TOC (SW9060)	Alkalinity, Anions, Bicarb, Carbonate							Additional Analyses / Remarks
		TB102700	10/27/00	0700	W	G	2										
		SD13-02WG13	10/27/00	0825	WG	G	3										
		ST14-W11WG13	10/27/00	1450	WG	G	3										
		DUP07WG13	10/27/00	1200	WG	G	3										
		ST14-03WG13	10/27/00	1104	WG	G	3										
		HN-123WG13	10/27/00	0919	WG	G	3	3	1	1							
		WHGLTA014WG13	10/27/00	1409	WG	G	3										
		WHGLTA012WG13	10/27/00	1149	WG	G	3										
		EB102700	10/27/00	1522	WG	G	3										

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	HGL	10/27/00	1595	[signature]	STL	10/28/00	0940
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
SE = Sediment
S = Solid
= Drum Solid
= Drum Liquid
L = Leachate

Container Key
1 Plastic
2. VOA Vial
3. Sterile Plastic
4 Amber Glass
5 Widemouth Glass

Preservative Key
1 HCl, Cool to 4°
2 H2SO4, Cool to 4°
3 HNO3, Cool to 4°
4. NaOH, Cool to 4°
5 NaOH/Zn Cool to 4°

COMMENTS
EB102700 associated w/ WHGLTA012WG13 & WHGLTA011WG13

Date Received 10/28/00
Courier: FX
Hand Delivered ☐
Bill of Lading attached

568 250 Best Available Copy

Severn Trent Laboratories Chicago
GC/MS Case Narrative

AFC001 – 33DDA
STL# 9A10G899
VOA DATA:

1 All of the samples were analyzed within the 14-day hold time from the date of collection.

2. All Method Blank target compounds were below reporting limits.

3. The QC limits specified in the QAPP were used to evaluate QC acceptance. The compound Vinyl acetate was not specified in the QAPP as a QC control compound. At the client's request, Vinyl acetate was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recoveries were above the QC limits for 1-Chlorohexene in the LCS (Laboratory Control Sample) samples 80GVC299-MB1 BS, 80GVC301-MB1 BS and 80GVC303-MB1 BS. The spike recovery was also above the QC limits for 1,1-Dichloropropene in the LCS sample 80GVC301-MB1 BS. Since the spike recoveries were above the QC limits and these compounds were not detected in the associated samples, further corrective action was not performed All of the other spike recoveries were within the QC limits in the LCS samples.

4 Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set.

5. The sample 9A10899-008 had two surrogate recoveries outside of the QC limits and was reanalyzed. The reanalyzed sample 9A10G899-008 RE exhibited the same surrogate recoveries outside of QC limits. Further corrective action was not required. All of the other volatile samples had surrogate recoveries within the QAPP specified QC limits.

6. The water samples were prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The target compounds were quantitated using the initial calibration.

7. All internal standard areas and retention times were within SOP acceptance limits as compared to the corresponding continuing calibration standard.

8 The water samples were initially analyzed without dilution using a 25-mL purge volume. Secondary dilutions for target compounds were performed on the samples 9A10G899-006 (1/100) and 007 (1/25)

Gregory L. Goodwin
GC/MS Section Manager

11/27/00
Date

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB102700

Lab Name: STS CHICAGO Contract:

Lab Code. Case No.: SAS No.: SDG No.: U10899

Matrix: (soil/water) WATER Lab Sample ID: 9A10G899-001

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSB01

Level (low/med) LOW Date Received: 10/28/00

% Moisture: not dec _____ Date Analyzed: 11/07/00

Column. (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1.1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1.2-Dichloroethene	0.5	U
75-34-3	1.1-Dichloroethane	0 4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1.2-Dichloroethene	0 5	U
594-20-7	2.2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0 4	U
67-66-3	Chloroform	0 3	U
71-55-6	1.1.1-Trichloroethane	0.5	U
563-58-6	1.1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1.2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1.2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1.3-Dichloropropene	0.5	U
79-00-5	1.1.2-Trichloroethane	0.5	U
142-28-9	1.3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1.2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB102700

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.. SAS No.: SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID. 9A10G899-001

Sample wt/vol. 25 00 (g/mL) ML Lab File ID. JSB01

Level: (low/med) LOW Date Received 10/28/00

% Moisture: not dec. _____ Date Analyzed: 11/07/00

Column (pack/cap) CAP Dilution Factor. 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0 4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0 5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0 5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0 3	U
96-18-4	1,2,3-Trichloropropane	0 5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0 5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	0 5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0 5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0 3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0 4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TB102700

Lab Name STS CHICAGO Contract:

Lab Code: Case No : SAS No.: SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID. 9A10G899-001

Sample wt/vol. 25.00 (g/mL) ML Lab File ID. JSB01

Level: (low/med) LOW Date Received. 10/28/00

% Moisture: not dec _____ Date Analyzed. 11/07/00

GC Column CAP ID 0 53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found. 2

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	UNKNOWN SILOXANE	23.62	2	J
2	UNKNOWN SILANE	28 00	2	J
3				
4				
5				
6				
7				
8				
9				
10				
11.				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21.				
22.				
23.				
24				
25				
26				
27.				
28				
29				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SD13-02WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10899

Matrix. (soil/water) WATER Lab Sample ID: 9A10G899-002

Sample wt/vol: 25 00 (g/mL) ML Lab File ID. JSB02

Level (low/med) LOW Date Received· 10/28/00

% Moisture: not dec. _____ Date Analyzed. 11/07/00

Column (pack/cap) CAP Dilution Factor. 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0 5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0 5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0 3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.7	
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0 5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SD13-02WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.. U10899

Matrix: (soil/water) WATER Lab Sample ID: 9A10G899-002

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSB02

Level: (low/med) LOW Date Received: 10/28/00

% Moisture: not dec _____ Date Analyzed 11/07/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	1	
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 568 257

SD13-02WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No : SAS No.: SDG No.: U10899

Matrix. (soil/water) WATER Lab Sample ID. 9A10G899-002

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSB02

Level: (low/med) LOW Date Received: 10/28/00

% Moisture: not dec _____ Date Analyzed· 11/07/00

GC Column CAP ID 0.53 (mm) Dilution Factor. 1 0

Soil Extract Volume _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found 5

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1	UNKNOWN KETONE	11.40	4	J
2 560-21-4	PENTANE, 2,3,3-TRIMETHYL-	16.91	7	NJ
3. 135-01-3	BENZENE, 1,2-DIETHYL-	26.83	2	NJ
4.	UNKNOWN CYCLOALKANE	27 96	2	J
5	UNKNOWN	28 32	3	J
6				
7				
8				
9				
10.				
11.				
12				
13				
14.				
15.				
16				
17				
18.				
19				
20.				
21				
22.				
23.				
24.				
25.				
26.				
27				
28.				
29				
30				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-W11WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID 9A10G899-003

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSB03

Level: (low/med) LOW Date Received: 10/28/00

% Moisture: not dec _____ Date Analyzed: 11/07/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 568 259

ST14-W11WG13

L ame: STS CHICAGO Contract:

Lab Code: Case No.. SAS No.. SDG No.: U10899

Matrix· (soil/water) WATER Lab Sample ID: 9A10G899-003

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: JSB03

Level· (low/med) LOW Date Received: 10/28/00

% Moisture: not dec. _____ Date Analyzed: 11/07/00

Column (pack/cap) CAP Dilution Factor. 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0 4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0 3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0 5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0 5	U
95-50-1	1,2-Dichlorobenzene	0 3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0 5	U
91-20-3	Naphthalene	0 5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ST14-W11WG13

Lab Name. STS CHICAGO Contract:

Lab Code: Case No : SAS No.: SDG No : U10899

Matrix (soil/water) WATER Lab Sample ID 9A10G899-003

Sample wt/vol: 25.00 (g/mL) ML Lab File ID· JSB03

Level. (low/med) LOW Date Received· 10/28/00

% Moisture not dec _____ Date Analyzed: 11/07/00

GC Column: CAP ID 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found 5

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	DIMETHYLPENTANE ISOMER	13.09	2	J
2	TRIMETHYLPENTANE ISOMER	14.80	42	J
3	DIMETHYLHEXANE ISOMER	16.03	3	J
4	TRIMETHYLPENTANE ISOMER	16.71	13	J
5.	TRIMETHYLHEXANE ISOMER	17 61	16	J
6.				
7.				
8				
9				
10				
11				
12				
13				
14				
15				
16.				
17				
18				
19				
20				
21.				
22.				
23				
24				
25				
26				
27				
28.				
29				
30				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP07WG13

Name: STS CHICAGO Contract:

Lab Code Case No.: SAS No.: SDG No.: U10899

Matrix: (soil/water) WATER Lab Sample ID: 9A10G899-004

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSB04

Level: (low/med) LOW Date Received: 10/28/00

% Moisture: not dec. _____ Date Analyzed 11/07/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0 5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0 5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0 3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0 5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0 5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0 5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0 5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP07WG13

Lab Name STS CHICAGO Contract:

Lab Code: Case No : SAS No.: SDG No.: U10899

Matrix: (soil/water) WATER Lab Sample ID: 9A10G899-004

Sample wt/vol: 25.00 (g/mL) ML Lab File ID. JSB04

Level: (low/med) LOW Date Received: 10/28/00

% Moisture: not dec _____ Date Analyzed. 11/07/00

Column. (pack/cap) CAP Dilution Factor. 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0 4	U
630-20-6	1,1,1,2-Tetrachloroethane	0 5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0 5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0 5	U
98-82-8	Isopropylbenzene	0.7	
79-34-5	1,1,2,2-Tetrachloroethane	0 5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0 4	U
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0 5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	3	
95-63-6	1,2,4-Trimethylbenzene	0 5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0 3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0 4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0 5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DUP07WG13

Name. STS CHICAGO Contract:

Lab Code: Case No · SAS No.· SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID· 9A10G899-004

Sample wt/vol· 25.00 (g/mL) ML Lab File ID: JSB04

Level. (low/med) LOW Date Received· 10/28/00

% Moisture· not dec _____ Date Analyzed· 11/07/00

GC Column· CAP ID. 0.53 (mm) Dilution Factor. 1 0

Soil Extract Volume._____(uL) Soil Aliquot Volume· _____(uL)

Number TICs found 5

CONCENTRATION UNITS·
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	DIMETHYLBUTANE ISOMER	11.41	17	J
2.	DIMETHYLPENTANE ISOMER	13.08	5	J
3	TETRAMETHYLBUTANE ISOMER	14.80	18	J
4	TETRAMETHYLBUTANE ISOMER	16.21	3	J
5	TRIMETHYLPENTANE ISOMER	16 71	4	J
6				
7				
8				
9.				
10.				
11				
12.				
13				
14				
15.				
16				
17				
18.				
19				
20				
21.				
22				
23				
24.				
25				
26.				
27				
28.				
29				
30				

568 264

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-03WG13

Lab Name: STS CHICAGO Contract:

Lab Code. Case No.: SAS No.: SDG No.: U10899

Matrix· (soil/water) WATER Lab Sample ID 9A10G899-005

Sample wt/vol 25.00 (g/mL) ML Lab File ID: JSB05

Level (low/med) LOW Date Received. 10/28/00

% Moisture· not dec _____ Date Analyzed: 11/07/00

Column. (pack/cap) CAP Dilution Factor: 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0 5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0 5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0 5	U
594-20-7	2,2-Dichloropropane	0 5	U
74-97-5	Bromochloromethane	0 4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0 5	U
79-00-5	1,1,2-Trichloroethane	0 5	U
142-28-9	1,3-Dichloropropane	0 4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0 5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-03WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No : SAS No.: SDG No.: U10899

Matrix: (soil/water) WATER Lab Sample ID. 9A10G899-005

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: JSB05

Level: (low/med) LOW Date Received. 10/28/00

% Moisture: not dec. _____ Date Analyzed· 11/07/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0 4	U
630-20-6	1.1.1,2-Tetrachloroethane	0 5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0 5	U
98-82-8	Isopropylbenzene	0.7	
79-34-5	1.1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0 5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	3	
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0 5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0 3	U
104-51-8	n-Butylbenzene	0 5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0 5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ST14-03WG13

Lab Name. STS CHICAGO Contract.

Lab Code: Case No.. SAS No. SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID 9A10G899-005

Sample wt/vol: 25.00 (g/mL) ML Lab File ID. JSB05

Level· (low/med) LOW Date Received 10/28/00

% Moisture: not dec _____ Date Analyzed· 11/07/00

GC Column· CAP ID 0.53 (mm) Dilution Factor· 1.0

Soil Extract Volume _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found 5

CONCENTRATION UNITS.
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	DIMETHYLBUTANE ISOMER	11.40	17	J
2	DIMETHYLPENTANE ISOMER	13 08	5	J
3	TRIMETHYLPENTANE ISOMER	14 79	19	J
4	TRIMETHYLPENTANE ISOMER	16.20	3	J
5	ETHYLPENTANE ISOMER	16 71	4	J
6.				
7.				
8				
9.				
10				
11.				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24.				
25				
26.				
27				
28				
29				
30				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB102700

Name. STS CHICAGO Contract·

Lab Code Case No.: SAS No.: SDG No.. U10899

Matrix (soil/water) WATER Lab Sample ID: 9A10G899-009

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: JSB14

Level: (low/med) LOW Date Received 10/28/00

% Moisture: not dec _____ Date Analyzed· 11/09/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0 5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0 5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0 5	U
594-20-7	2,2-Dichloropropane	0 5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0 5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0 5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0 5	U
142-28-9	1,3-Dichloropropane	0 4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0 5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EB102700

Lab Name: STS CHICAGO Contract.

