General Services Agency

Darlene A. Smith, Director

December 20, 1994

Mr. Scott Seery, CHMM
Senior Hazardous Materials Specialist
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

SUBJECT: SECOND QUARTER GROUNDWATER MONITORING REPORT FOR FORMER UNDERGROUND STORAGE TANK #9, SANTA RITA PROPERTY, SANTA RITA, CALIFORNIA

Dear Mr. Seery:

Enclosed for your review are two copies of the *November 29, 1994 Second Quarter Groundwater Monitoring Report for the Former Underground Storage Tank #9, Santa Rita Property, Santa Rita, California.* This report was prepared by Versar, Inc., environmental consultant.

Please note Versar's *Table 1, Summary of First and Second Quarterly Groundwater Sampling Analytical Results*, enclosed. Therein, the County of Alameda has demonstrated two consecutive quarters of groundwater monitoring at the UST #9 site. All the laboratory results for TPH-D and BTEX are well below the Maximum Contaminant Levels for drinking water. We plan to continue groundwater monitoring for two additional quarters. Assuming the results remain below the Maximum Contaminant Levels for drinking water, the County of Alameda will request site closure for UST #9 site.

Also, on September 8, 1994, Environmental Science & Engineering, Inc., environmental consultant, on behalf of the County of Alameda, requested **site closure** for Old Graystone Fueling Area, Santa Rita Correctional Facility, Dublin, California. Enclosed is a copy of their letter for your reference. The primary basis for this request is that the County of Alameda has demonstrated four consecutive quarters of groundwater monitoring. All the

Engineering & Environmental Management Department
1401 Lakeside Drive, 11th Floor, Oakland, California 94612
Telephone (510) 208-9525 • FAX (510) 208-9530

laboratory results for TPH-G, TPH-D, and BTEX are well below the Maximum Contaminant Levels for drinking water. These results are summarized in Environmental Science & Engineering's *Table 2, Analytical Results for Groundwater Samples Collected From Monitoring Wells*, enclosed.

I would appreciate it if you would place these two sites on the **highest, fastest priority level** possible. The County of Alameda has entered into a sales agreement with Homart Development Co. in which a portion of Alameda County's Santa Rita property along Interstate 580 will be developed. My understanding is that construction of a shopping center on the property, which includes the UST-9 and Old Graystone sites, will start as soon as March 1, 1995. Thus, obtaining site closures for these two sites as soon as possible, is my top priority. Any help, advice, suggestions, etc. that you can give me, are appreciated.

If you have any questions, please call me at (510) 208-9521. I appreciate your continued cooperation and prompt response to this letter. I look forward to our continued excellent working relationship. Have a *Merry Christmas* and a *Happy New Year*!

Sincerely,

Andrew B. Garcia

Andrew B. Garcia, REA
Environmental Project Manager

enclosure

cc: Mr. Tom Peacock, Department of Environmental Health
Mr. Jack Shepherd, Planning Department

ABG,abg; g\project\env\7058srj9\eh1220
File: Project #93-7058, Bldg. #2282

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TABLE 1

SUMMARY OF FIRST AND SECOND QUARTERLY GROUNDWATER SAMPLING ANALYTICAL RESULTS'

NOVEMBER 1994 *

SAMPLE DATE	TPH-D	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
14-JUN-94	ND[2]	ND	ND	ND	ND
30-SEP-94	ND	0.52	ND	ND	ND
MDL[3]	50	0.50	0.50	0.50	1.50
MCL[4]	NA	1.0	100[5]	680	1,750

Notes: 1. All results reported in micrograms per liter.

2. ND = constituent not detect at or above the analytical method detection limit.

3. MDL = method detection limit.

4. MCL = maximum contaminant level.

5. California Action Level (EPA, 1994).

* Taken from Versar, Inc. November 29, 1994 "Second Quarter Groundwater Monitoring Report for the Former Underground Storage Tank #9, Santa Rita, California".

Versar INC.

SECOND QUARTER GROUNDWATER MONITORING REPORT

for the

FORMER UNDERGROUND STORAGE TANK #9
SANTA RITA PROPERTY
Santa Rita, California

Prepared for:

COUNTY OF ALAMEDA
GENERAL SERVICES AGENCY
Energy & Environmental Management Department
1401 Lakeside Drive
Oakland, California 94612

Prepared by:

VERSAR, INC.
1255 Harbor Bay Parkway, Suite 100
Alameda, California 94502

Versar Project No. 2241-019

November 29, 1994

Versar INC.

