General Services Agency

Darlene A. Smith, Director

April 6, 1995

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

SUBJECT: FOURTH QUARTER GROUNDWATER MONITORING REPORT FOR FORMER UNDERGROUND STORAGE TANK #9, SANTA RITA PROPERTY, SANTA RITA, CALIFORNIA AND REGULATORY FINAL CASE CLOSURE REQUEST FOR THE OLD GRAYSTONE SITE (STID 4086)

Dear Mr. Seery:

Enclosed for your review are two copies of the *March 30, 1995 Fourth 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.

The County of Alameda has now demonstrated four consecutive quarters of groundwater monitoring at the UST #9 site in which the laboratory results for TPH-D and BTEX are well below the Maximum Contaminant Levels for drinking water. Accordingly, we request **final case closure** of the Old Graystone Site (STID 4086), which includes both the UST #9 sub-site and the UST #11, #12 & #12A sub-site. Monitoring at the UST #11, #12 & #12A sub-site was successfully completed earlier this year, as indicated in your February 21, 1995 letter to me.

Your expeditious handling of this matter is requested. As Andy Garcia previously discussed with you, the Old Graystone Site is part of the proposed sale to the Homart Development Co. Final case closure is a crucial element of the sale.

If you have any questions or need additional information, please call me at (510) 208-9522. Thank you for your continued assistance.

Sincerely,

Rod Freitag, P.E.
Environmental Project Manager

enclosures

cc: Mr. Tom Peacock, Department of Environmental Health
Mr. Patrick Cashman, Surplus Property Authority

RDF:rdf:g:\project\env\7058srj9\eh0406
File: Project #93-7058, Bldg. #2282

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

Versar INC.

FOURTH 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
Engineering & 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

March 30, 1995

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 Dublin, California (site). The monitoring program is being performed to assess groundwater conditions and potential impact from fuel oil hydrocarbons stored in the former UST.

Laboratory analytical results of the fourth quarterly sampling event indicate that total petroleum hydrocarbons as diesel (TPH-D), and the constituents benzene, toluene, ethylbenzene and xylenes (BTEX) were not present in the groundwater sample at concentrations above the selected analytical method detection limits. Similarly, these hydrocarbon analytes were not reported present in the groundwater collected during the first and third quarterly sampling events. During the second quarterly groundwater sampling benzene was reported at a concentration of 0.52 micrograms per liter (µg/l). This concentration however, is well below the California Maximum Contaminant Level of 1.0 µg/l (Versar, 1994a).

Based on the results of each of the four quarterly samplings, it does not appear that groundwater in the location of the monitoring well has been impacted by the former UST at the site. As such, case closure is recommended for this site. Additionally, the monitoring well SR9 should be decommissioned in accordance with protocols set forth by the State Water Resources Control Board.

Versar INC.

Prepared by:

Terrence J. Kinn
Project Geologist

Approved for Release:

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

REGISTERED GEOLOGIST
Michael P. Sellens
No. 4714
Exp 2/97
STATE OF CALIFORNIA

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1.0 INTRODUCTION

This report presents the results of the fourth quarterly groundwater sampling performed March 7, 1995 for the former underground storage tank (UST) #9 located at the Santa Rita Property, Dublin, California (site). The site location and layout are provided in Figures 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). The 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 the 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.

On June 10, 1994 Versar installed one four-inch diameter monitoring well adjacent to and downgradient of the former UST location. During drilling of the monitoring well boring samples were collected at five foot depth intervals for lithologic classification and potential chemical analysis. During drilling and sample collection no odors or stained soils were observed. Additionally, organic vapor monitoring of the drill cuttings and soil samples was performed using a Photovac photoionization detector. Organic vapors were not detected

during the monitoring. Based on these results, three soil samples were selected for analysis of TPH-D and benzene, toluene, ethylbenzene, and xylenes (BTEX). Two of the samples analyzed were collected from depths from 26 to 27.5 feet below ground surface (bgs), directly above the observed ground water table. The third sample analyzed was collected from the depth of approximately 11.5 feet bgs, slightly greater than the depth of the bottom of the former UST. None of the analytes were reported in the samples at concentrations equal to or exceeding the laboratory method detection limits (Versar, 1994b). The well was subsequently developed and has been sampled on a quarterly basis since installation.

3.0 GROUNDWATER SAMPLING

The fourth round of quarterly groundwater sampling was conducted on March 7, 1995. The sampling event involved the purging and collection of a groundwater sample from monitoring well SR9 at the site. Prior to purging, the bailer used to purge the well was washed in Liqunox detergent solution, rinsed in two tap-water bathes and final rinsed with deionized water. Additionally the depth to water in the well and the total well depth were measured in order to calculate the volume of groundwater in the well.