Lab Code Case No. SAS No.: SDG No.: U10899

Matrix. (soil/water) WATER Lab Sample ID: 9A10G899-009

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: JSB14

Level (low/med) LOW Date Received: 10/28/00

% Moisture: not dec _____ Date Analyzed: 11/09/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0 5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB102700

Lab Name: STS CHICAGO Contract:

Lab Code: Case No : SAS No : SDG No : U10899

Matrix. (soil/water) WATER Lab Sample ID: 9A10G899-009

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: JSB14

Level (low/med) LOW Date Received: 10/28/00

% Moisture: not dec _____ Date Analyzed: 11/09/00

GC Column: CAP ID: 0 53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	110-54-3	HEXANE	12.31	2	NJ
2.		DIMETHYL NAPHTHALENE ISOMER	22.63	2	J
3.		DIMETHYL NAPHTHALENE ISOMER	25.38	2	J
4.					
5.					
6					
7					
8					
9					
10					
11					
12					
13.					
14					
15					
16					
17.					
18.					
19.					
20.					
21.					
22.					
23					
24					
25					
26.					
27.					
28					
29					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

VBLKDT

Lab Name STS CHICAGO Contract·

Lab Code· Case No. SAS No.. SDG No.: U10899

Matrix. (soil/water) WATER Lab Sample ID. 80GVC299-MB1

Sample wt/vol. 25.00 (g/mL) ML Lab File ID. MC1106

Level· (low/med) LOW Date Received: 11/06/00

% Moisture· not dec _____ Date Analyzed: 11/06/00

Column· (pack/cap) CAP Dilution Factor: 1 0

CAS NO.	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0 5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0 5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0 3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0 5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0 5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKDT

Name. STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10899

Matrix· (soil/water) WATER Lab Sample ID· 80GVC299-MB1

Sample wt/vol: 25 00 (g/mL) ML Lab File ID. MC1106

Level· (low/med) LOW Date Received· 11/06/00

% Moisture· not dec. _____ Date Analyzed. 11/06/00

Column· (pack/cap) CAP Dilution Factor· 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0 5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0 5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0 5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0 4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKDT

Lab Name: STS CHICAGO Contract:

Lab Code. Case No.: SAS No.: SDG No : U10899

Matrix (soil/water) WATER Lab Sample ID: 80GVC299-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: MC1106

Level. (low/med) LOW Date Received. 11/06/00

% Moisture: not dec. _____ Date Analyzed 11/06/00

GC Column: CAP ID 0 53 (mm) Dilution Factor. 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found. 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1.					
2.					
3					
4					
5.					
6.					
7					
8					
9.					
10.					
11					
12.					
13					
14.					
15					
16					
17					
18					
19					
20					
21					
22.					
23.					
24					
25.					
26					
27					
28.					
29					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJH

Name: STS CHICAGO Contract:

Lab Code. Case No.. SAS No.: SDG No.: U10899

Matrix. (soil/water) WATER Lab Sample ID: 80GVC301-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: MA1108

Level: (low/med) LOW Date Received 11/08/00

% Moisture not dec _____ Date Analyzed: 11/08/00

Column: (pack/cap) CAP Dilution Factor: 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0 5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0 5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0 5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0 5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJH

Lab Name. STS CHICAGO Contract:

Lab Code. Case No.: SAS No.: SDG No.: U10899

Matrix. (soil/water) WATER Lab Sample ID: 80GVC301-MB1

Sample wt/vol 25 00 (g/mL) ML Lab File ID: MA1108

Level. (low/med) LOW Date Received: 11/08/00

% Moisture: not dec _____ Date Analyzed: 11/08/00

Column. (pack/cap) CAP Dilution Factor: 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0 5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0 3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	0 5	U
95-63-6	1,2,4-Trimethylbenzene	0 5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0 3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJH

Name. STS CHICAGO Contract:

Lab Code: Case No. SAS No.: SDG No : U10899

Matrix· (soil/water) WATER Lab Sample ID. 80GVC301-MB1

Sample wt/vol 25 00 (g/mL) ML Lab File ID· MA1108

Level· (low/med) LOW Date Received 11/08/00

% Moisture: not dec. _____ Date Analyzed 11/08/00

GC Column· CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume·_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found. 0

CONCENTRATION UNITS.
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1					
2.					
3.					
4					
5					
6					
7					
8					
9.					
10.					
11					
12					
13.					
14					
15.					
16.					
17.					
18					
19					
20.					
21.					
22					
23					
24.					
25					
26					
27.					
28					
29					
30					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKEL

Lab Name: STS CHICAGO Contract:

Lab Code: Case No. SAS No.: SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID. 80GVC303-MB1

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: MD1108

Level. (low/med) LOW Date Received. 11/08/00

% Moisture: not dec. _____ Date Analyzed 11/08/00

Column (pack/cap) CAP Dilution Factor. 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0 5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0 5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0 5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

VBLKEL

Lab Name: STS CHICAGO Contract

Lab Code. Case No.: SAS No.: SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID. 80GVC303-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: MD1108

Level. (low/med) LOW Date Received: 11/08/00

% Moisture: not dec. _____ Date Analyzed 11/08/00

Column: (pack/cap) CAP Dilution Factor. 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0 5	U
100-42-5	Styrene	0 4	U
75-25-2	Bromoform	0 5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0 5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0 5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0 5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0 5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0 5	U
87-61-6	1,2,3-Trichlorobenzene	0 5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKEL

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID: 80GVC303-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID. MD1108

Level (low/med) LOW Date Received 11/08/00

% Moisture: not dec _____ Date Analyzed: 11/08/00

GC Column CAP ID 0.53 (mm) Dilution Factor. 1.0

Soil Extract Volume _____(uL) Soil Aliquot Volume. _____(uL)

Number TICs found 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				
2.				
3.				
4.				
5				
6.				
7				
8				
9.				
10				
11				
12				
13				
14				
15				
16.				
17				
18				
19.				
20.				
21.				
22.				
23				
24				
25				
26.				
27.				
28				
29.				
30				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKDTBS

Name: STS CHICAGO Contract:

Lab Code: Case No.. SAS No.. SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID. 80GVC299-MB1S

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: MD1106

Level. (low/med) LOW Date Received: 11/06/00

% Moisture: not dec. _____ Date Analyzed 11/06/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	9	
74-87-3	Chloromethane	9	
75-01-4	Vinyl chloride	11	
74-83-9	Bromomethane	12	
75-00-3	Chloroethane	12	
75-69-4	Trichlorofluoromethane	10	
75-35-4	1,1-Dichloroethene	11	
75-09-2	Methylene chloride	8	
1634-04-4	Methyl-tert-Butyl Ether	10	
156-60-5	trans-1,2-Dichloroethene	11	
75-34-3	1,1-Dichloroethane	11	
108-05-4	Vinyl Acetate	14	
156-59-2	cis-1,2-Dichloroethene	11	
594-20-7	2,2-Dichloropropane	11	
74-97-5	Bromochloromethane	11	
67-66-3	Chloroform	11	
71-55-6	1,1,1-Trichloroethane	10	
563-58-6	1,1-Dichloropropene	12	
56-23-5	Carbon tetrachloride	10	
71-43-2	Benzene	10	
107-06-2	1,2-Dichloroethane	10	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	10	
74-95-3	Dibromomethane	10	
75-27-4	Bromodichloromethane	10	
10061-01-5	cis-1,3-Dichloropropene	11	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	10	
79-00-5	1,1,2-Trichloroethane	11	
142-28-9	1,3-Dichloropropane	10	
127-18-4	Tetrachloroethene	9	
124-48-1	Dibromochloromethane	10	
106-93-4	1,2-Dibromoethane	10	
544-10-5	1-Chlorohexane	15	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKDTBS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10899

Matrix (soil/water) WATER Lab Sample ID. 80GVC299-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: MD1106

Level: (low/med) LOW Date Received. 11/06/00

% Moisture. not dec. _____ Date Analyzed· 11/06/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	10	
630-20-6	1,1,1,2-Tetrachloroethane	10	
100-41-4	Ethylbenzene	9	
136777-612	p,m-Xylene	19	
95-47-6	o-Xylene	10	
100-42-5	Styrene	10	
75-25-2	Bromoform	10	
98-82-8	Isopropylbenzene	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-86-1	Bromobenzene	10	
96-18-4	1,2,3-Trichloropropane	10	
103-65-1	n-Propylbenzene	10	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	10	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	10	
95-63-6	1,2,4-Trimethylbenzene	10	
135-98-8	sec-Butylbenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
99-87-6	p-Isopropyltoluene	10	
106-46-7	1,4-Dichlorobenzene	10	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	10	
96-12-8	1,2-Dibromo-3-Chloropropane	10	
120-82-1	1,2,4-Trichlorobenzene	10	
87-68-3	Hexachlorobutadiene	10	
91-20-3	Naphthalene	10	
87-61-6	1,2,3-Trichlorobenzene	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 568 281

VBLKJHBS

L ame· STS CHICAGO Contract·

Lab Code: Case No.: SAS No.: SDG No.. U10899

Matrix (soil/water) WATER Lab Sample ID: 80GVC301-MB1S

Sample wt/vol. 25 00 (g/mL) ML Lab File ID: MB1108

Level: (low/med) LOW Date Received: 11/08/00

% Moisture· not dec. _____ Date Analyzed: 11/08/00

Column (pack/cap) CAP Dilution Factor. 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	8	
74-87-3	Chloromethane	9	
75-01-4	Vinyl chloride	11	
74-83-9	Bromomethane	12	
75-00-3	Chloroethane	11	
75-69-4	Trichlorofluoromethane	9	
75-35-4	1,1-Dichloroethene	12	
75-09-2	Methylene chloride	9	
1634-04-4	Methyl-tert-Butyl Ether	9	
156-60-5	trans-1,2-Dichloroethene	12	
75-34-3	1,1-Dichloroethane	12	
108-05-4	Vinyl Acetate	15	
156-59-2	cis-1,2-Dichloroethene	12	
594-20-7	2,2-Dichloropropane	11	
74-97-5	Bromochloromethane	11	
67-66-3	Chloroform	11	
71-55-6	1,1,1-Trichloroethane	10	
563-58-6	1,1-Dichloropropene	13	
56-23-5	Carbon tetrachloride	10	
71-43-2	Benzene	10	
107-06-2	1,2-Dichloroethane	9	
79-01-6	Trichloroethene	10	
78-87-5	1,2-Dichloropropane	10	
74-95-3	Dibromomethane	10	
75-27-4	Bromodichloromethane	10	
10061-01-5	cis-1,3-Dichloropropene	11	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	10	
79-00-5	1,1,2-Trichloroethane	11	
142-28-9	1,3-Dichloropropane	10	
127-18-4	Tetrachloroethene	9	
124-48-1	Dibromochloromethane	10	
106-93-4	1,2-Dibromoethane	10	
544-10-5	1-Chlorohexane	14	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJHBS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No : SDG No.. U10899

Matrix (soil/water) WATER Lab Sample ID 80GVC301-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: MB1108

Level. (low/med) LOW Date Received: 11/08/00

% Moisture. not dec _____ Date Analyzed 11/08/00

Column. (pack/cap) CAP Dilution Factor. 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	10	
630-20-6	1,1,1,2-Tetrachloroethane	10	
100-41-4	Ethylbenzene	10	
136777-612	p,m-Xylene	20	
95-47-6	o-Xylene	10	
100-42-5	Styrene	11	
75-25-2	Bromoform	10	
98-82-8	Isopropylbenzene	11	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-86-1	Bromobenzene	10	
96-18-4	1,2,3-Trichloropropane	10	
103-65-1	n-Propylbenzene	10	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	11	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	11	
95-63-6	1,2,4-Trimethylbenzene	11	
135-98-8	sec-Butylbenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
99-87-6	p-Isopropyltoluene	11	
106-46-7	1,4-Dichlorobenzene	10	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	10	
96-12-8	1,2-Dibromo-3-Chloropropane	10	
120-82-1	1,2,4-Trichlorobenzene	10	
87-68-3	Hexachlorobutadiene	10	
91-20-3	Naphthalene	10	
87-61-6	1,2,3-Trichlorobenzene	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKELBS

Name. STS CHICAGO Contract:

Lab Code· Case No.: SAS No.· SDG No.: U10899

Matrix. (soil/water) WATER Lab Sample ID. 80GVC303-MB1S

Sample wt/vol: 25 00 (g/mL) ML Lab File ID· ME1108

Level (low/med) LOW Date Received: 11/08/00

% Moisture not dec _____ Date Analyzed· 11/08/00

Column· (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	7	
74-87-3	Chloromethane	9	
75-01-4	Vinyl chloride	11	
74-83-9	Bromomethane	11	
75-00-3	Chloroethane	12	
75-69-4	Trichlorofluoromethane	8	
75-35-4	1,1-Dichloroethene	10	
75-09-2	Methylene chloride	8	
1634-04-4	Methyl-tert-Butyl Ether	9	
156-60-5	trans-1,2-Dichloroethene	10	
75-34-3	1,1-Dichloroethane	10	
108-05-4	Vinyl Acetate	13	
156-59-2	cis-1,2-Dichloroethene	10	
594-20-7	2,2-Dichloropropane	9	
74-97-5	Bromochloromethane	10	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
563-58-6	1,1-Dichloropropene	11	
56-23-5	Carbon tetrachloride	8	
71-43-2	Benzene	8	
107-06-2	1,2-Dichloroethane	8	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	9	
74-95-3	Dibromomethane	8	
75-27-4	Bromodichloromethane	8	
10061-01-5	cis-1,3-Dichloropropene	9	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	8	
79-00-5	1,1,2-Trichloroethane	10	
142-28-9	1,3-Dichloropropane	9	
127-18-4	Tetrachloroethene	8	
124-48-1	Dibromochloromethane	8	
106-93-4	1,2-Dibromoethane	9	
544-10-5	1-Chlorohexane	13	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKELBS

Lab Name. STS CHICAGO Contract.