Prepared by:

Terrence J. Kinn
Geologist

Approved for Release:

Michael P. Sellens, R.G. 4714
Manager, Geoscience Department

Versar INC.

EXECUTIVE SUMMARY

The County of Alameda General Services Agency (GSA) retained Versar, Inc. (Versar) to install one groundwater monitoring well and perform four quarters of groundwater monitoring at the former underground storage tank (UST) #9 site located in Santa Rita, California (site). The monitoring program is being performed to assess groundwater conditions and potential impact from fuel oil hydrocarbons stored in the former UST. The site location and layout is shown in Figures 1 and 2.

Laboratory analytical results of the second quarterly sampling indicated that total petroleum hydrocarbons as diesel, and constituents toluene, ethylbenzene and xylenes were not present in the groundwater sample at concentrations above the selected analytical method detections limits. Benzene, however, was detected in the groundwater sample at a concentration of 0.52 micrograms per liter (µg/l). This concentration is however, below the California Maximum Contaminant Level of 1.0 µg/l for benzene (EPA, 1994). None of these hydrocarbon analytes were reported present in the groundwater collected during the first quarterly sampling event (Versar, 1994).

Presently, Versar recommends continuing the groundwater monitoring at the site as scheduled. In the event that diesel range hydrocarbon or benzene, toluene, ethylbenzene and xylenes (BTEX) constituents are detected in the subsequent sampling events, Versar will compare the data to regulatory guidelines and present appropriate recommendations to GSA. If hydrocarbon constituents are not reported present throughout the remainder of the monitoring program, Versar, on behalf of the GSA, will recommend to the Alameda County Health Care Services Agency that the former UST site be granted site closure.

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Versar INC.

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B Laboratory Analytical Report

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1.0 INTRODUCTION

This report present the results of the second quarterly groundwater monitoring event performed September 30, 1994 at the former location of underground storage tank (UST) #9 at the Santa Rita Property, Santa Rita, California (site). The site location and layout are provided in Figure 1 and 2. The County of Alameda General Services Agency (GSA) retained Versar, Inc. (Versar) to install one groundwater monitoring well adjacent to the former UST #9 location, and perform four quarters of groundwater monitoring. This work is being performed on behalf of GSA pursuant to directives issued by the Alameda County Health Care Services Agency (ACHCSA). ACHCSA directed GSA to implement a groundwater monitoring program to assess groundwater conditions and potential groundwater impact related to the use and storage of fuel oil hydrocarbons at the former UST location.

2.0 BACKGROUND

On November 20, 1990, a 1,500 gallon fuel oil storage tank was excavated and removed from the site by Certified Environmental Consultants, Inc. Laboratory results of native soil samples collected from beneath UST #9 following removal were reported to contain elevated concentrations of total petroleum hydrocarbons as diesel (TPH-D) (CEC, 1990). As a result, ACHCSA requested a groundwater monitoring program be conducted for a one year period.

3.0 GROUNDWATER SAMPLING

Prior to purging, the bailer used to purge the well was washed in Liqunox detergent solution, rinsed in a two tap-water bath and final rinsed with deionized water. Additionally the depth to water and total well depth were measured in order to calculate the volume of groundwater in the well.

The monitoring well was purged until dry (approximately three casing volumes) of water using a three inch diameter polyvinyl chloride (PVC) bailer and dedicated nylon rope. The procedures for well purging involved the measurement of hydrologic parameters for temperature, pH, and conductivity, an average of three times per well volume. The data observed during well purging was recorded on a Monitoring Well Purge Table (Appendix A) to document stabilization of the hydrologic parameters to within a relative variance of less than ten percent. Bailing of the well was terminated at approximately 12.25 gallons due to insufficient recharge. The well was allowed to recover to within 90 percent of the static water level prior to sample collection.

Collection of the groundwater sample was accomplished using a dedicated pre-cleaned polyethylene bailer and nylon rope. The groundwater sample was transferred from the bailer to the laboratory supplied containers using a bottom emptying device. Sample containers were then labeled with the appropriate identification number (SR9-1W), date and time of collection, Versar project number, and placed in an insulated chest with ice. Sample collection handling and transport to the laboratory were documented following Versar standard chain-of-custody procedures.