The monitoring well was purged until dry (approximately 3 casing volumes) of water using a three inch diameter polyvinyl chloride (PVC) bailer and dedicated nylon rope. Procedures used for well purging included 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 these parameters to within a relative variance of less than ten percent. Bailing of the well was terminated at approximately 18.50 gallons due to insufficient recharge. The well was allowed to recover to within 80 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 (SR9-3W), 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 standard Versar 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 BTEX by Environmental Protection Agency (EPA) Method 8020. The groundwater sample was submitted to Trace Analysis Laboratory, a state-certified hazardous waste laboratory for analysis.

TPH-D, and BTEX were not reported present in the sample above the laboratory's method reporting limits. A copy of the laboratory analytical report is included in Appendix B. Table 1 summarizes the results of the TPH-D and BTEX analyses performed during each of the four quarterly monitorings.

TABLE 1
SUMMARY OF QUARTERLY GROUNDWATER
SAMPLING ANALYTICAL RESULTS[1]

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
30-DEC-94	ND	ND	ND	ND	ND
07-MAR-95	ND	ND	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

The fourth round of quarterly groundwater monitoring completes the groundwater monitoring program as directed by the ACHSA, no future monitoring is scheduled for the site. Potential future activities to be performed at the site should involve decommissioning of the monitoring well. Destruction of the well is contingent on award of case closure by the Regional Water Quality Control Board (RWQCB) and the ACHSA.

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6.0 CONCLUSIONS AND RECOMMENDATIONS

Laboratory analyses did not detect TPH-D in any of the groundwater samples collected during the four monitoring events. With exception of the benzene concentration detected (0.52 µg/l) during the second quarterly sampling event, BTEX constituents have not been reported in the groundwater samples. Based on these results it does not appear that the groundwater in the location of the monitoring well SR9 has been impacted by the UST formerly located on the site. As such, it is Versar's opinion that no further investigation is warranted for this site, and based on current regulatory guidelines the site should be considered for case closure.

In addition, pending award of site closure, the monitoring well at the site should be decommissioned in accordance with current well destruction procedures as recommended by the State Water Resources Control Board.

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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, 1994a, Second Quarter Groundwater Monitoring Report for the Former Underground Storage Tank #9., Santa Rita California, November 29, 1994.

Versar, 1994b, 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.