Lab Code: Case No.: SAS No.: SDG No.: U10899

Matrix: (soil/water) WATER Lab Sample ID. 80GVC303-MB1S

Sample wt/vol 25.00 (g/mL) ML Lab File ID: ME1108

Level (low/med) LOW Date Received: 11/08/00

% Moisture not dec _____ Date Analyzed: 11/08/00

Column: (pack/cap) CAP Dilution Factor 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	9	
630-20-6	1,1,1,2-Tetrachloroethane	9	
100-41-4	Ethylbenzene	9	
136777-612	p,m-Xylene	17	
95-47-6	o-Xylene	8	
100-42-5	Styrene	9	
75-25-2	Bromoform	8	
98-82-8	Isopropylbenzene	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-86-1	Bromobenzene	9	
96-18-4	1,2,3-Trichloropropane	10	
103-65-1	n-Propylbenzene	9	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	10	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	10	
95-63-6	1,2,4-Trimethylbenzene	10	
135-98-8	sec-Butylbenzene	9	
541-73-1	1,3-Dichlorobenzene	9	
99-87-6	p-Isopropyltoluene	10	
106-46-7	1,4-Dichlorobenzene	9	
104-51-8	n-Butylbenzene	9	
95-50-1	1,2-Dichlorobenzene	9	
96-12-8	1,2-Dibromo-3-Chloropropane	9	
120-82-1	1,2,4-Trichlorobenzene	9	
87-68-3	Hexachlorobutadiene	9	
91-20-3	Naphthalene	9	
87-61-6	1,2,3-Trichlorobenzene	9	

SEVERN
TRENT
SERVICES

STL Chicago
2417 Bond Street
University Park, IL 60466

Tel 708 534 5200
Fax 708 534 5211
www stl-inc com

November 27, 2000

Ms. Kim Evers
HydroGeoLogic, Inc
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

received
11-26-00

RE· AFC001-33DDA
Analytical Report
Lot 9A10G904

Dear Ms Evers

The enclosed summary report is for the project and lot number listed above. The volatile results will be reported on form 1s instead of a spreadsheet format due to LIMS limitations. The EDD and error report will be transferred via E-mail when completed. If you have any questions, please contact me at 708-534-5200

Sincerely,

Severn Trent Laboratories

Donna Ingersoll
Project Manager

pmb

Enclosures Summary Report

CLP Report & Data Summary-Nancy Weaver /EDS

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested All pages of this report are integral parts of the analytical data Therefore, this report should be reproduced only in its entirety

Severn Trent Laboratories Chicago
8260 ANALYTICAL DATA PACKAGE FOR
AFC001-33DDA

LOT # 9A10G904

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB103000	001	W	80GVC301	10/30/00	10/31/00	N/A	11/08/00
EB103000	002	W	80GVC301	10/30/00	10/31/00	N/A	11/08/00
ST14-27WG13	003	W	80GVC301	10/30/00	10/31/00	N/A	11/08/00
ST14-W16WG13	004	W	80GVF371	10/30/00	10/31/00	N/A	11/10/00
ST14-W16WG13	004 MS	W	80GVF371	10/30/00	10/31/00	N/A	11/10/00
ST14-W16WG13	004 MSD	W	80GVF371	10/30/00	10/31/00	N/A	11/10/00
WCHMHTA008WG13	005	W	80GVC301	10/30/00	10/31/00	N/A	11/08/00
WCHMHTA008WG13	005 D1	W	80GVF371	10/30/00	10/31/00	N/A	11/10/00
LAB QC.							
VBLKJH	MB1	W	80GVC301	N/A	N/A	N/A	11/08/00
VBLKJH	MB1 BS	W	80GVC301	N/A	N/A	N/A	11/08/00
VBLKJD	MB1	W	80GVF371	N/A	N/A	N/A	11/10/00
VBLKJD	MB1 BS	W	80GVF371	N/A	N/A	N/A	11/10/00

NY CERTIFICATION # 11006

AFCEE / LCI Line
int. COC
EOD

SEVERN TRENT SERVICES

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone 708-534-5200
Fax 708-534-5211

Report To:
Contact: Jim Evans
Company: Hydrogeologic
Address: 1155 Herndon Pkwy
Suite 100, Herndon VA 20170
Phone: 703/478-5166
Fax: 703/471-4164
E-Mail: [illegible]

Bill To:
Contact: (same)
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab L t# 9A10[illegible]704

Package Sealed: Yes (circled) No	Samples Sealed: Yes No (circled)
Received on Ice: Yes (circled) No	Samples Intact: Yes (circled) No
Temperature °C of Cooler: 4.0	
Within Hold Time: Yes (circled) No	Preserv. Indicated: Yes (circled) No NA
pH Check OK: Yes No NA (circled)	Res Cl_2 Check OK: Yes No NA (circled)
Sample Labels and COC Agree: Yes (circled) No	COC not present

Sampler Name: Kent Dixon
Signature: Kent Dixon
Project Name: October 2000 AFCEE01 - Quarterly
Project Number: AFCEE01-33DDA
Project Location: Lackland AFB, Texas
Lab PM: Denise Jaqueson
Date Required Hard Copy: __/__/__ Fax: __/__/__

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	# / Cont. (Volatiles / Semivolatiles)
001		TB103000	10/30/00	0530	W	G	2
002		EB103000	10/30/00	1733	W	G	3
003		ST14-27WG13	10/30/00	1406	WG	G	3
004		ST14-W16WG13	10/30/00	1238	WG	G	3
1		ST14-W16WG13MS	10/30/00	1238	WG	G	3
—		ST14-W16WG13MSD	10/30/00	1238	WG	G	3
005		WKHMHTAQ#WG13	10/30/00	1624	WG	G	3

Refrg #: | Volume: 40mL | Preserv: 1

Additional Analyses / Remarks

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	[illegible]	[illegible]	[illegible]	[signature]	STL	10/31/00	1000
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl, Cool to 4
2 H2SO4, Cool to 4°
3 HNO3, Cool to 4
4 NaOH, Cool to 4
5 NaOH/Zn, Cool to 4°
6 Cool to 4°
7 None

COMMENTS
EB103000 Associated w/ ST14-27 & WKHMHTAQ#WG13 only

Date Received: 10/31/00
Courier: FX
Hand Delivered: |
Bill of Lading: attached

568 287

STL Chicago is a part of Severn Trent Laboratories, Inc

STL 8208 (0600)

Severn Trent Laboratories Chicago
GC/MS Case Narrative

AFC001 – 33DDA
STL# 9A10G904
VOA DATA:

1. All of the samples were analyzed within the 14-day hold time from the date of collection.

2. All Method Blank target compounds were below reporting limits.

3. The QC limits specified in the QAPP were used to evaluate QC acceptance. The compound Vinyl acetate was not specified in the QAPP as a QC control compound. At the client's request, Vinyl acetate was given QC limits of 0-0% and the flags on this compound have no QC significance. The LCS (Laboratory Control Sample) sample 80GVC301-MB1 BS had the spike recoveries for 1,1-Dichloropropene and 1-Chlorohexene above the QC limits. Since the spike recoveries were above the QC limits and this compound was not detected in the associated samples, further corrective action was not performed. The LCS sample 80GVF371-MB1 BS had the spike recoveries for Methylene chloride, Methyl-tert-butyl ether and Naphthalene below the QC limits and 1-Chlorohexene above the QC limits. The results for these compounds in the associated samples could be considered slightly biased. Further corrective action was not performed.

4. Matrix Spike/Matrix Spike Duplicate analyses was performed on the sample 9A10G904-004 The QC limits specified in the QAPP were used to evaluate QC acceptance. The compound Vinyl acetate was not specified in the QAPP as a QC control compound At the client's request, Vinyl acetate was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recoveries w below the QC limits for Methylene chloride and Methyl-tert-butyl ether in the sample 9A10G904-004 MS. The spike recovery was below the QC limits for Methylene chloride and above the QC limits for 1-Chlorohexene in the sample 9A10G904-004 MSD There were four RPD values above the QC limits in the samples 9A10G904-004 MS/MSD. Further corrective action was not performed

5. All of the volatile samples had surrogate recoveries within the QAPP specified QC limits.

6. The water samples were prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits The target compounds were quantitated using the initial calibration.

7 All internal standard areas and retention times were within SOP acceptance limits as compared to the corresponding continuing calibration standard

8 The water samples were analyzed without dilution using a 25-mL purge volume. A secondary dilution for target compounds was performed on the sample 9A10G904-005 (1/25).

Gregory L. Goodwin
GC/MS Section Manager

11/27/00
Date

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB103000

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix. (soil/water) WATER Lab Sample ID: 9A10G904-001

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE01

Level. (low/med) LOW Date Received· 10/31/00

% Moisture: not dec. _____ Date Analyzed: 11/08/00

Column· (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0 4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0 5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0 3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0 5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB103000

Lab Name. STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID. 9A10G904-001

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE01

Level: (low/med) LOW Date Received: 10/31/00

% Moisture: not dec. _____ Date Analyzed. 11/08/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0 5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0 5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0 5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0 5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TB103000

Name: STS CHICAGO Contract.

Lab Code. Case No.: SAS No.. SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID: 9A10G904-001

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE01

Level· (low/med) LOW Date Received· 10/31/00

% Moisture: not dec _____ Date Analyzed· 11/08/00

GC Column. CAP ID: 0.53 (mm) Dilution Factor. 1.0

Soil Extract Volume._____(uL) Soil Aliquot Volume· _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1.				
2.				
3				
4.				
5.				
6.				
7				
8				
9.				
10.				
11				
12.				
13				
14.				
15.				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26.				
27				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB103000

Lab Name: STS CHICAGO Contract:

Lab Code. Case No.: SAS No.: SDG No.: U10904

Matrix (soil/water) WATER Lab Sample ID: 9A10G904-002

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE02

Level: (low/med) LOW Date Received: 10/31/00

% Moisture: not dec _____ Date Analyzed: 11/08/00

Column (pack/cap) CAP Dilution Factor: 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0 5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0 5	U
108-88-3	Toluene	0 5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB103000

Lab Name. STS CHICAGO Contract.

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix (soil/water) WATER Lab Sample ID: 9A10G904-002

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE02

Level. (low/med) LOW Date Received 10/31/00

% Moisture not dec. _____ Date Analyzed: 11/08/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0 4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0 5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0 5	U
95-63-6	1,2,4-Trimethylbenzene	0 5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0 4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

568 294

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB103000

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.. SAS No.: SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID: 9A10G904-002

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE02

Level: (low/med) LOW Date Received: 10/31/00

% Moisture: not dec. _____ Date Analyzed: 11/08/00

GC Column: CAP ID. 0 53 (mm) Dilution Factor. 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 4

CONCENTRATION UNITS.
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1	METHYLPENTANE ISOMER	11 49	6	J
2.	UNKNOWN ALKANE	11 88	82	J
3. 110-54-3	HEXANE	12 37	640	NJ
4.	UNKNOWN CYCLOALKANE	13.20	260	J
5.				
6.				
7				
8.				
9				
10.				
11				
12.				
13				
14				
15.				
16.				
17				
18.				
19.				
20				
21.				
22				
23.				
24				
25				
26				
27				
28.				
29				
30				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-27WG13

Lab Name. STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix. (soil/water) WATER Lab Sample ID: 9A10G904-003

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: JSE03

Level: (low/med) LOW Date Received: 10/31/00

% Moisture: not dec _____ Date Analyzed: 11/08/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-27WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID 9A10G904-003

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE03

Level: (low/med) LOW Date Received: 10/31/00

% Moisture: not dec. _____ Date Analyzed: 11/08/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	3	
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 568 297

ST14-27WG13

Lab Name: STS CHICAGO Contract:

Lab Code. Case No.: SAS No.: SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID: 9A10G904-003

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE03

Level. (low/med) LOW Date Received: 10/31/00

% Moisture: not dec. _____ Date Analyzed. 11/08/00

GC Column. CAP ID. 0.53 (mm) Dilution Factor. 1 0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found 4

CONCENTRATION UNITS.
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1. 110-54-3	HEXANE	12 30	0 9	NJ
2.	UNKNOWN ALKANE	14.79	7	J
3	TRIMETHYLPENTANE ISOMER	16.70	2	J
4.	TRIMETHYLPENTANE ISOMER	16 91	2	J
5.				
6				
7				
8				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17				
18				
19				
20.				
21				
22				
23				
24.				
25.				
26.				
27				
28.				
29.				
30				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-W16WG13

Lab Name. STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix (soil/water) WATER Lab Sample ID: 9A10G904-004

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: JSE06

Level. (low/med) LOW Date Received· 10/31/00

% Moisture: not dec. _____ Date Analyzed· 11/10/00

Column (pack/cap) CAP Dilution Factor: 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	
1634-04-4	Methyl-tert-Butyl Ether	0 5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	1	
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-W16WG13

Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID. 9A10G904-004

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE06

Level (low/med) LOW Date Received. 10/31/00

% Moisture: not dec. _____ Date Analyzed. 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	7	
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	6	
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	5	
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	2	
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ST14-W16WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix (soil/water) WATER Lab Sample ID: 9A10G904-004

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE06

Level. (low/med) LOW Date Received: 10/31/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

GC Column. CAP ID: 0.53 (mm) Dilution Factor 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	METHYLBUTANE ISOMER	9 73	11	J
2	DIMETHYLPENTANE ISOMER	12.95	13	J
3.	DIMETHYLHEXANE ISOMER	14 98	9	J
4.	TRIMETHYLPENTANE ISOMER	15.52	49	J
5.	TRIMETHYLPENTANE ISOMER	15 69	90	J
6.				
7.				
8.				
9.				
10.				
11				
12				
13				
14				
15				
16.				
17.				
18.				
19				
20				
21.				
22.				
23.				
24				
25				
26.				
27.				
28.				
29				
30.				

FORM I VOA-TIC 1/87 Rev

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 568 301

VBLKJH

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No. U10904

Matrix. (soil/water) WATER Lab Sample ID: 80GVC301-MB1

Sample wt/vol 25 00 (g/mL) ML Lab File ID: MA1108

Level (low/med) LOW Date Received: 11/08/00

% Moisture. not dec _____ Date Analyzed: 11/08/00

Column· (pack/cap) CAP Dilution Factor 1 0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0 5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0 5	U
106-93-4	1,2-Dibromoethane	0 5	U
544-10-5	1-Chlorohexane	0 5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJH

Lab Name: STS CHICAGO Contract:

Lab Code: Case No. SAS No.. SDG No : U10904

Matrix: (soil/water) WATER Lab Sample ID: 80GVC301-MB1

Sample wt/vol 25.00 (g/mL) ML Lab File ID: MA1108

Level: (low/med) LOW Date Received 11/08/00

% Moisture: not dec. _____ Date Analyzed 11/08/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0 5	U
79-34-5	1,1,2,2-Tetrachloroethane	0 5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0 4	U
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	0 5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0 3	U
104-51-8	n-Butylbenzene	0 5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 568 303

VBLKJH

L. me· STS CHICAGO Contract:

Lab Code: Case No.: SAS No.. SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID: 80GVC301-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: MA1108

Level (low/med) LOW Date Received: 11/08/00

% Moisture. not dec _____ Date Analyzed 11/08/00

GC Column. CAP ID: 0 53 (mm) Dilution Factor: 1.0

Soil Extract Volume._____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found· 0

CONCENTRATION UNITS.
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1.				
2				
3				
4				
5.				
6.				
7				
8				
9.				
10				
11				
12				
13.				
14.				
15				
16.				
17				
18				
19				
20.				
21				
22				
23.				
24.				
25				
26.				
27.				
28				
29				
30				

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name STS CHICAGO Contract·

Lab Code. Case No.: SAS No.: SDG No.: U10904

Matrix. (soil/water) WATER Lab Sample ID: 80GVF371-MB1

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: PA1110

Level: (low/med) LOW Date Received· 11/10/00

% Moisture· not dec. _____ Date Analyzed: 11/10/00

Column. (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0 5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0 4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0 5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0 4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0 5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0 5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 568 305

VBLKJD

L ame: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID: 80GVF371-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PA1110

Level: (low/med) LOW Date Received: 11/10/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0 4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0 5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0 5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0 5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0 5	U
95-50-1	1,2-Dichlorobenzene	0 3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0 5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0 5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

568 306

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJD

Lab Name: STS CHICAGO Contract.