4.0 LABORATORY ANALYTICAL PROGRAM

The groundwater sample was analyzed for TPH-D by California Department of Health Services (DHS) Method, and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020. The groundwater sample was submitted to Trace Analysis Laboratory, a state-certified hazardous waste laboratory for analysis.

TPH-D, toluene ethylbenzene and xylenes were not reported to be present above the laboratory's reporting limit in the groundwater sample. However, benzene was detected in the groundwater sample at a concentration of 0.52 micrograms per liter (µg/l). This

concentration is below the California Maximum Contaminant Level (MCL) of 1.0 µg/l (EPA, 1994). A copy of the laboratory analytical report is included in Appendix B. A summary of the results from the TPH-D and BTEX analyses for the first and second quarter monitorings are presented in Table 1.

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TABLE 1

SUMMARY OF FIRST AND SECOND QUARTERLY GROUNDWATER SAMPLING ANALYTICAL RESULTS[1]

NOVEMBER 1994

SAMPLE DATE	TPH-D	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
14-JUN-94	ND[2]	ND	ND	ND	ND
30-SEP-94	ND	0.52	ND	ND	ND
MDL[3]	50	0.50	0.50	0.50	1 50
MCL[4]	NA	1.0	100[5]	680	1,750

Notes: 1. All results reported in micrograms per liter.

2 ND = constituent not detect at or above the analytical method detection limit.

3. MDL = method detection limit.

4. MCL = maximum contaminant level.

5 California Action Level (EPA, 1994).

5.0 FUTURE ACTIVITIES

Two remaining groundwater monitoring events are scheduled for late December 1994 and late March 1995.

6.0 RECOMMENDATIONS

Groundwater analytical results report no detectable concentrations of TPH-D, toluene, ethylbenzene and xylenes. The reported concentration of 0.52 µg/l of benzene is well below the regulatory limit of 1.0 µg/l. In the event that diesel range hydrocarbons or any of the BTEX constituents are to be detected in the groundwater samples during future monitoring events Versar will compare the data with applicable regulatory guidelines and present recommendations to GSA. However, if diesel range hydrocarbons or its BTEX constituents are not detected in the groundwater samples during the upcoming samplings, Versar, on behalf of the GSA, will recommend that the former UST site be granted site closure.

7.0 REFERENCES

CEC, 1990, Certified Environmental Consulting Inc., Underground Storage Tank Removal Report, December 11, 1990.

EPA, 1994, United States Environmental Protection Agency, Region IX, Drinking Water Standards and Health Advisories, July 1994.

Versar, 1994, Installation of One Monitoring Well and Performance of the First of Four Quarters of Groundwater Monitoring. Santa Rita Property, Former Underground Storage Tank #9., July 15, 1994.

8.0 LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

- The sole purpose of the investigation and of this report is to assess the physical characteristics of the Site with respect to the presence or absence of oil or hazardous materials and substances in the environment as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Site.

- Versar derived the data in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals with information about the Site, and a limited number of environmental samples, as indicated by the Scope of Services for the Site. The passage of time, manifestation of latent conditions, or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, conclusions, and recommendations expressed in the report.

- In preparing this report, Versar has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, Versar has not attempted to verify the accuracy or completeness of such information.