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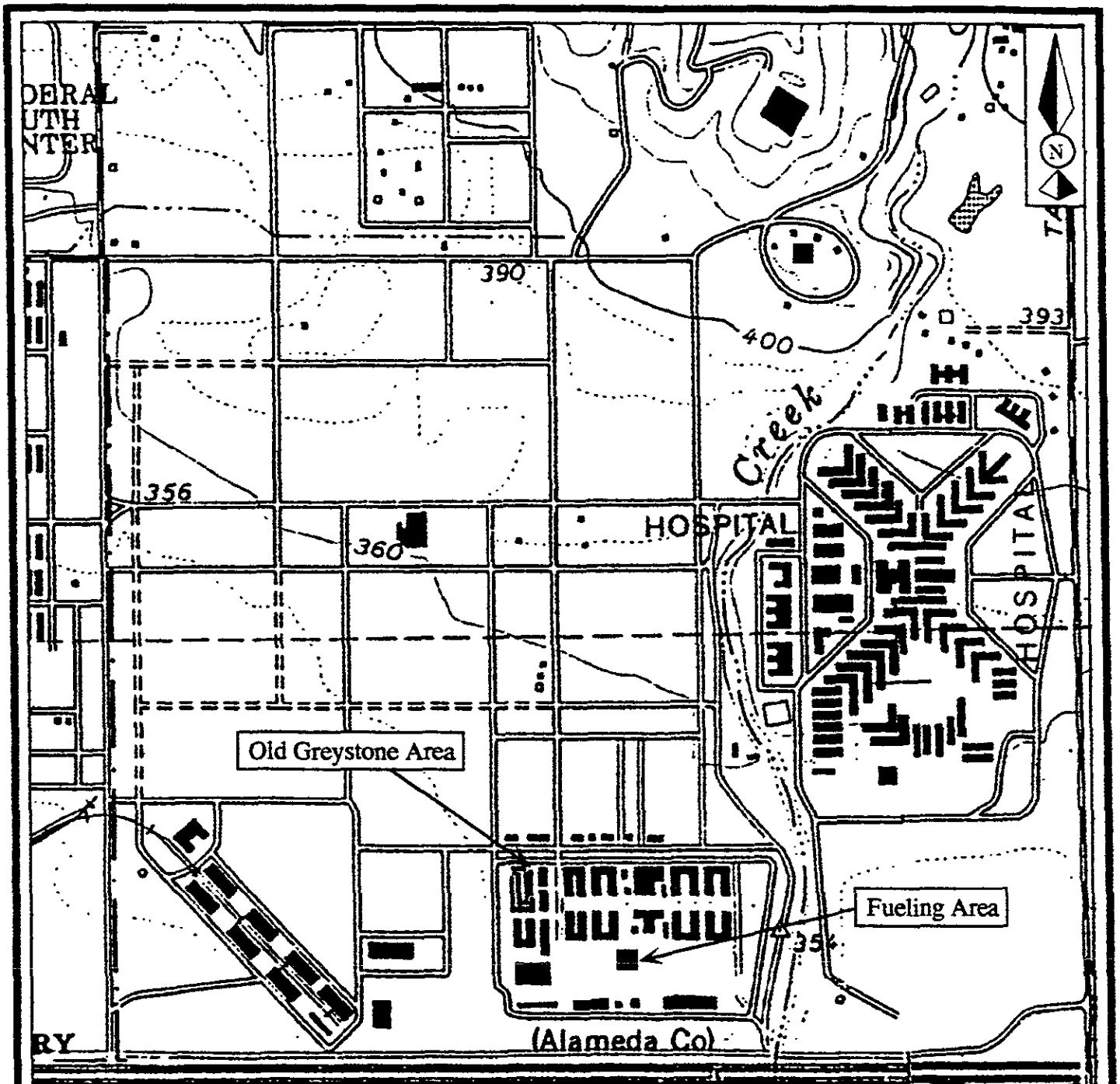
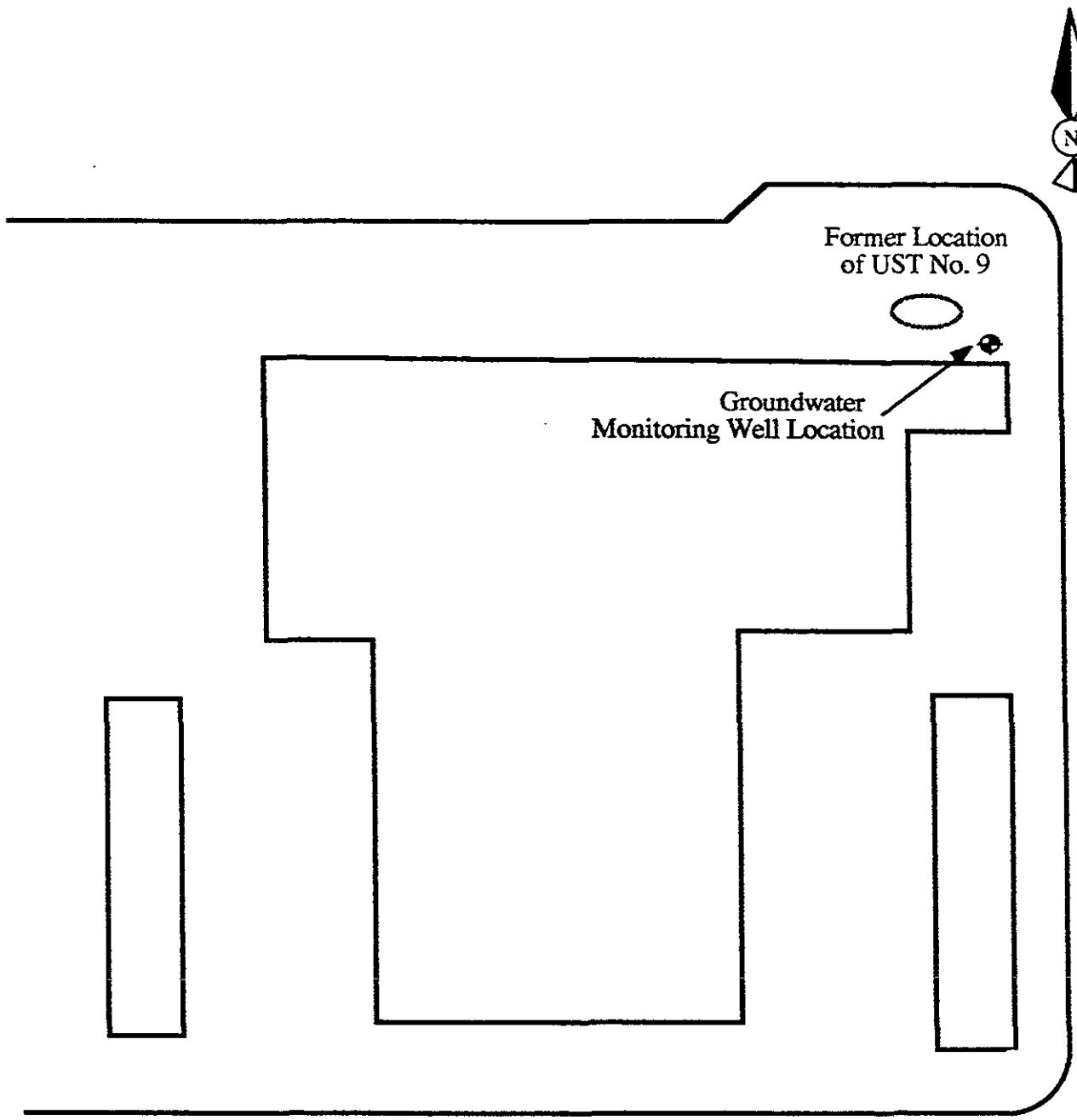
FIGURES