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix. (soil/water) WATER Lab Sample ID: 80GVF371-MB1

Sample wt/vol· 25.00 (g/mL) ML Lab File ID. PA1110

Level (low/med) LOW Date Received: 11/10/00

% Moisture· not dec _____ Date Analyzed: 11/10/00

GC Column CAP ID 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____(uL) Soil Aliquot Volume. _____(uL)

Number TICs found 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1					
2.					
3					
4					
5.					
6.					
7					
8					
9.					
10					
11					
12.					
13					
14.					
15.					
16					
17					
18.					
19					
20					
21					
22					
23.					
24.					
25					
26.					
27.					
28					
29					
30					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-W16WG13MS

L ame· STS CHICAGO Contract:

Lab Code· Case No.. SAS No.: SDG No.: U10904

Matrix (soil/water) WATER Lab Sample ID· 9A10G904-004S

Sample wt/vol 25.00 (g/mL) ML Lab File ID: JSE07

Level· (low/med) LOW Date Received. 10/31/00

% Moisture: not dec. _____ Date Analyzed: 11/10/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	6	
74-87-3	Chloromethane	6	
75-01-4	Vinyl chloride	8	
74-83-9	Bromomethane	9	
75-00-3	Chloroethane	9	
75-69-4	Trichlorofluoromethane	8	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene chloride	6	
1634-04-4	Methyl-tert-Butyl Ether	7	
156-60-5	trans-1,2-Dichloroethene	9	
75-34-3	1,1-Dichloroethane	9	
108-05-4	Vinyl Acetate	7	
156-59-2	cis-1,2-Dichloroethene	9	
594-20-7	2,2-Dichloropropane	9	
74-97-5	Bromochloromethane	8	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
563-58-6	1,1-Dichloropropene	10	
56-23-5	Carbon tetrachloride	9	
71-43-2	Benzene	11	
107-06-2	1,2-Dichloroethane	9	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	9	
74-95-3	Dibromomethane	9	
75-27-4	Bromodichloromethane	9	
10061-01-5	cis-1,3-Dichloropropene	9	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	8	
79-00-5	1,1,2-Trichloroethane	10	
142-28-9	1,3-Dichloropropane	9	
127-18-4	Tetrachloroethene	9	
124-48-1	Dibromochloromethane	9	
106-93-4	1,2-Dibromoethane	9	
544-10-5	1-Chlorohexane	12	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-W16WG13MS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.. U10904

Matrix (soil/water) WATER Lab Sample ID· 9A10G904-004S

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: JSE07

Level: (low/med) LOW Date Received· 10/31/00

% Moisture· not dec. _____ Date Analyzed. 11/10/00

Column (pack/cap) CAP Dilution Factor. 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	9	
630-20-6	1,1,1,2-Tetrachloroethane	9	
100-41-4	Ethylbenzene	9	
136777-612	p,m-Xylene	18	
95-47-6	o-Xylene	9	
100-42-5	Styrene	8	
75-25-2	Bromoform	9	
98-82-8	Isopropylbenzene	16	
79-34-5	1,1,2,2-Tetrachloroethane	9	
108-86-1	Bromobenzene	9	
96-18-4	1,2,3-Trichloropropane	9	
103-65-1	n-Propylbenzene	15	
95-49-8	2-Chlorotoluene	9	
108-67-8	1,3,5-Trimethylbenzene	9	
106-43-4	4-Chlorotoluene	9	
98-06-6	tert-Butylbenzene	13	
95-63-6	1,2,4-Trimethylbenzene	9	
135-98-8	sec-Butylbenzene	9	
541-73-1	1,3-Dichlorobenzene	9	
99-87-6	p-Isopropyltoluene	9	
106-46-7	1,4-Dichlorobenzene	9	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	9	
96-12-8	1,2-Dibromo-3-Chloropropane	8	
120-82-1	1,2,4-Trichlorobenzene	9	
87-68-3	Hexachlorobutadiene	10	
91-20-3	Naphthalene	10	
87-61-6	1,2,3-Trichlorobenzene	9	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ST14-W16WG13MSD

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No : SDG No.: U10904

Matrix. (soil/water) WATER Lab Sample ID. 9A10G904-004T

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: JSE08

Level. (low/med) LOW Date Received. 10/31/00

% Moisture: not dec. _____ Date Analyzed 11/10/00

Column. (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	6	
74-87-3	Chloromethane	8	
75-01-4	Vinyl chloride	9	
74-83-9	Bromomethane	11	
75-00-3	Chloroethane	10	
75-69-4	Trichlorofluoromethane	10	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene chloride	6	
1634-04-4	Methyl-tert-Butyl Ether	9	
156-60-5	trans-1,2-Dichloroethene	10	
75-34-3	1,1-Dichloroethane	10	
108-05-4	Vinyl Acetate	8	
156-59-2	cis-1,2-Dichloroethene	10	
594-20-7	2,2-Dichloropropane	10	
74-97-5	Bromochloromethane	10	
67-66-3	Chloroform	10	
71-55-6	1,1,1-Trichloroethane	10	
563-58-6	1,1-Dichloropropene	11	
56-23-5	Carbon tetrachloride	10	
71-43-2	Benzene	11	
107-06-2	1,2-Dichloroethane	10	
79-01-6	Trichloroethene	10	
78-87-5	1,2-Dichloropropane	10	
74-95-3	Dibromomethane	10	
75-27-4	Bromodichloromethane	10	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	11	
142-28-9	1,3-Dichloropropane	10	
127-18-4	Tetrachloroethene	10	
124-48-1	Dibromochloromethane	10	
106-93-4	1,2-Dibromoethane	10	
544-10-5	1-Chlorohexane	15	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ST14-W16WG13MSD

Lab Name: STS CHICAGO Contract.

Lab Code: Case No.: SAS No.: SDG No.. U10904

Matrix· (soil/water) WATER Lab Sample ID: 9A10G904-004T

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSE08

Level (low/med) LOW Date Received· 10/31/00

% Moisture: not dec. _____ Date Analyzed. 11/10/00

Column· (pack/cap) CAP Dilution Factor. 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	10	
630-20-6	1,1,1,2-Tetrachloroethane	10	
100-41-4	Ethylbenzene	10	
136777-612	p,m-Xylene	19	
95-47-6	o-Xylene	10	
100-42-5	Styrene	8	
75-25-2	Bromoform	10	
98-82-8	Isopropylbenzene	16	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-86-1	Bromobenzene	10	
96-18-4	1,2,3-Trichloropropane	10	
103-65-1	n-Propylbenzene	15	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	9	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	14	
95-63-6	1,2,4-Trimethylbenzene	9	
135-98-8	sec-Butylbenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
99-87-6	p-Isopropyltoluene	10	
106-46-7	1,4-Dichlorobenzene	10	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	10	
96-12-8	1,2-Dibromo-3-Chloropropane	9	
120-82-1	1,2,4-Trichlorobenzene	10	
87-68-3	Hexachlorobutadiene	10	
91-20-3	Naphthalene	11	
87-61-6	1,2,3-Trichlorobenzene	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJDBS

Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID. 80GVF371-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PB1110

Level (low/med) LOW Date Received 11/10/00

% Moisture. not dec _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor. 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	7	
74-87-3	Chloromethane	8	
75-01-4	Vinyl chloride	10	
74-83-9	Bromomethane	11	
75-00-3	Chloroethane	10	
75-69-4	Trichlorofluoromethane	9	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene chloride	6	
1634-04-4	Methyl-tert-Butyl Ether	7	
156-60-5	trans-1,2-Dichloroethene	9	
75-34-3	1,1-Dichloroethane	8	
108-05-4	Vinyl Acetate	6	
156-59-2	cis-1,2-Dichloroethene	10	
594-20-7	2,2-Dichloropropane	8	
74-97-5	Bromochloromethane	9	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
563-58-6	1,1-Dichloropropene	11	
56-23-5	Carbon tetrachloride	10	
71-43-2	Benzene	9	
107-06-2	1,2-Dichloroethane	9	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	9	
74-95-3	Dibromomethane	9	
75-27-4	Bromodichloromethane	9	
10061-01-5	cis-1,3-Dichloropropene	9	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	8	
79-00-5	1,1,2-Trichloroethane	8	
142-28-9	1,3-Dichloropropane	9	
127-18-4	Tetrachloroethene	10	
124-48-1	Dibromochloromethane	9	
106-93-4	1,2-Dibromoethane	8	
544-10-5	1-Chlorohexane	14	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJDBS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID: 80GVF371-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PB1110

Level: (low/med) LOW Date Received: 11/10/00

% Moisture: not dec. _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1 0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	9	
630-20-6	1,1,1,2-Tetrachloroethane	9	
100-41-4	Ethylbenzene	9	
136777-612	p,m-Xylene	19	
95-47-6	o-Xylene	9	
100-42-5	Styrene	9	
75-25-2	Bromoform	9	
98-82-8	Isopropylbenzene	9	
79-34-5	1,1,2,2-Tetrachloroethane	9	
108-86-1	Bromobenzene	9	
96-18-4	1,2,3-Trichloropropane	9	
103-65-1	n-Propylbenzene	10	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	10	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	10	
95-63-6	1,2,4-Trimethylbenzene	9	
135-98-8	sec-Butylbenzene	9	
541-73-1	1,3-Dichlorobenzene	9	
99-87-6	p-Isopropyltoluene	10	
106-46-7	1,4-Dichlorobenzene	9	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	9	
96-12-8	1,2-Dibromo-3-Chloropropane	8	
120-82-1	1,2,4-Trichlorobenzene	9	
87-68-3	Hexachlorobutadiene	11	
91-20-3	Naphthalene	7	
87-61-6	1,2,3-Trichlorobenzene	8	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJHBS

Lab Name: STS CHICAGO Contract:

Lab Code. Case No : SAS No.: SDG No.: U10904

Matrix: (soil/water) WATER Lab Sample ID: 80GVC301-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: MB1108

Level. (low/med) LOW Date Received: 11/08/00

% Moisture: not dec _____ Date Analyzed. 11/08/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	8	
74-87-3	Chloromethane	9	
75-01-4	Vinyl chloride	11	
74-83-9	Bromomethane	12	
75-00-3	Chloroethane	11	
75-69-4	Trichlorofluoromethane	9	
75-35-4	1,1-Dichloroethene	12	
75-09-2	Methylene chloride	9	
1634-04-4	Methyl-tert-Butyl Ether	9	
156-60-5	trans-1,2-Dichloroethene	12	
75-34-3	1,1-Dichloroethane	12	
108-05-4	Vinyl Acetate	15	
156-59-2	cis-1,2-Dichloroethene	12	
594-20-7	2,2-Dichloropropane	11	
74-97-5	Bromochloromethane	11	
67-66-3	Chloroform	11	
71-55-6	1,1,1-Trichloroethane	10	
563-58-6	1,1-Dichloropropene	13	
56-23-5	Carbon tetrachloride	10	
71-43-2	Benzene	10	
107-06-2	1,2-Dichloroethane	9	
79-01-6	Trichloroethene	10	
78-87-5	1,2-Dichloropropane	10	
74-95-3	Dibromomethane	10	
75-27-4	Bromodichloromethane	10	
10061-01-5	cis-1,3-Dichloropropene	11	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	10	
79-00-5	1,1,2-Trichloroethane	11	
142-28-9	1,3-Dichloropropane	10	
127-18-4	Tetrachloroethene	9	
124-48-1	Dibromochloromethane	10	
106-93-4	1,2-Dibromoethane	10	
544-10-5	1-Chlorohexane	14	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJHBS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U10904

Matrix. (soil/water) WATER Lab Sample ID: 80GVC301-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: MB1108

Level· (low/med) LOW Date Received: 11/08/00

% Moisture not dec _____ Date Analyzed: 11/08/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	10	
630-20-6	1,1,1,2-Tetrachloroethane	10	
100-41-4	Ethylbenzene	10	
136777-612	p,m-Xylene	20	
95-47-6	o-Xylene	10	
100-42-5	Styrene	11	
75-25-2	Bromoform	10	
98-82-8	Isopropylbenzene	11	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-86-1	Bromobenzene	10	
96-18-4	1,2,3-Trichloropropane	10	
103-65-1	n-Propylbenzene	10	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	11	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	11	
95-63-6	1,2,4-Trimethylbenzene	11	
135-98-8	sec-Butylbenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
99-87-6	p-Isopropyltoluene	11	
106-46-7	1,4-Dichlorobenzene	10	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	10	
96-12-8	1,2-Dibromo-3-Chloropropane	10	
120-82-1	1,2,4-Trichlorobenzene	10	
87-68-3	Hexachlorobutadiene	10	
91-20-3	Naphthalene	10	
87-61-6	1,2,3-Trichlorobenzene	10	

SEVERN TRENT SERVICES

STL Chicago
2417 Bond Street
University Park, IL 60466

Tel 708 534 5200
Fax 708 534 5211
www stl-inc com

November 30, 2000

Ms. Kim Evers
HydroGeoLogic, Inc
1155 Herndon Parkway, Suite 900
Herndon, VA 20170

received
12-1-00

RE· AFC001-33DDA
Analytical Report
Lot 9A11G927

Dear Ms. Evers.

The enclosed summary report is for the project and lot number listed above The volatile results will be reported on form 1s instead of a spreadsheet format due to LIMS limitations The EDD and error report will be transferred via E-mail when completed If you have any questions, please contact me at 708-534-5200

Sincerely,

Severn Trent Laboratories

Donna Ingersoll
Project Manager

sj

Enclosures. Summary Report

CLP Report & Data Summary-Nancy Weaver /EDS

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested All pages of this report are integral parts of the analytical data Therefore, this report should be reproduced only in its entirety

Severn Trent Laboratories Chicago
8260 ANALYTICAL DATA PACKAGE FOR
AFC001-33DDA

LOT # .9A11G927

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB103100	001	W	80GVF371	10/31/00	11/02/00	N/A	11/10/00
WCHMHTA009WG13	002	W	80GVF371	10/31/00	11/02/00	N/A	11/10/00
WCHMHTA009WG13	002 D1	W	80GVF372	10/31/00	11/02/00	N/A	11/10/00
AB103100	003	W	80GVF371	10/31/00	11/02/00	N/A	11/10/00
AB103100	003 MS	W	80GVF372	10/31/00	11/02/00	N/A	11/10/00
AB103100	003 MSD	W	80GVF372	10/31/00	11/02/00	N/A	11/11/00
DUP06WG13	004	W	80GVF371	10/31/00	11/02/00	N/A	11/10/00
DUP06WG13	004 D1	W	80GVF372	10/31/00	11/02/00	N/A	11/10/00
ST14-W21WG13	005	W	80GVF371	10/31/00	11/02/00	N/A	11/10/00
SD13-01WG13	006	W	80GVF371	10/31/00	11/02/00	N/A	11/10/00
SD13-04WG13	007	W	80GVT202	10/31/00	11/02/00	N/A	11/12/00
WHGLTA009WG13	008	W	80GVF372	10/31/00	11/02/00	N/A	11/11/00
WHGLTA009WG13	008 D1	W	80GVT202	10/31/00	11/02/00	N/A	11/12/00
AB103100A	009	W	80GVF372	10/31/00	11/02/00	N/A	11/11/00
WHGLTA010WG13	010	W	80GVF372	10/31/00	11/02/00	N/A	11/11/00
EB103100	011	W	80GVF371	10/31/00	11/02/00	N/A	11/10/00
LAB QC							
VBLKJD	MB1	W	80GVF371	N/A	N/A	N/A	11/10/00
VBLKJD	MB1 BS	W	80GVF371	N/A	N/A	N/A	11/10/00
VBLKKN	MB1	W	80GVF372	N/A	N/A	N/A	11/10/00
VBLKKN	MB1 BS	W	80GVF372	N/A	N/A	N/A	11/10/00
VBLKKJ	MB1	W	80GVT202	N/A	N/A	N/A	11/12/00
VBLKKJ	MB1 BS	W	80GVT202	N/A	N/A	N/A	11/12/00