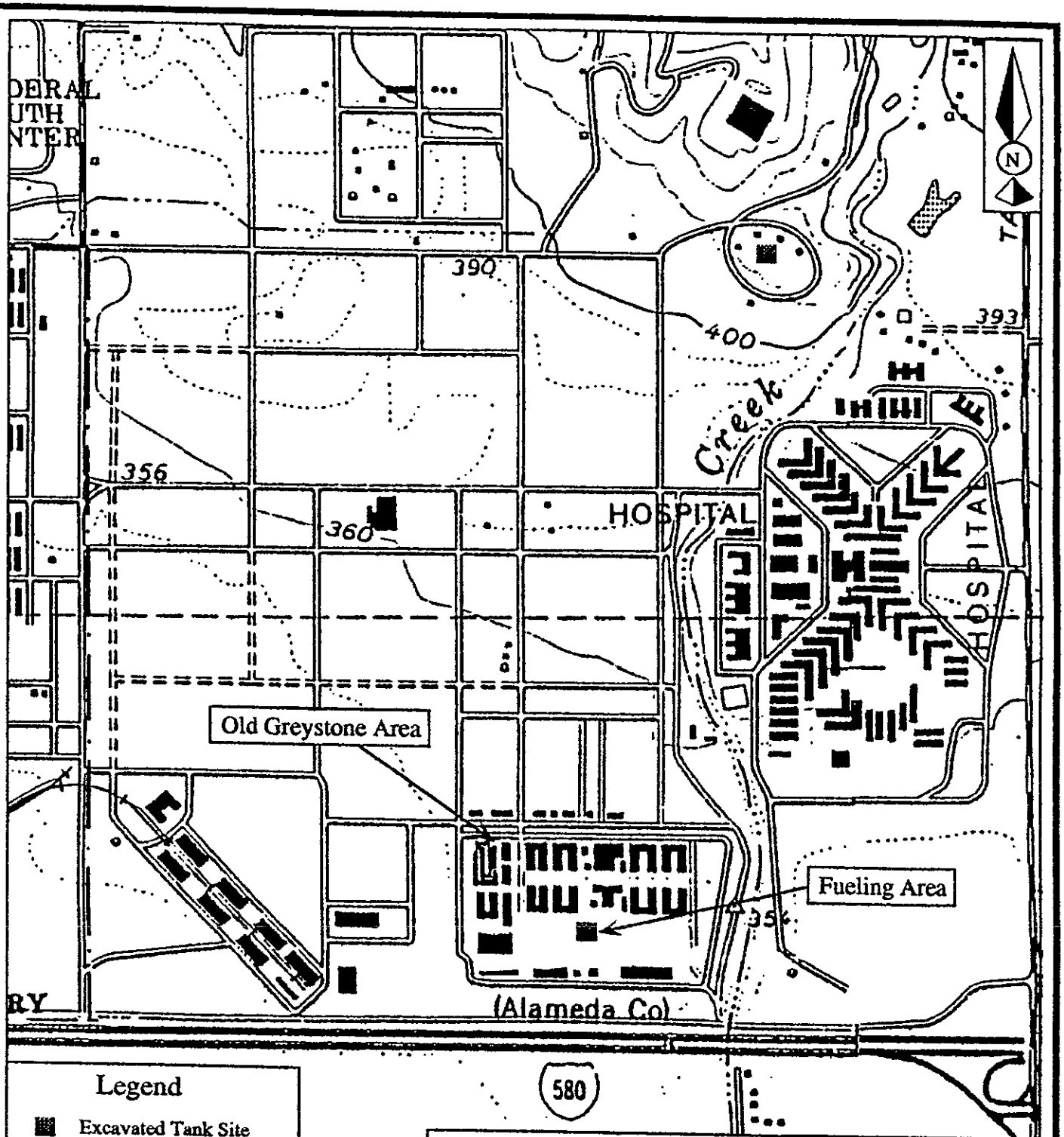
- The data reported and the findings, observations, conclusions, and recommendations expressed in the report are limited by the Scope of Services, including the extent of environmental sampling and other tests. The Scope of Services was defined by the

requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Site.

- Because of the limitations stated above, the findings, observations, conclusions and recommendations expressed by Versar in this report are limited to the information obtained and the surface and subsurface investigation undertaken and should not be considered an opinion concerning the compliance of any past or current owner or operator of the Site with any federal, state, or local law or regulation. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, conclusions, and recommendations expressed in this report. Further, such data, findings, observations, conclusions, and recommendations are based solely upon Site conditions in existence at the time of investigation.