Legend		
■ Excavated Tank Site	Adapted from USGS Topographic Maps, Livermore and Dublin Quads, California	
Not to Scale	Site Plan	Figure 1
Project No. 2241-019	Santa Rita Property Pleasanton, California	Versar, Inc.



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

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APPENDIX A

Monitoring Well Purge Table

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MONITORING WELL PURGE TABLE

Project Number: 2241-019	Site Name: Santa Rita #9
Well Number: SR9	Date(s) Purged: 3/7/95
OVA - Ambient: --	Purge Method: 3-inch PVC bailer
OVA - Vault: --	Purge Rate:
OVA - Casing: --	Date & Time Sampled: 3/7/95
Water Level - Initial: 26.16 feet	Purged & Sampled By: J. Harris
Water Level - Final:	Sampling Method: Polyethylene bailer
Well Depth: 36.29	Free Product: None
Well Diameter: 4-inches	Sheen: None
Well Casing Volume: 6.61 gallons	Odor: None

Time	Purge Water Removed	Temperature (degrees F)	pH	Electrical Conductivity (µs/cm)	Turbidity
10:28	0.00	67.2	5.90	3490	low
10:31	2.00	65.9	6.31	2950	high
10:35	4.00	63.8	6.51	2910	high
10:39	6.00	63.7	6.59	2910	high
10:45	8.00	63.5	6.65	2910	high
10:50	10.00	63.4	6.67	2900	high
10:56	12.00	63.5	6.68	2900	high
11:00	14.00	63.3	6.65	2900	high
11:05	16.00	63.4	6.69	2900	high
11:12	18.00	63.3	6.70	2890	high
11:14	18.50	63.1	6.71	2890	high
12:45	Sample	67.8	6.29	2810	low

Field Notes: Purged dry at 18.5 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

March 14, 1995

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 March 7, 1995 for your Project No. 2241-019, Santa Rita (our custody log number 5287).

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

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: 5287
DATE SAMPLED: 03/07/95
DATE RECEIVED: 03/07/95
DATE EXTRACTED: 03/08/95
DATE ANALYZED: 03/10/95
DATE REPORTED: 03/14/95

CUSTOMER: Versar, Inc.

REQUESTER: Terrence Kinn

PROJECT: No. 2241-019, Santa Rita

Sample Type: Water

Method and Constituent:	Units	SR9-3W Concentration	SR9-3W Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
DHS Method:					
Total Petroleum Hydrocarbons as Diesel	ug/l	ND	50	ND	50

QC Summary:

% Recovery: 94
% RPD: 3.2

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

Trace Analysis Laboratory, Inc.

LOG NUMBER: 5287
DATE SAMPLED: 03/07/95
DATE RECEIVED: 03/07/95
DATE ANALYZED: 03/10/95
DATE REPORTED: 03/14/95
PAGE: Two

Sample Type: Water

Method and Constituent:	Units	SR9-3W Concentration	SR9-3W Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
Modified EPA Method 8020 for:					
Benzene	ug/l	ND	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: 110
% RPD: 9.0

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

Louis W. DuPuis
Quality Assurance/Quality Control Manager

Versar INC. 5287

CHAIN OF CUSTODY RECORD

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

SAMPLERS: (Signature) _____ (Printed) JONATHAN HARRIS

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PARAMETERS: BTEX	PARAMETERS: TPH/D	REMARKS
SR9-3W	3/7/95	1245		X	SANTA RITA #9	4	X	X	water

INDUSTRIAL HYGIENE SAMPLE: Y / N

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
(Printed)	3/7/95 1410	(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) for TAL	Date / Time	Remarks	
(Printed)		(Printed) Louis DuPuis	3/7/95 1410	5-day TAT	

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink). walkin, water, 1ℓ, 3 VOAs w/HCl, Green Tray 2