AFCEE / CLP Lite
int. COC
EDD

STL
Committed To Your Success

Chicago Laboratory
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax 708-534-5211

Report To:
Contact: Kim Evers
Company: Hydrogeologic
Address: [illegible]
Phone: 703-[illegible]
Fax: 703-[illegible]
E-Mail: [illegible]

Contact: (Same)
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use of

Lab Lot # 9A11G927

Package Sealed: Yes (No)	Samples Sealed: Yes (No)
Received on Ice: (Yes) No	Samples Intact: (Yes) No
Temperature °C of Cooler: 3.5	
Within Hold Time: (Yes) No	Preserv. Indicated: (Yes) No NA
pH Check ok: Yes No (NA)	Res. Cl_2 Check ok: Yes No (NA)
Sample Labels and COC Agree: (Yes) No COC not present	

Sampler Name: JENNIFER WALLACE
Signature: [signature]
Project Name: [illegible]
Project Number: AFCEE-[illegible]
Project Location: EASTON AFB, [illegible]
Date Required: Hard Copy ___/___/___ Fax ___/___/___
Lab PM: DONNA INGERSOLL

Refrg #
#/Cont.
Volume
Preserv

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Volume Preservative	Additional Analyses / Remarks
001		TB103100	10/31/00	0845	W	G	3	
002		WHMHTAOOPWG13	10/31/00	1110	W	G	3	
003		AB103100	10/31/00	1115	W	G	3	
004		DUPWG13	10/31/00	1200	W	G	3	
005		ST14-W21WG13	10/31/00	0703	W	G	3	
006		SD13-01WG13	10/31/00	0716	W	G	3	
007		SD13-04WG13	10/31/00	0712	W	G	3	
008		WHGLTAOOTWG13	10/31/00	1310	W	G	3	
009		AB103100A	10/31/00	1315	W	G	3	
010		WHGLTAOOWWG13	10/31/00	1034	W	G	3	
011		EB103100	10/31/00	1203	W	G	3	

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	HGC	10/31/00	1352	[signature]	STL	11/2/00	0950
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1 Plastic
2 VOA Vial
3 Sterile Plastic
4 Amber Glass
5 Widemouth Glass
6 Other _____

Preservative Key
1 HCl, Cool to 4°
2 H_2SO_4, Cool to 4°
3 HNO_3, Cool to 4°
4 NaOH, Cool to 4°
5 NaOH/Zn Acetate, Cool to 4°
6 Cool to 4°
7 None

COMMENTS
* EB103100 Associated w/ WHGLTAOOT, WHGLTAOOW, WHMHTAOOPW, DUPWG only
** AB103100 w/ sample WHMHTAOOPW only
*** AB103100A w/ WHGLTAOOW only

Date Received 11 / 2 / 00
Courier FX
Hand Delivered ☐
Bill of Lading attached

Best Available Copy

568 317

Severn Trent Laboratories Chicago
GC/MS Case Narrative

AFC001 – 33DDA
STL# 9A11G927
VOA DATA:

1. All of the samples were analyzed within the 14-day hold time from the date of collection.

2. All Method Blank target compounds were below reporting limits.

3. The QC limits specified in the QAPP were used to evaluate QC acceptance. The compound Vinyl acetate was not specified in the QAPP as a QC control compound. At the client's request, Vinyl acetate was given QC limits of 0-0% and the flags on this compound have no QC significance The spike recoveries were below the QC limits for Methylene chloride, Methyl-tert-butyl ether, Naphthalene and above the QC limits for 1-Chlorohexene in the LCS (Laboratory Control Sample) sample 80GVF371-MB1 BS. The spike recoveries were below the QC limits for Methylene chloride and above the QC limits for 1-Chlorohexene in the LCS sample 80GVT202-MB1 BS The spike recoveries were below the QC limits for Methyl-tert-butyl ether and above the QC limits for 1,1-Dichloropropene, 1-Chlorohexene and 1,3,5-Trimethylbenzene in the LCS sample 80GVF372-MB1 BS. Further corrective action was not performed. These compounds were not detected in the associated samples. All of the other spike recoveries were within the QC limits in the LCS samples.

4. Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set.

5. All of the volatile samples had surrogate recoveries within the QAPP specified QC limits.

6 The water samples were prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds) The low point in the initial calibration verifies the base reporting limits. The target compounds were quantitated using the initial calibration.

7. All internal standard areas and retention times were within SOP acceptance limits as compared to the corresponding continuing calibration standard.

8. The water samples were analyzed using a 25-mL purge volume. Secondary dilutions for target compounds were performed on the samples 9A11G927-002 (1/25), 004 (1/25) and 008 (1/10).

Gregory L. Goodwin
GC/MS Section Manager

11/29/00
Date

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

568 319

TB103100

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix. (soil/water) WATER Lab Sample ID: 9A11G927-001

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ01

Level: (low/med) LOW Date Received: 11/02/00

% Moisture not dec. _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	1	
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB103100

Lab Name: STS CHICAGO Contract:

Lab Code. Case No.. SAS No.: SDG No.: U11927

Matrix (soil/water) WATER Lab Sample ID: 9A11G927-001

Sample wt/vol: 25.00 (g/mL) ML Lab File ID. JSQ01

Level (low/med) LOW Date Received: 11/02/00

% Moisture. not dec. _____ Date Analyzed. 11/10/00

Column (pack/cap) CAP Dilution Factor. 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0 5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0 5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0 4	U
87-68-3	Hexachlorobutadiene	0 5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

TB103100

Lab Name: STS CHICAGO Contract:

Lab Code. Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-001

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: JSQ01

Level: (low/med) LOW Date Received 11/02/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume. _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC.	Q
1.				
2				
3.				
4.				
5				
6				
7.				
8.				
9				
10				
11.				
12.				
13.				
14				
15.				
16.				
17.				
18.				
19				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29				
30				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AB103100

Lab Name: STS CHICAGO Contract:

Lab Code: Case No : SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-003

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: JSQ04

Level: (low/med) LOW Date Received: 11/02/00

% Moisture not dec. _____ Date Analyzed: 11/10/00

Column (pack/cap) CAP Dilution Factor 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AB103100

L ame: STS CHICAGO Contract:

Lab Code: Case No.. SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-003

Sample wt/vol· 25.00 (g/mL) ML Lab File ID: JSQ04

Level: (low/med) LOW Date Received· 11/02/00

% Moisture: not dec. _____ Date Analyzed 11/10/00

Column: (pack/cap) CAP Dilution Factor· 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0 5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0 4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	0 5	U
95-63-6	1,2,4-Trimethylbenzene	0 5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0 5	U
95-50-1	1,2-Dichlorobenzene	0 3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0 4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

AB103100

Lab Name: STS CHICAGO Contract

Lab Code: Case No.: SAS No · SDG No.: U11927

Matrix (soil/water) WATER Lab Sample ID: 9A11G927-003

Sample wt/vol· 25 00 (g/mL) ML Lab File ID: JSQ04

Level· (low/med) LOW Date Received· 11/02/00

% Moisture: not dec. _____ Date Analyzed. 11/10/00

GC Column. CAP ID. 0 53 (mm) Dilution Factor. 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume. _____(uL)

Number TICs found 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1	UNKNOWN	20 57	7	J
2.	UNKNOWN	24.50	5	J
3				
4				
5				
6.				
7.				
8				
9				
10.				
11.				
12.				
13				
14.				
15.				
16				
17				
18				
19.				
20				
21				
22.				
23				
24				
25				
26				
27				
28				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

568 325

ST14-W21WG13

Lab Name: STS CHICAGO Contract.

Lab Code: Case No.: SAS No.: SDG No : U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-005

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ06

Level: (low/med) LOW Date Received: 11/02/00

% Moisture. not dec. _____ Date Analyzed: 11/10/00

Column. (pack/cap) CAP Dilution Factor. 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0 3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	2	
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0 5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ST14-W21WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-005

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ06

Level. (low/med) LOW Date Received: 11/02/00

% Moisture: not dec. _____ Date Analyzed: 11/10/00

Column. (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0 5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	17	
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0 3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.9	
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	3	
95-63-6	1,2,4-Trimethylbenzene	0 5	U
135-98-8	sec-Butylbenzene	0 4	J
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0 5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 568 327

ST14-W21WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-005

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ06

Level: (low/med) LOW Date Received: 11/02/00

% Moisture not dec _____ Date Analyzed. 11/10/00

GC Column: CAP ID: 0.53 (mm) Dilution Factor. 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume. _____(uL)

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	UNKNOWN ALKANE	15.50	15	J
2.	UNKNOWN ALKANE	16.08	3	J
3	UNKNOWN CYCLOHEXANE	16.74	3	J
4.	SUBST. BENZENE	24.47	2	J
5.	SUBST. INDENE	24 79	2	J
6.				
7.				
8				
9				
10				
11				
12				
13				
14				
15.				
16				
17.				
18.				
19				
20.				
21.				
22				
23.				
24.				
25				
26.				
27				
28				
29.				
30				

568 328

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SD13-01WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-006

Sample wt/vol· 25 00 (g/mL) ML Lab File ID: JSQ07

Level· (low/med) LOW Date Received 11/02/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0 5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SD13-01WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-006

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ07

Level: (low/med) LOW Date Received: 11/02/00

% Moisture: not dec. _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	1	
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	9	
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	6	
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	8	
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	8	
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	3	
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.6	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SD13-01WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-006

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ07

Level: (low/med) LOW Date Received: 11/02/00

% Moisture. not dec. _____ Date Analyzed: 11/10/00

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1.	UNKNOWN CYCLOPENTANONE	15 30	27	J
2.	SUBST. BENZENE	24.24	36	J
3	SUBST. BENZENE	24 48	17	J
4.	SUBST. BENZENE	24.98	23	J
5.	SUBST. BENZENE	25.83	41	J
6.				
7.				
8				
9				
10				
11				
12				
13				
14				
15.				
16.				
17.				
18.				
19.				
20				
21.				
22				
23				
24.				
25.				
26.				
27				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO 568 331

SD13-04WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-007

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: JSQ22

Level. (low/med) LOW Date Received: 11/02/00

% Moisture. not dec. _____ Date Analyzed 11/12/00

Column: (pack/cap) CAP Dilution Factor 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0 5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0 5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0 5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0 5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SD13-04WG13

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.. SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-007

Sample wt/vol 25.00 (g/mL) ML Lab File ID: JSQ22

Level: (low/med) LOW Date Received. 11/02/00

% Moisture not dec. _____ Date Analyzed. 11/12/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0 4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0 5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0 5	U
98-82-8	Isopropylbenzene	13	
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	7	
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0 5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	7	
95-63-6	1,2,4-Trimethylbenzene	0 5	U
135-98-8	sec-Butylbenzene	5	
541-73-1	1,3-Dichlorobenzene	0 5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	2	
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0 5	U
91-20-3	Naphthalene	0 5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SD13-04WG13

Lab Name: STS CHICAGO Contract:

Lab Code. Case No : SAS No.. SDG No.: U11927

Matrix· (soil/water) WATER Lab Sample ID: 9A11G927-007

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ22

Level: (low/med) LOW Date Received. 11/02/00

% Moisture: not dec _____ Date Analyzed: 11/12/00

GC Column. CAP ID: 0.53 (mm) Dilution Factor: 1 0

Soil Extract Volume:_____(uL) Soil Aliquot Volume· _____(uL)

Number TICs found. 5

CONCENTRATION UNITS.
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	UNKNOWN CYCLOALKANE	12.63	39	J
2.	SUBST. BENZENE	18.87	72	J
3	SUBST. BENZENE	19.06	56	J
4.	SUBST. BENZENE	19.59	34	J
5.	SUBST. BENZENE	20.44	120	J
6.				
7.				
8.				
9.				
10				
11				
12.				
13				
14				
15				
16.				
17				
18.				
19.				
20.				
21				
22.				
23.				
24.				
25.				
26.				
27				
28.				
29				
30.				

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

AB103100A

Lab Name. STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-009

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ14

Level: (low/med) LOW Date Received: 11/02/00

% Moisture: not dec. _____ Date Analyzed: 11/11/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0.5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 568 335

AB103100A

Lab Name STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix. (soil/water) WATER Lab Sample ID: 9A11G927-009

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ14

Level· (low/med) LOW Date Received: 11/02/00

% Moisture:- not dec. _____ Date Analyzed: 11/11/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0 4	U
630-20-6	1,1,1,2-Tetrachloroethane	0 5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0 5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

AB103100A

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-009

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: JSQ14

Level: (low/med) LOW Date Received. 11/02/00

% Moisture· not dec. _____ Date Analyzed: 11/11/00

GC Column CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found· 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		UNKNOWN	20.58	1	J
2					
3					
4					
5					
6.					
7					
8.					
9					
10					
11					
12					
13					
14.					
15					
16					
17.					
18					
19.					
20					
21					
22.					
23.					
24.					
25					
26.					
27					
28.					
29					
30					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB103100

Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No : U11927

Matrix: (soil/water) WATER Lab Sample ID. 9A11G927-011

Sample wt/vol. 25 00 (g/mL) ML Lab File ID: JSQ02

Level. (low/med) LOW Date Received 11/02/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0.5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0 5	U
75-09-2	Methylene chloride	0 9	
1634-04-4	Methyl-tert-Butyl Ether	0 5	U
156-60-5	trans-1,2-Dichloroethene	0 5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0 5	U
74-97-5	Bromochloromethane	0 4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0 5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0 5	U
106-93-4	1,2-Dibromoethane	0 5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB103100

Lab Name: STS CHICAGO Contract.

Lab Code: Case No · SAS No.: SDG No.: U11927

Matrix· (soil/water) WATER Lab Sample ID. 9A11G927-011

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ02

Level· (low/med) LOW Date Received: 11/02/00

% Moisture· not dec _____ Date Analyzed. 11/10/00

Column: (pack/cap) CAP Dilution Factor. 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0 5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0 4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0 5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0 5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0 3	U
104-51-8	n-Butylbenzene	0 5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0 5	U
120-82-1	1,2,4-Trichlorobenzene	0 4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0 5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 568 339

EB103100

N STS CHICAGO Contract:

Code: Case No.: SAS No : SDG No.: U11927

rix: (soil/water) WATER Lab Sample ID: 9A11G927-011

ple wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ02

el: (low/med) LOW Date Received: 11/02/00

loisture: not dec _____ Date Analyzed: 11/10/00

Column. CAP ID 0 53 (mm) Dilution Factor: 1.0

l Extract Volume: _____(uL) Soil Aliquot Volume _____(uL)

mber TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	110-54-3	HEXANE	12 35	8	NJ
2					
3					
4					
5					
6.					
7.					
8.					
9					
10					
11					
12					
13					
14					
15					
16.					
17.					
18					
19					
20.					
21.					
22					
23.					
24.					
25.					
26.					
27					
28.					
29					
30					

FORM I VOA-TIC 1/87 Rev.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJD

Lab Name: STS CHICAGO Contract.