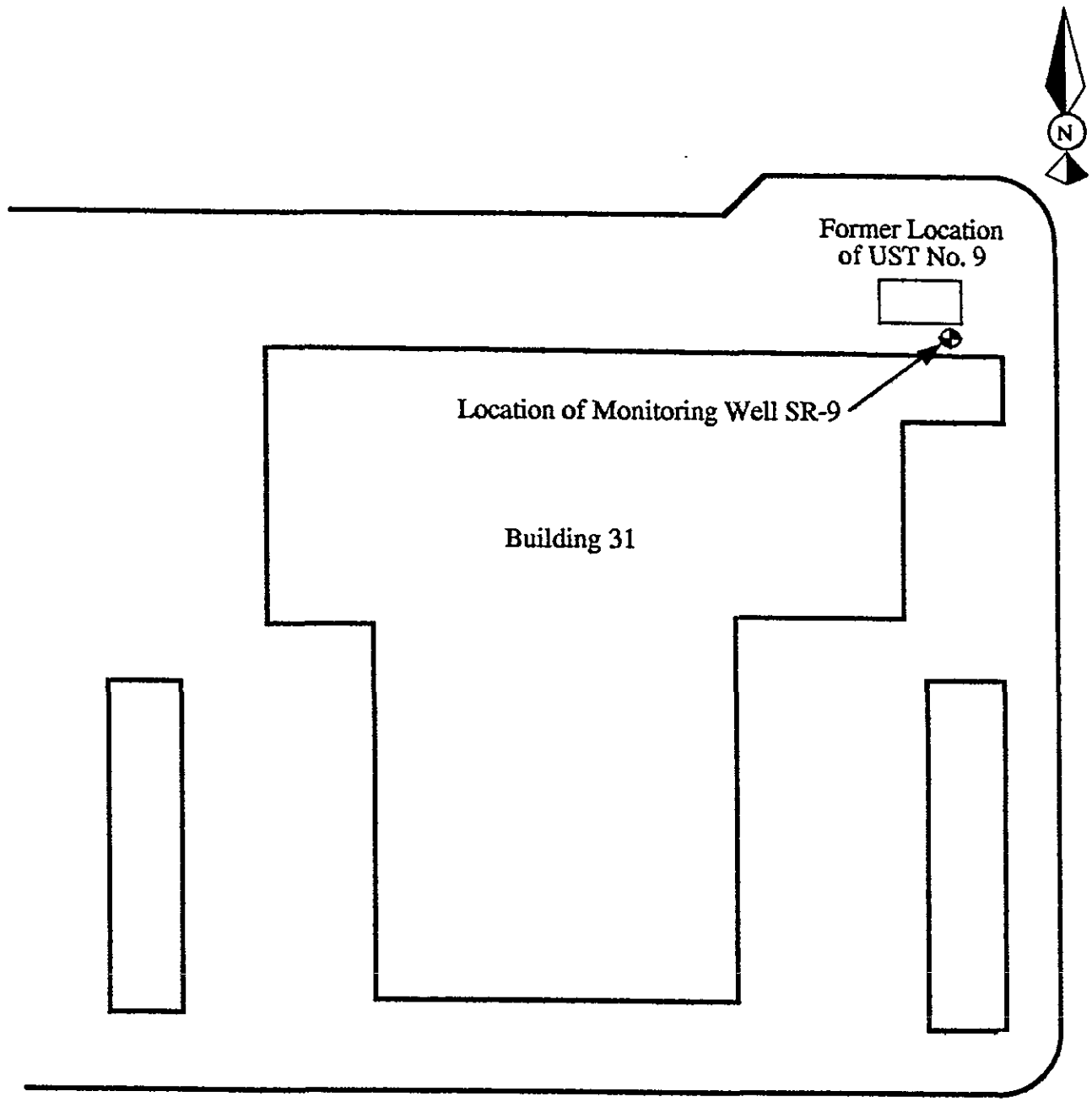
- This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.

FIGURES



Legend		
Excavated Tank Site		
Not to Scale	Site Plan	Figure 1
Project No. 2241-019	Santa Rita Property Pleasanton, California	Versar, Inc.

Adapted from USGS Topographic Maps, Livermore and Dublin Quads, California



Not to Scale	Site Layout	Figure 2
Project No. 2241-019	Santa Rita Property Pleasanton, California	Versar, Inc.

Versar INC.

APPENDIX A

Monitoring Well Purge Table

Versar INC.

