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LETTER TRANSMITTING FINAL 2000 ANNUAL GROUNDWATER MONITORING REPORT
FOR SOLID WASTE MANAGEMENT UNIT 60 AND AREA OF CONCERN 7 NAS FORT
WORTH TX
5/15/2001
AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE

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NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 580



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

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File:
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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



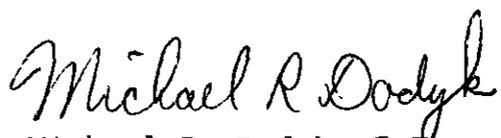
measurements have shown LNAPL thicknesses to be less than <0.01 feet.

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

REPORTING FORMS	
<input type="checkbox"/> Assessment Report Form (TNRCC-0562)	<input type="checkbox"/> LPST Case Questionnaire
<input type="checkbox"/> Product Recovery Report Form (TNRCC-0016)	<input type="checkbox"/> Release Report Form (TNRCC-0621)
<input checked="" type="checkbox"/> Site Closure Request Form (TNRCC-0028)	<input type="checkbox"/> Monitoring Event Summary and Status Report (TNRCC-0013)
<input type="checkbox"/> Final Site Closure Report Form (TNRCC-0038)	<input type="checkbox"/> Priority 4 LPST Case Closure Request Form (TNRCC-0461)
<input type="checkbox"/> Other form _____	

REPORTS		
<input type="checkbox"/> Tank Closure/Removal	<input type="checkbox"/> Plan A Risk Assessment	<input checked="" type="checkbox"/> Annual Groundwater Monitoring
<input type="checkbox"/> O&M/Performance Mon	<input type="checkbox"/> Plan B Risk Assessment	<input type="checkbox"/> CAP Installation/Modification
<input type="checkbox"/> Property Divestiture/Phase I ESA	<input type="checkbox"/> Corrective Action Plan (CAP)	<input type="checkbox"/> Aquifer/Pilot Test Results

MISCELLANEOUS	
<input type="checkbox"/> Off-site access assistance	<input type="checkbox"/> Deadline Extension Request
<input type="checkbox"/> Tank tightness test results	<input type="checkbox"/> Request for State-Lead
<input type="checkbox"/> Request for LPST Waste Code	<input type="checkbox"/> Class V ReInjection Request
<input type="checkbox"/> Notice to Owner/Operator for CAS Services	<input type="checkbox"/> Petroleum-Substance Waste Manifest
<input type="checkbox"/> Notice of Continuation of Groundwater Monitoring	<input type="checkbox"/> Underground Storage Tank Registration Form
<input type="checkbox"/> Notice of Continuation of Operation and Maintenance	<input type="checkbox"/> Aboveground Storage Tank Registration Form
<input type="checkbox"/> 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. RCAS00700 6/27/2001
 (Registered Corrective Action Specialist) (RCAS Reg No) (Expiration date)

Paul A. ... 5/14/01
 (Signature) (Date)
512/336-1170 512/336-0178
 (Telephone #) (FAX #)

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

Kent Duran 5/14/01
 (Signature) (Date)
512/336-1170 512/336-0178
 (Telephone #) (FAX #)

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

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

Michael R Dodyk 15 May 01
 (Signature) (Date)
817/782-7167 817/782-6399
 (Telephone #) (FAX #)

**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):

Residence¹ School or Day Care center Commercial/Industrial¹ Recreational Agricultural

What is the anticipated future use of the site? (indicate all that apply):

Residence¹ School or Day Care center Commercial/Industrial¹ Recreational Agricultural

Adjacent property use (indicate all that apply):

Residence¹ School or Day Care Center Commercial/Industrial¹ 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:	<u>AST-1159</u>	<u>JP-4</u>	<u>2.5 million gallons</u>	
	<u>AST-1156</u>	<u>JP-4</u>	<u>630,000 gallons</u>	
	<u>AST-1157</u>	<u>JP-4</u>	<u>630,000 gallons</u>	
Former:	<u>UST</u>	<u>Gasoline/Diesel</u>	<u>Unknown</u>	<u>Unknown (tank numbers, volumes and removal were not permanently recorded)</u>

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/REMEDATION (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

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: _____ Date: _____

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