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVF371-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PA1110

Level: (low/med) LOW Date Received: 11/10/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

Column (pack/cap) CAP Dilution Factor: 1 0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0 5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0 5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0.4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0.5	U
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0 5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0 4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0 5	U
544-10-5	1-Chlorohexane	0.5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

568 341

VBLKJD

Name: STS CHICAGO Contract:

Lab Code: Case No : SAS No.: SDG No.: U11927

Matrix (soil/water) WATER Lab Sample ID: 80GVF371-MB1

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: PA1110

Level (low/med) LOW Date Received. 11/10/00

% Moisture: not dec. _____ Date Analyzed· 11/10/00

Column (pack/cap) CAP Dilution Factor. 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS· (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0 4	U
630-20-6	1.1.1.2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0 5	U
136777-612	p.m-Xylene	0.5	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1.2.2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	0 5	U
95-63-6	1,2.4-Trimethylbenzene	0 5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0 5	U
99-87-6	p-Isopropyltoluene	0 5	U
106-46-7	1,4-Dichlorobenzene	0 3	U
104-51-8	n-Butylbenzene	0 5	U
95-50-1	1,2-Dichlorobenzene	0 3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2.4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0 5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJD

Lab Name: STS CHICAGO Contract:

Lab Code Case No : SAS No.: SDG No.: U11927

Matrix (soil/water) WATER Lab Sample ID: 80GVF371-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PA1110

Level: (low/med) LOW Date Received: 11/10/00

% Moisture: not dec. _____ Date Analyzed: 11/10/00

GC Column: CAP ID. 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC.	Q
1.				
2				
3.				
4.				
5.				
6.				
7				
8				
9				
10				
11.				
12				
13.				
14.				
15				
16				
17				
18.				
19				
20.				
21.				
22.				
23				
24.				
25				
26.				
27				
28.				
29				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 568 343

VBLKKJ

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVT202-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: SA1112

Level (low/med) LOW Date Received: 11/12/00

% Moisture. not dec. _____ Date Analyzed: 11/12/00

Column: (pack/cap) CAP Dilution Factor: 1 0

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0 5	U
74-83-9	Bromomethane	0 5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0 5	U
74-97-5	Bromochloromethane	0 4	U
67-66-3	Chloroform	0 3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0 5	U
56-23-5	Carbon tetrachloride	0 5	U
71-43-2	Benzene	0.4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0 5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1,3-Dichloropropane	0.4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0 5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKJ

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVT202-MB1

Sample wt/vol 25.00 (g/mL) ML Lab File ID: SA1112

Level: (low/med) LOW Date Received: 11/12/00

% Moisture: not dec _____ Date Analyzed. 11/12/00

Column (pack/cap) CAP Dilution Factor. 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0.5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0 5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0.5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0.4	U
95-49-8	2-Chlorotoluene	0 4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0.5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0.5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U
120-82-1	1,2,4-Trichlorobenzene	0.4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKKJ

Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix (soil/water) WATER Lab Sample ID: 80GVT202-MB1

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: SA1112

Level: (low/med) LOW Date Received. 11/12/00

% Moisture: not dec _____ Date Analyzed: 11/12/00

GC Column CAP ID 0 53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1					
2					
3.					
4					
5					
6.					
7.					
8					
9.					
10					
11.					
12.					
13.					
14.					
15					
16.					
17.					
18.					
19.					
20.					
21					
22.					
23					
24.					
25					
26					
27.					
28.					
29					
30					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKN

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID. 80GVF372-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PE110

Level. (low/med) LOW Date Received. 11/10/00

% Moisture. not dec _____ Date Analyzed: 11/10/00

Column (pack/cap) CAP Dilution Factor 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0 5	U
74-87-3	Chloromethane	0 5	U
75-01-4	Vinyl chloride	0 5	U
74-83-9	Bromomethane	0.5	U
75-00-3	Chloroethane	0 5	U
75-69-4	Trichlorofluoromethane	0 5	U
75-35-4	1,1-Dichloroethene	0 5	U
75-09-2	Methylene chloride	0 5	U
1634-04-4	Methyl-tert-Butyl Ether	0.5	U
156-60-5	trans-1,2-Dichloroethene	0 5	U
75-34-3	1,1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0 5	U
74-97-5	Bromochloromethane	0 4	U
67-66-3	Chloroform	0 3	U
71-55-6	1,1,1-Trichloroethane	0 5	U
563-58-6	1,1-Dichloropropene	0.5	U
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0 5	U
79-01-6	Trichloroethene	0 5	U
78-87-5	1,2-Dichloropropane	0.4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0 5	U
79-00-5	1,1,2-Trichloroethane	0 5	U
142-28-9	1,3-Dichloropropane	0 4	U
127-18-4	Tetrachloroethene	0 5	U
124-48-1	Dibromochloromethane	0 5	U
106-93-4	1,2-Dibromoethane	0.5	U
544-10-5	1-Chlorohexane	0 5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKN

Name: STS CHICAGO Contract:

Lab Code. Case No . SAS No.. SDG No.: U11927

Matrix (soil/water) WATER Lab Sample ID: 80GVF372-MB1

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: PE110

Level (low/med) LOW Date Received: 11/10/00

% Moisture: not dec. _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1 0

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	0.4	U
630-20-6	1,1,1,2-Tetrachloroethane	0.5	U
100-41-4	Ethylbenzene	0 5	U
136777-612	p,m-Xylene	0 5	U
95-47-6	o-Xylene	0 5	U
100-42-5	Styrene	0.4	U
75-25-2	Bromoform	0 5	U
98-82-8	Isopropylbenzene	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	0 5	U
108-86-1	Bromobenzene	0.3	U
96-18-4	1,2,3-Trichloropropane	0.5	U
103-65-1	n-Propylbenzene	0 4	U
95-49-8	2-Chlorotoluene	0.4	U
108-67-8	1,3,5-Trimethylbenzene	0.5	U
106-43-4	4-Chlorotoluene	0 5	U
98-06-6	tert-Butylbenzene	0.5	U
95-63-6	1,2,4-Trimethylbenzene	0.5	U
135-98-8	sec-Butylbenzene	0 5	U
541-73-1	1,3-Dichlorobenzene	0.5	U
99-87-6	p-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	0.3	U
104-51-8	n-Butylbenzene	0.5	U
95-50-1	1,2-Dichlorobenzene	0.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	0 5	U
120-82-1	1,2,4-Trichlorobenzene	0 4	U
87-68-3	Hexachlorobutadiene	0.5	U
91-20-3	Naphthalene	0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKKN

Lab Name: STS CHICAGO Contract:

Lab Code Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVF372-MB1

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PE110

Level: (low/med) LOW Date Received: 11/10/00

% Moisture not dec. _____ Date Analyzed. 11/10/00

GC Column CAP ID. 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS.
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1					
2.					
3					
4					
5					
6					
7.					
8					
9.					
10.					
11					
12.					
13.					
14.					
15.					
16					
17					
18.					
19					
20.					
21.					
22.					
23					
24.					
25					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AB103100MS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-003S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ10

Level: (low/med) LOW Date Received: 11/02/00

% Moisture: not dec. _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	5	
74-87-3	Chloromethane	6	
75-01-4	Vinyl chloride	7	
74-83-9	Bromomethane	8	
75-00-3	Chloroethane	7	
75-69-4	Trichlorofluoromethane	5	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene chloride	8	
1634-04-4	Methyl-tert-Butyl Ether	12	
156-60-5	trans-1,2-Dichloroethene	8	
75-34-3	1,1-Dichloroethane	10	
108-05-4	Vinyl Acetate	5	
156-59-2	cis-1,2-Dichloroethene	10	
594-20-7	2,2-Dichloropropane	12	
74-97-5	Bromochloromethane	11	
67-66-3	Chloroform	10	
71-55-6	1,1,1-Trichloroethane	10	
563-58-6	1,1-Dichloropropene	12	
56-23-5	Carbon tetrachloride	11	
71-43-2	Benzene	10	
107-06-2	1,2-Dichloroethane	10	
79-01-6	Trichloroethene	10	
78-87-5	1,2-Dichloropropane	10	
74-95-3	Dibromomethane	9	
75-27-4	Bromodichloromethane	10	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	10	
79-00-5	1,1,2-Trichloroethane	9	
142-28-9	1,3-Dichloropropane	10	
127-18-4	Tetrachloroethene	10	
124-48-1	Dibromochloromethane	10	
106-93-4	1,2-Dibromoethane	10	
544-10-5	1-Chlorohexane	15	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AB103100MS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-003S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ10

Level (low/med) LOW Date Received: 11/02/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	10	
630-20-6	1,1,1,2-Tetrachloroethane	10	
100-41-4	Ethylbenzene	10	
136777-612	p,m-Xylene	19	
95-47-6	o-Xylene	10	
100-42-5	Styrene	9	
75-25-2	Bromoform	9	
98-82-8	Isopropylbenzene	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-86-1	Bromobenzene	10	
96-18-4	1,2,3-Trichloropropane	10	
103-65-1	n-Propylbenzene	10	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	10	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	11	
95-63-6	1,2,4-Trimethylbenzene	10	
135-98-8	sec-Butylbenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
99-87-6	p-Isopropyltoluene	10	
106-46-7	1,4-Dichlorobenzene	10	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	10	
96-12-8	1,2-Dibromo-3-Chloropropane	9	
120-82-1	1,2,4-Trichlorobenzene	10	
87-68-3	Hexachlorobutadiene	11	
91-20-3	Naphthalene	10	
87-61-6	1,2,3-Trichlorobenzene	9	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AB103100MSD

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.. SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-003T

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: JSQ11

Level: (low/med) LOW Date Received· 11/02/00

% Moisture· not dec. _____ Date Analyzed: 11/11/00

Column. (pack/cap) CAP Dilution Factor. 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	6	
74-87-3	Chloromethane	7	
75-01-4	Vinyl chloride	8	
74-83-9	Bromomethane	8	
75-00-3	Chloroethane	8	
75-69-4	Trichlorofluoromethane	6	
75-35-4	1,1-Dichloroethene	10	
75-09-2	Methylene chloride	9	
1634-04-4	Methyl-tert-Butyl Ether	15	
156-60-5	trans-1,2-Dichloroethene	9	
75-34-3	1,1-Dichloroethane	10	
108-05-4	Vinyl Acetate	5	
156-59-2	cis-1,2-Dichloroethene	8	
594-20-7	2,2-Dichloropropane	10	
74-97-5	Bromochloromethane	12	
67-66-3	Chloroform	10	
71-55-6	1,1,1-Trichloroethane	10	
563-58-6	1,1-Dichloropropene	12	
56-23-5	Carbon tetrachloride	10	
71-43-2	Benzene	9	
107-06-2	1,2-Dichloroethane	9	
79-01-6	Trichloroethene	10	
78-87-5	1,2-Dichloropropane	10	
74-95-3	Dibromomethane	9	
75-27-4	Bromodichloromethane	10	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	10	
142-28-9	1,3-Dichloropropane	10	
127-18-4	Tetrachloroethene	10	
124-48-1	Dibromochloromethane	10	
106-93-4	1,2-Dibromoethane	9	
544-10-5	1-Chlorohexane	18	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AB103100MSD

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 9A11G927-003T

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSQ11

Level: (low/med) LOW Date Received: 11/02/00

% Moisture: not dec. _____ Date Analyzed: 11/11/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	10	
630-20-6	1,1,1,2-Tetrachloroethane	10	
100-41-4	Ethylbenzene	9	
136777-612	p,m-Xylene	19	
95-47-6	o-Xylene	9	
100-42-5	Styrene	10	
75-25-2	Bromoform	9	
98-82-8	Isopropylbenzene	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-86-1	Bromobenzene	10	
96-18-4	1,2,3-Trichloropropane	10	
103-65-1	n-Propylbenzene	10	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	10	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	10	
95-63-6	1,2,4-Trimethylbenzene	10	
135-98-8	sec-Butylbenzene	9	
541-73-1	1,3-Dichlorobenzene	10	
99-87-6	p-Isopropyltoluene	10	
106-46-7	1,4-Dichlorobenzene	10	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	10	
96-12-8	1,2-Dibromo-3-Chloropropane	9	
120-82-1	1,2,4-Trichlorobenzene	9	
87-68-3	Hexachlorobutadiene	10	
91-20-3	Naphthalene	10	
87-61-6	1,2,3-Trichlorobenzene	9	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJDBS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix. (soil/water) WATER Lab Sample ID: 80GVF371-MB1S

Sample wt/vol 25 00 (g/mL) ML Lab File ID: PB1110

Level: (low/med) LOW Date Received 11/10/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	7	
74-87-3	Chloromethane	8	
75-01-4	Vinyl chloride	10	
74-83-9	Bromomethane	11	
75-00-3	Chloroethane	10	
75-69-4	Trichlorofluoromethane	9	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene chloride	6	
1634-04-4	Methyl-tert-Butyl Ether	7	
156-60-5	trans-1,2-Dichloroethene	9	
75-34-3	1,1-Dichloroethane	8	
108-05-4	Vinyl Acetate	6	
156-59-2	cis-1,2-Dichloroethene	10	
594-20-7	2,2-Dichloropropane	8	
74-97-5	Bromochloromethane	9	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
563-58-6	1,1-Dichloropropene	11	
56-23-5	Carbon tetrachloride	10	
71-43-2	Benzene	9	
107-06-2	1,2-Dichloroethane	9	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	9	
74-95-3	Dibromomethane	9	
75-27-4	Bromodichloromethane	9	
10061-01-5	cis-1,3-Dichloropropene	9	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	8	
79-00-5	1,1,2-Trichloroethane	8	
142-28-9	1,3-Dichloropropane	9	
127-18-4	Tetrachloroethene	10	
124-48-1	Dibromochloromethane	9	
106-93-4	1,2-Dibromoethane	8	
544-10-5	1-Chlorohexane	14	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJDBS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No : SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVF371-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PB1110