MONITORING WELL PURGE TABLE

Project Number: 2241-019	Site Name: Santa Rita #9
Well Number: SR9	Date(s) Purged: 9/30/94
OVA - Ambient: --	Purge Method: 3-inch PVC bailer
OVA - Vault: --	Purge Rate: 0.36 gallon/minute
OVA - Casing: --	Date & Time Sampled: 9/30/94; 10:55
Water Level - Initial: 28.92 feet	Purged & Sampled By: J. Harris
Water Level - Final: 28.43 feet	Sampling Method: Polyethylene bailer
Well Depth: 36.33	Free Product: None
Well Diameter: 4-inches	Sheen: None
Well Casing Volume: 4.74 gallons	Odor: None

Time	Purge Water Removed (gal)	Temperature (°F)	pH	Electrical Conductivity (µS/cm)	Turbidity
09:09	0.50	66.7	7.14	2,480	High
09:13	3.50	66.0	7.15	2,260	High
09:16	4.00	65.4	7.17	2,190	High
09:21	6.00	65.2	7.28	2,390	High
09:25	8.00	65.9	7.28	2,150	High
09:29	9.00	66.3	7.51	2,320	High
09:33	10.00	66.4	7.92	2,380	High
09:36	11.00	66.6	8.47	2,250	High
09:43	12.25	64.9	8.58	1,890	High
10:55	Sample	68.2	7.47	2,530	Very low

Field Notes: Well purged dry after 12.25 gallons.

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APPENDIX B

Laboratory Analytical Report

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

October 7, 1994

Mr. Terrence Kinn
Versar, Inc.
1255 Harbor Bay Parkway, Suite 100
Alameda, CA 94501

Dear Mr. Kinn:

Trace Analysis Laboratory received one water sample on September 30, 1994 for your Project No. 2241-019, Santa Rita #9 (our custody log number 4808).

This sample was analyzed for Total Petroleum Hydrocarbons as Diesel and Benzene, Toluene, Ethylbenzene, and Xylenes. Our analytical report and the completed chain of custody form are enclosed for your review.

Trace Analysis Laboratory is certified under the California Environmental Laboratory Accreditation Program. Our certification number is 1199.

If you should have any questions or require additional information, please call me.

Sincerely yours,

Scott T. Ferriman
Project Specialist

Enclosures

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

LOG NUMBER: 4808
DATE SAMPLED: 09/30/94
DATE RECEIVED: 09/30/94
DATE EXTRACTED: 10/05/94
DATE ANALYZED: 10/07/94
DATE REPORTED: 10/07/94

CUSTOMER: Versar, Inc.

REQUESTER: Terrence Kinn

PROJECT: No. 2241-019, Santa Rita #9

Sample Type: Water

Method and Constituent:	Units	SR9-1W Concentration	SR9-1W Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
DHS Method:					
Total Petroleum Hydrocarbons as Diesel	ug/kg	ND	50	ND	50

QC Summary:

% Recovery: 91
% RPD: 6.6

Concentrations reported as ND were not detected at or above the reporting limit.

Trace Analysis Laboratory, Inc.

LOG NUMBER: 4808
DATE SAMPLED: 09/30/94
DATE RECEIVED: 09/30/94
DATE ANALYZED: 10/05/94
DATE REPORTED: 10/07/94
PAGE: Two

Sample Type: Water

Method and Constituent:	Units	SR9-1W Concentration	SR9-1W Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
Modified EPA Method 8020 for:					
Benzene	ug/l	0.52	0.50	ND	0.50
Toluene	ug/l	ND	0.50	ND	0.50
Ethylbenzene	ug/l	ND	0.50	ND	0.50
Xylenes	ug/l	ND	1.5	ND	1.5

QC Summary:

% Recovery: 106
% RPD: 3.1

Concentrations reported as ND were not detected at or above the reporting limit.

Louis W. DuPuis
Quality Assurance/Quality Control Manager

Versar INC. 4808 CHAIN OF CUSTODY RECORD #2

1 OF 1

PROJECT NO.	PROJECT NAME
2241-019	SANTA RITA #9

SAMPLERS: (Signature) [signature] (Printed) JONATHAN HARRIS

PARAMETERS: NO. OF CONTAINERS; BTEX; TPH/D

INDUSTRIAL HYGIENE SAMPLE: Y [X]

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	BTEX	TPH/D	REMARKS
SR9-1W	9/30/94	1055		X	SR9	3	X		
SR9-1W	9/30/94	1055		X	SR9	2		X	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	9/30/94 1300	[signature]	[signature]	9/30/94 1350	[signature]
(Printed) JONATHAN HARRIS		(Printed) T Kim	(Printed) T Kim		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		[signature]	9/30/94 1350	
(Printed)		(Printed) Scott Ferrini		

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink). P/4, water, 2 L, 3 VOAs HCl, Glass, Tray 4, 5-Day