Level: (low/med) LOW Date Received. 11/10/00

% Moisture. not dec. _____ Date Analyzed 11/10/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	9	
630-20-6	1,1,1,2-Tetrachloroethane	9	
100-41-4	Ethylbenzene	9	
136777-612	p,m-Xylene	19	
95-47-6	o-Xylene	9	
100-42-5	Styrene	9	
75-25-2	Bromoform	9	
98-82-8	Isopropylbenzene	9	
79-34-5	1,1,2,2-Tetrachloroethane	9	
108-86-1	Bromobenzene	9	
96-18-4	1,2,3-Trichloropropane	9	
103-65-1	n-Propylbenzene	10	
95-49-8	2-Chlorotoluene	10	
108-67-8	1,3,5-Trimethylbenzene	10	
106-43-4	4-Chlorotoluene	10	
98-06-6	tert-Butylbenzene	10	
95-63-6	1,2,4-Trimethylbenzene	9	
135-98-8	sec-Butylbenzene	9	
541-73-1	1,3-Dichlorobenzene	9	
99-87-6	p-Isopropyltoluene	10	
106-46-7	1,4-Dichlorobenzene	9	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	9	
96-12-8	1,2-Dibromo-3-Chloropropane	8	
120-82-1	1,2,4-Trichlorobenzene	9	
87-68-3	Hexachlorobutadiene	11	
91-20-3	Naphthalene	7	
87-61-6	1,2,3-Trichlorobenzene	8	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKJBS

L ame: STS CHICAGO Contract

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVT202-MB1S

Sample wt/vol. 25.00 (g/mL) ML Lab File ID: SC1112

Level: (low/med) LOW Date Received: 11/12/00

% Moisture· not dec _____ Date Analyzed. 11/12/00

Column· (pack/cap) CAP Dilution Factor: 1 0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	8	
74-87-3	Chloromethane	10	
75-01-4	Vinyl chloride	10	
74-83-9	Bromomethane	11	
75-00-3	Chloroethane	11	
75-69-4	Trichlorofluoromethane	11	
75-35-4	1,1-Dichloroethene	10	
75-09-2	Methylene chloride	7	
1634-04-4	Methyl-tert-Butyl Ether	9	
156-60-5	trans-1,2-Dichloroethene	10	
75-34-3	1,1-Dichloroethane	10	
108-05-4	Vinyl Acetate	8	
156-59-2	cis-1,2-Dichloroethene	10	
594-20-7	2,2-Dichloropropane	10	
74-97-5	Bromochloromethane	8	
67-66-3	Chloroform	10	
71-55-6	1,1,1-Trichloroethane	10	
563-58-6	1,1-Dichloropropene	12	
56-23-5	Carbon tetrachloride	10	
71-43-2	Benzene	10	
107-06-2	1,2-Dichloroethane	9	
79-01-6	Trichloroethene	10	
78-87-5	1,2-Dichloropropane	10	
74-95-3	Dibromomethane	9	
75-27-4	Bromodichloromethane	10	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	9	
142-28-9	1,3-Dichloropropane	9	
127-18-4	Tetrachloroethene	10	
124-48-1	Dibromochloromethane	9	
106-93-4	1,2-Dibromoethane	9	
544-10-5	1-Chlorohexane	15	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKJBS

Lab Name. STS CHICAGO Contract:

Lab Code. Case No.: SAS No : SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVT202-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: SC1112

Level: (low/med) LOW Date Received 11/12/00

% Moisture: not dec _____ Date Analyzed: 11/12/00

Column. (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	9	
630-20-6	1,1,1,2-Tetrachloroethane	9	
100-41-4	Ethylbenzene	9	
136777-612	p,m-Xylene	19	
95-47-6	o-Xylene	9	
100-42-5	Styrene	9	
75-25-2	Bromoform	8	
98-82-8	Isopropylbenzene	9	
79-34-5	1,1,2,2-Tetrachloroethane	8	
108-86-1	Bromobenzene	9	
96-18-4	1,2,3-Trichloropropane	9	
103-65-1	n-Propylbenzene	10	
95-49-8	2-Chlorotoluene	9	
108-67-8	1,3,5-Trimethylbenzene	10	
106-43-4	4-Chlorotoluene	9	
98-06-6	tert-Butylbenzene	10	
95-63-6	1,2,4-Trimethylbenzene	10	
135-98-8	sec-Butylbenzene	9	
541-73-1	1,3-Dichlorobenzene	9	
99-87-6	p-Isopropyltoluene	10	
106-46-7	1,4-Dichlorobenzene	9	
104-51-8	n-Butylbenzene	10	
95-50-1	1,2-Dichlorobenzene	9	
96-12-8	1,2-Dibromo-3-Chloropropane	8	
120-82-1	1,2,4-Trichlorobenzene	9	
87-68-3	Hexachlorobutadiene	10	
91-20-3	Naphthalene	8	
87-61-6	1,2,3-Trichlorobenzene	9	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKNBS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVF372-MB1S

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: PF1110

Level: (low/med) LOW Date Received: 11/10/00

% Moisture: not dec. _____ Date Analyzed: 11/10/00

Column: (pack/cap) CAP Dilution Factor. 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	7	
74-87-3	Chloromethane	8	
75-01-4	Vinyl chloride	10	
74-83-9	Bromomethane	10	
75-00-3	Chloroethane	10	
75-69-4	Trichlorofluoromethane	8	
75-35-4	1,1-Dichloroethene	10	
75-09-2	Methylene chloride	8	
1634-04-4	Methyl-tert-Butyl Ether	5	
156-60-5	trans-1,2-Dichloroethene	9	
75-34-3	1,1-Dichloroethane	10	
108-05-4	Vinyl Acetate	4	
156-59-2	cis-1,2-Dichloroethene	8	
594-20-7	2,2-Dichloropropane	8	
74-97-5	Bromochloromethane	9	
67-66-3	Chloroform	10	
71-55-6	1,1,1-Trichloroethane	10	
563-58-6	1,1-Dichloropropene	13	
56-23-5	Carbon tetrachloride	11	
71-43-2	Benzene	10	
107-06-2	1,2-Dichloroethane	9	
79-01-6	Trichloroethene	11	
78-87-5	1,2-Dichloropropane	10	
74-95-3	Dibromomethane	8	
75-27-4	Bromodichloromethane	10	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	8	
142-28-9	1,3-Dichloropropane	10	
127-18-4	Tetrachloroethene	11	
124-48-1	Dibromochloromethane	10	
106-93-4	1,2-Dibromoethane	8	
544-10-5	1-Chlorohexane	15	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKNBS

Lab Name: STS CHICAGO Contract:

Lab Code: Case No.: SAS No.. SDG No.: U11927

Matrix: (soil/water) WATER Lab Sample ID: 80GVF372-MB1S

Sample wt/vol: 25 00 (g/mL) ML Lab File ID: PF1110

Level: (low/med) LOW Date Received: 11/10/00

% Moisture: not dec _____ Date Analyzed: 11/10/00

Column (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-90-7	Chlorobenzene	10	
630-20-6	1,1,1,2-Tetrachloroethane	10	
100-41-4	Ethylbenzene	10	
136777-612	p,m-Xylene	21	
95-47-6	o-Xylene	10	
100-42-5	Styrene	10	
75-25-2	Bromoform	9	
98-82-8	Isopropylbenzene	11	
79-34-5	1,1,2,2-Tetrachloroethane	9	
108-86-1	Bromobenzene	10	
96-18-4	1,2,3-Trichloropropane	9	
103-65-1	n-Propylbenzene	11	
95-49-8	2-Chlorotoluene	11	
108-67-8	1,3,5-Trimethylbenzene	11	
106-43-4	4-Chlorotoluene	11	
98-06-6	tert-Butylbenzene	12	
95-63-6	1,2,4-Trimethylbenzene	11	
135-98-8	sec-Butylbenzene	11	
541-73-1	1,3-Dichlorobenzene	10	
99-87-6	p-Isopropyltoluene	12	
106-46-7	1,4-Dichlorobenzene	10	
104-51-8	n-Butylbenzene	12	
95-50-1	1,2-Dichlorobenzene	10	
96-12-8	1,2-Dibromo-3-Chloropropane	8	
120-82-1	1,2,4-Trichlorobenzene	10	
87-68-3	Hexachlorobutadiene	12	
91-20-3	Naphthalene	9	
87-61-6	1,2,3-Trichlorobenzene	9	

TAB

APPENDIX E

APPENDIX E

LPST SITE CLOSURE REQUEST FORM

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
PETROLEUM STORAGE TANK

LPST SITE CLOSURE REQUEST FORM

This form is to be used to request closure for Leaking Petroleum Storage Tank (LPST) cases. The soil and groundwater cleanup goals must be met prior to submitting this form. These cleanup goals should be derived from either:

- the TWC *Guidance Manual for LPST Cleanups in Texas*, January 1990 **so long as these goals were achieved prior to November 8, 1995**, or
- the TNRCC *Risk-Based Corrective Action for Leaking Storage Tank Sites* document, January 1994 (RG-36).

Submission of this Site Closure Request constitutes certification by the Responsible Party, Corrective Action Specialist (CAS), and Corrective Action Project Manager (CAPM) that all necessary corrective actions have been completed and final closure of the subject site is appropriate at this time. By signing this Site Closure Request, the Responsible Party, CAS, and CAPM acknowledges that no further corrective actions, with the exception of activities subsequently approved by the TNRCC, will be eligible for reimbursement after the RP's signature date. Although costs for activities such as groundwater monitoring or remediation system operation and maintenance may have been approved for an annual period, these activities should cease upon submission of the Site Closure Request as these activities will not be considered eligible for reimbursement beyond the date of the Site Closure Request. Additionally, any costs relating to site assessment or other corrective action activities will not be eligible for reimbursement if the activities are conducted after the date of the Site Closure Request, unless specifically approved by the TNRCC. If, upon review by the TNRCC, the TNRCC concurs that the site meets the conditions for final closure, the costs for closure activities necessary to restore the site to its original condition will be reviewed and approved as appropriate. If the TNRCC determines that the site does not meet the conditions for final closure, the TNRCC will request a workplan and cost proposal for the next appropriate corrective action activity necessary to proceed towards final closure unless appropriate activities have previously been approved. The only type of proposal that should be attached to the Site Closure Request is for site closure costs. Any proposals attached to the Site Closure Request for activities other than site closure will not be processed and will be withdrawn from consideration.

If any of the following apply, the site is not ready for closure and this form should not be submitted:

- **The appropriate LPST cleanup goals have not been met (a proposal for the next appropriate step should be submitted instead);**
- **Phase-separated hydrocarbons (>0.1 feet) currently exist at the site;**
- **The contaminant plume is increasing in size; or**
- **All wastes and other material generated from the site have not been properly disposed;**

Do not use this form:

- **if the release was not from a regulated underground or aboveground storage tank;**
- **for tank removal-from-service activities not associated with an LPST site (use the *Release Determination Report Form* (TNRCC-0621) or other appropriate format);**
- **for situations where the second set of confirmation samples collected during tank removal-from-service activities confirms suitability for closure (use the *Release Determination Report Form* (TNRCC-0621) or other appropriate format); or**
- **for shutdown of remediation systems or for plugging of monitor wells when site closure is not yet appropriate.**

If asked to initiate additional activities, submit a workplan and preapproval request for those activities on sites eligible for reimbursement. Please review the document entitled *Preapproval for Corrective Action Activities* (RG-111) for procedures on preapproval requests and the other PST guidance pamphlets and rules for additional information on LPST sites.

Complete all blanks and check "yes" or "no" for all inquiries. **IF A COMPLETED *ASSESSMENT REPORT FORM* (TNRCC-0562) WAS PREVIOUSLY SUBMITTED, YOU DO NOT NEED TO ANSWER THE QUESTIONS WITHIN THE DARK OUTLINED AREAS UNLESS THE INFORMATION HAS CHANGED.** If the question is not applicable to this site, indicate with N/A. If the answer to the question is unknown, please indicate. If space for supplemental information is needed, insert numbered footnote and provide brief supporting discussion in Section VI, Justification for Closure.

SITE CLOSURE REQUEST FORM

I. GENERAL INFORMATION

LPST ID No.: 104819 Facility ID No.: 0009696

Responsible Party: Air Force Center For Environmental Excellence

Responsible Party Address: 3207 North Road City: Brooks Air Force Base State: TX Zip: 78235-5363

Facility Name: Fort Worth Naval Air Station Joint Reserve Base

Facility Street Address: Desert Storm Road and Military Parkway

Facility City: Fort Worth County: Tarrant

What is the current use of site? (indicate all that apply):
☐ Residence[1] ☐ School or Day Care center ■ Commercial/Industrial[1] ☐ Recreational ☐ Agricultural

What is the anticipated future use of the site? (indicate all that apply):
☐ Residence[1] ☐ School or Day Care center ■ Commercial/Industrial[1] ☐ Recreational ☐ Agricultural

Adjacent property use (indicate all that apply):
☐ Residence[1] ☐ School or Day Care Center ■ Commercial/Industrial[1] ☐ Recreational ☐ Agricultural

Distance to nearest off-site residence from property line: NA feet in NA direction.

Distance to nearest school or day care center from property line: NA feet in NA direction.

II. CLOSURE SCREENING INFORMATION

Based on the *Limited Site Assessment Report* form or the Risk-Based *Assessment Report Form* (TNRCC-0562), the site is currently a **Priority** 4.1 site. If the site priority has changed, list the other priorities that previously pertained to this site:

■ Yes ☐ No — Have non-aqueous phase liquids (NAPL) ever been present at this site (including tankpit observation wells)? If yes, is NAPL present now (thickness ≥0.1 feet)? ☐ Yes ■ No Current thickness: <0.01ft ft. If NAPL is currently present, stop here and do not submit this form for case closure. Initiate or continue activities necessary for the removal of all recoverable NAPL at the site.

■ Yes ☐ No — Were all soils, recovered contaminated groundwater, and any phase-separated hydrocarbons properly disposed of, treated, recycled or reused in accordance with TNRCC requirements? If No, stop here and do not submit this form. Provide a proposal (if the site is eligible for reimbursement) to properly dispose or otherwise manage the wastes/materials or, if the site is not eligible for reimbursement, provide documentation of proper disposition of the wastes.

■ Yes ☐ No — Do contaminant concentrations show a consistent decreasing or low static trend? If No, is the contaminant plume increasing in size? ☐ Yes ☐ No If Yes, stop here, do not submit this form, and initiate activities to control plume migration.

[1] See definition in 30 TAC 334.202

III. RELEASE ABATEMENT/REMEDIATION

Date Release Discovered: 1960s

Substance(s) released: (check all that apply) ■ Gasoline ❑ Alcohol-blended fuel (Type and percentage of alcohol. ____)
❑ Diesel ❑ Used Oil ■ Jet Fuel (type. JP-4) ❑ Aviation Gasoline ❑ Other: (be specific) ____

Source of Release (specify all that apply):
❑ Spills/overfills ■ Piping leaks ❑ Dispenser leaks ❑ Tank corrosion ❑ Other: ____

■ Yes ❑ No Has a receptor survey been conducted?
■ Yes ❑ No Has a water well inventory been conducted?

❑ Yes ■ No Have vapor impacts to buildings or utility lines ever been associated with this release? If Yes, specify the measures taken to abate the impact and indicate the latest date that an impact was noted: ____

❑ Yes ■ No Have subsurface utilities ever been affected with NAPL or vapors by this release? If Yes, indicate the latest date that an impact was noted: ____

If not already provided in *Release Determination Report Form* (TNRCC-0621), or if the information has changed since submittal of the *Release Determination Report*, indicate number of tanks currently and formerly located at this site (attach pages as necessary).

	Type (UST/AST)	Product Type	Size (approx. gal)	Date Removed from Service
Current:	AST-1159	JP-4	2.5 million gallons	
	AST-1156	JP-4	630,000 gallons	
	AST-1157	JP-4	630,000 gallons	
Former:	UST	Gasoline/Diesel	Unknown	Unknown (tank numbers, volumes and removal were not permanently recorded)

■ Yes ❑ No If the tanks were permanently removed from service, were native soil samples collected from beneath the tanks **and** the entire length of the piping? If No, explain why not: ____

❑ Yes ■ No Was a new UST system installed? If Yes, indicate the date, number of tanks and their contents:
The fuel loading system at SWMU 68 was repaired and returned to service.

❑ Yes ■ No Are there any open excavations at the site? If Yes, state size, location, purpose, and status for each of the excavations: ____

Type(s) of soil remediation and time periods the remediation method was operational (indicate all that apply):
❑ Excavation ____ to ____ (dates), and
❑ Aboveground Bioremediation/Aeration ____ to ____ (dates), or
❑ Thermal Treatment ____ to ____ (dates), or
❑ Disposal ____ to ____ (dates).
■ Bioventing April 1996 to April 1998 (dates).
❑ Soil Vapor Extraction ____ to ____ (dates).
❑ In-Situ Bioremediation ____ to ____ (dates).
❑ None

III. RELEASE ABATEMENT/REMEDIATION (Continued)

Type(s) of groundwater remediation and time periods the remediation method was operational (indicate all that apply):

- ☐ Groundwater Pump and Treat _____ to _____ (dates)
- ☐ Air Sparging/SVE _____ to _____ (dates)
- ☐ In-Situ Bioremediation _____ to _____ (dates)
- ☐ Other: _____ _____ to _____ (dates)
- ■ None

■ Yes ☐ No Were copies of all receipts and manifests to document disposition of all wastes submitted to the TNRCC? If No, attach copies to this form.

Measured total volume of NAPL recovered: **unknown** gallons.

Estimated total volume of soil treated/removed: **0** cubic yards (exclude soil cuttings removed from borings).

Estimated total volume of groundwater treated/removed: **0** gallons (if known).

Estimated pounds of hydrocarbons removed or treated from soil (if known): **NA**

Estimated pounds of hydrocarbons removed or treated from groundwater (if known): **NA**

Estimated percent of total contaminants removed or treated (if known): **NA**

IV. SOIL DATA VALIDATION

Are there now affected surface soils (contamination exceeding health-based target concentrations) present within 2 feet below the ground surface? ❑ Yes ■ No ❑ Unknown

Type of surface cover over affected surface soil area:

■ Paved [■ Asphalt or ■ Concrete] Percent of affected soils covered? >50% ❑ Unpaved

❑ Other:

Is there public access to the uncovered affected surface soil area? ❑ Yes ■ No

Total number of borings: >100 (including those completed as monitor wells)

■ Yes ❑ No Was the vertical and horizontal extent of soil impacts defined (to the more stringent of health-based target or groundwater protective soil concentrations horizontally and to groundwater or nondetect vertically) by the borings?

❑ Yes ■ No Are shallow (0-15 feet below ground surface) soils affected (contaminant levels exceed health-based target concentrations) on adjacent properties (including right-of-way properties).

■ Yes ❑ No Were all soil sample collection, handling, transport, and analytical procedures conducted in accordance with TNRCC and EPA requirements? If No, provide justification:

MAXIMUM SOIL CONCENTRATION LEVELS

Soil Contaminants	Sample Date	Sample Location	Depth (in feet below ground surface)	Analytical Method	Maximum Concentration* (mg/kg)	Target Cleanup Goals** (indicate source of target cleanup goals: 1990 or 1994 [Plan A or B] guidance)
Benzene	3/1998	GP3-9	9-11	SW8260B	3.3	6.27 (Plan B)
Toluene	3/1998	GP3-9	9-11	SW8260B	<0.74	69 (Plan A, Cat I)
Ethylbenzene	3/1998	GP3-9	9-11	SW8260B	4.8	160 (Plan A, Cat I)
Total Xylenes	3/1998	GP3-9	9-11	SW8260B	7.0	568 (Plan A, Cat I)
Total BTEX	NA					
TPH	NA					
Other Napthalene	3/1998	GP3-9	9-11	SW8260	2	389 (Plan A, Cat I)
Other						

* Enter maximum soil analytical results for soils remaining beneath the site (take into account all available data, including information obtained during the release determination (tank removal from service, minimal site assessment, etc)).

** If Plan A cleanup goals were used, provide the potential groundwater beneficial use category and a justification of how it was determined in Section VI.
1990 cleanup goals may be used only if all activities necessary to meet those goals were completed by November 8, 1995.

V. GROUNDWATER DATA VALIDATION

Is groundwater at the site impacted? ❑ Yes ■ No

Did the assessment document that groundwater was not impacted? ■ Yes ❑ No If No or unsure, provide justification for not determining whether there is a groundwater impact:

Total number of monitoring wells installed: 48 Number of monitor wells remaining at the site: 48
Will any of the remaining wells be used in the future? ■ Yes ❑ No If Yes, specify exactly which well(s) will be used:
Wells to be used for base-wide groundwater monitoring and further compliance monitoring at POL tank farm which will remain in use.
If No, they must be plugged in accordance with Water Code 32.017 **after** obtaining approval for site closure. **Do not** plug the wells until you receive concurrence on site closure. Costs of well plugging may be allowable for reimbursement if all eligibility requirements are met and if the wells were installed under the direction of the TNRCC specifically to address the confirmed release at the site. Provide a proposal with this form (if the site is eligible for reimbursement) for costs of the well plugging.

Measured total dissolved solids (TDS) concentration in groundwater: 570 mg/l. From which monitor well(s) was/were the sample(s) collected? WHGLTA010

Measured groundwater yield at the site: _____ gallons/day (as determined from well adequately screened in the impacted aquifer). ■ Not determined.

Measured groundwater depth at the site ranges between 16.0 and 21.5 feet below the top of well casing.

Time period of groundwater monitoring at the site (dates): 1993 to October 2000.

Total number of groundwater monitoring events: 2 during the 2000 sampling period.

What type of aquifer is impacted? (unconfined, confined, semi-confined): Unconfined.

Distance from maximum plume concentration point to nearest existing downgradient well location (not monitor well): >0.5 mi in _____ direction (Input ">0.5 mile" if there is no well within 0.5 mile downgradient)

Are any water supply wells impacted or immediately threatened? ❑ Yes ■ No
If Yes, specify type of well: ❑ Drinking water ❑ Non-drinking water

Are there any existing water wells located within the area of impacted groundwater? ❑ Yes ■ No
If Yes, specify type of well: ❑ Drinking water ❑ Non-drinking water

Has surface water been affected? ❑ Yes ■ No

Will the groundwater contaminants likely discharge to a surface water body? ❑ Yes ■ No

What is the potential impact of affected groundwater discharge on surface water?
❑ Current impact ■ Discharges within 500 ft. ❑ Discharges within 500 to 0.25 miles
❑ No potential impact

■ Yes ❑ No Were groundwater sample collection, handling, transport, and analytical procedures conducted and documented in accordance with TNRCC requirements? If no, provide justification:

V. GROUNDWATER DATA VALIDATION (Continued)

■ Yes ❑ No	Is the extent of groundwater contamination defined (to MCL concentrations)? If No, provide justification for not defining the plume:_____
❑ Yes ■ No	Have groundwater impacts from this release been detected on adjacent properties? If No, is off-site migration probable? ❑ Yes ■ No Is there documentation that off-site migration has **not** occurred (sample results from off-site sampling point)? ■ Yes ❑ No
❑ Yes ■ No	Was the static groundwater level above the top of the well screen in any monitor wells during any of the last 4 monitoring events? If Yes, provide a statement of validity regarding these samples:
■ Yes ❑ No	Have groundwater samples from all monitor wells met the target cleanup goals for the last four consecutive sampling events?

MAXIMUM GROUNDWATER CONCENTRATIONS

Groundwater Contaminants	Sample Date	Sample Location	Laboratory Method	Maximum Concentration* (mg/l)	Target Cleanup Goals** *(indicate source of target cleanup goals: 1990 or 1994 [Plan A or B] guidance)*
Benzene	10/2000	ST14-W16	SW8260B	0.001	0.0294
Toluene	4/2000	ST14-03	SW8260B	0 003	7.3
Ethylbenzene	ND			ND	3.65
Total Xylenes	ND			ND	73.0
Total BTEX	NA				
TPH	NA				
Other _____					
Other					

* Enter maximum groundwater analytical results from the most recent 12 months of monitoring.

** 1990 cleanup goals may be used only if all activities necessary to meet those goals were completed by November 8, 1995.

VI. JUSTIFICATION FOR CLOSURE

Please provide a brief summary supporting this request for site closure, including footnoted discussions for the above entries as necessary. **Include discussions providing necessary justifications for any site conditions which deviate from the specific requirements of TNRCC rules and policies, including the document *Risk-Based Corrective Action for Leaking Storage Tank Sites*.** Provide documentation to justify case closure, including information which addresses the potential for future exposure, the existence of impervious cover or other actions which may prevent exposure or limit infiltration, the absence of receptors, etc.

Groundwater usage of the site meets the Category II definition where TDS is less than 3000 mg/kg and there is no beneficial use within 0.5 miles of the site. Current site conditions are industrial in nature and will remain industrial in the future. The site is mostly covered by asphalt, concrete driveways, and concrete slab foundations for work buildings. Farmers Branch Stream is located downgradient to both sites but is intermittent in flow and is not considered to be for public usage.

Groundwater monitoring has been performed most recently in 2000 on a semiannual basis. A total of 8 wells were chosen for sampling based on elevated historical concentrations, and the proximity of the wells to the suspected release area All BTEX compounds were well below the Plan A Category II concentrations during the 2000 sampling.

LNAPL has been measured at the site in four wells. Active monitoring and recovery were initiated from the day of discovery and have recently been measured <0.01 feet in thickness LNAPL was not observed between the months of January through August 2000. During one event in September 2000, LNAPL was measured in each of the wells rangi from <0.02 to 0 1 feet in thickness. One well was also observed to have LNAPL in November 2000 with a thickness of 0 01 feet. These two events are considered to be attributed to a seasonal change in groundwater table elevation and not indicative of an increase in LNAPL volume or changing site conditions.

Soil samples were collected from the fuel loading area in the vicinity of the bioventing remediation system which was installed in 1996 and run continuously for 2 years The system was installed at this location due to the elevated concentrations of contaminants detected during historical field events (benzene as high as 67 mg/kg). The post remediation samples were collected in March 1998 to determine the effectiveness of the system. Of the 27 subsurface samples collected, the highest benzene concentration was 3.3 mg/kg in the most affected area. The Plan A Category II Target Concentration for benzene in soil is 0.74 mg/kg in soil and the Plan B calculated concentration for benzene in soil was determined to be 6.27 mg/kg as specified in the 1997 Remedial Action Plan submitted to the TNRCC by Parsons Engineering Science, Inc. Only one soil sample exceeded the Plan A Concentration for benzene at a level of 3.3 mg/kg which is lower than the calculated site specific Plan B concentration of 6.27 mg/kg. Toluene, Ethylbenzene, and Xylenes were also detected but well below the Plan A levels. The remediation of soils is considered a success as a result of the system and further corrective action should not be necessary.

Based on the above information, this site no longer poses a threat to current or future human health and has met the requirements for closure under the TNRCC/PST Division.

VII. REPORT PREPARATION

568 369

Based on the results of the site investigation and the additional information presented herein, I certify that the site investigation activities performed either by me, or under my direct supervision, including subcontracted work, were conducted in accordance with accepted industry standards/practices and further, that all such tasks were conducted in compliance with applicable TNRCC published rules, guidelines and the laws of the State of Texas I have reviewed the information included within this report, and consider it to be complete, accurate and representative of the conditions discovered during the site investigation. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties **I certify that the site has met all requirements for closure and that closure is appropriate.**

Project Manager: **Kent Duran** CAPM No.: **01534** Expiration Date: **4/10/2003**

Company: **HydroGeoLogic, Inc.**

Address: **12343 Hymeadow Drive, Bldg. 3-B** City: **Austin** State: **TX** Zip: **78750**

Telephone No.: **512/336-1170** Fax No.: **512/336-0178**

Signature: Kent Duran Date: 5/15/01

By my signature affixed below, I certify that I am the duly authorized representative of the Correction Action Specialist named and that I have personally reviewed the site investigation results and other relevant information presented herein and considered them to be in accordance with accepted standards/practices and in compliance with the applicable TNRCC published rules, guidelines and the laws of the State of Texas. Further, that the information presented herein is considered complete, accurate and representative of the conditions discovered during the site investigation I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties **I certify that the site has met all requirements for closure and that closure is appropriate.**

Corrective Action Specialist: **James Costello** CAS No.: **00700** Expiration date: **6/27/2001**

Company: **HydroGeoLogic, Inc.**

Address: **1155 Herndon Parkway, Suite 900** City: **Herndon** State: **VA** Zip: **20170**

Telephone No.: **512/336-1170** Fax No.: **512/336-0178**

Signature: [illegible] Date: 5/16/01

By my signature affixed below, I certify that I have reviewed this report for accuracy and completeness of information regarding points of contact and the facility and storage tank system history and status. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report related to the contact information, and the facility and storage tank system history and status information, I may be subject to administrative, civil, and/or criminal penalties. I attest that I have reviewed this report for accuracy and completeness I understand that I am responsible for addressing this matter.
I certify that the site has met all requirements for closure and that closure is appropriate.

Name of Responsible Party contact: **Michael Dodyk, P.E., HQ AFCEE/ERD**

Telephone No.: **817/782-7167** Fax No.: **817/782-6399**

Signature: Michael R Dodyk Date: 15 May 01

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH THIS FORM IF NOT PREVIOUSLY SUBMITTED:

- A site map illustrating the locations of the entire UST and/or AST system (including piping, dispensers, observation wells, etc.), all soil borings and monitoring wells and all other sampling points, subsurface utilities, and surface water within 500 feet.
- A copy of the latest groundwater gradient map (if monitor wells were completed).
- Summary tables of all soil, groundwater and surface water analytical results, including samples collected from any tank removal from service activities, tank system repair activities, and those collected from borings and monitor wells. The tables must clearly identify the sample number, date of collection, sampling locations, depths (if applicable), and analytical results.
- Copies of any manifests or other waste receipts, and any other documents necessary for case closure.

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE