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QUARTERLY MONITORING REPORT
ALAMEDA COUNTY
UST 1, 2, 3 SITE
SANTA RITA CORRECTIONAL FACILITY
DUBLIN, CALIFORNIA

(ESE PROJECT #6-94-5240)

PRESENTED TO:

ALAMEDA COUNTY
GENERAL SERVICES AGENCY
ENGINEERING AND ENVIRONMENTAL
MANAGEMENT DEPARTMENT
1401 LAKESIDE DRIVE
OAKLAND, CALIFORNIA 94612

PREPARED BY:

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
4090 NELSON AVENUE, SUITE J
CONCORD, CALIFORNIA 94520
(510) 685-4053

JANUARY 30, 1995





General Services Agency

Darlene A. Smith, Director

March 2, 1995

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

**SUBJECT: QUARTERLY GROUNDWATER MONITORING REPORT FOR
FORMER UNDERGROUND STORAGE TANKS #1, #2 & #3
SANTA RITA CORRECTIONAL FACILITY, DUBLIN, CALIFORNIA**

Dear Mr. Seery:

Enclosed for your review are two copies of the *January 30, 1995 Quarterly Monitoring Report, Alameda County, UST 1, 2, 3 Site, Santa Rita Correctional Facility, Dublin, California*. This report was prepared by ES&E, environmental consultant.

The County of Alameda has demonstrated two consecutive quarters of groundwater monitoring at the UST 1, 2, 3 site in which the laboratory results have indicated nondetectable concentrations of TPH-D and BTEX. We plan to continue groundwater monitoring for two additional quarters. Assuming analytical results remain "ND" or are below the Maximum Contaminant Levels for drinking water, the County of Alameda will request site closure for the UST 1, 2, 3 site.

If you have any questions, please call me at (510) 208-9522.

Sincerely,

Rod Freitag, P.E.
Environmental Project Manager

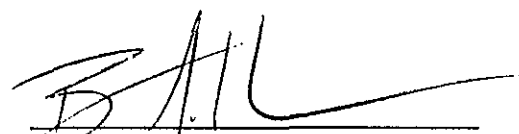
enclosure

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

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File: Project #93-7055, Bldg. #2282


This quarterly monitoring report has been prepared by Environmental Science and Engineering, Inc. (ESE) for the exclusive use of the Alameda County General Services Agency as it pertains to the site known as the UST 1, 2, 3 Site located at the Santa Rita Correctional Facility in Dublin, California. This report was prepared with that degree of care and skill ordinarily exercised by other geologists and engineers practicing in this field. No other warranty, either express or implied, is made as to professional advice in this report.

REPORT PREPARED BY:

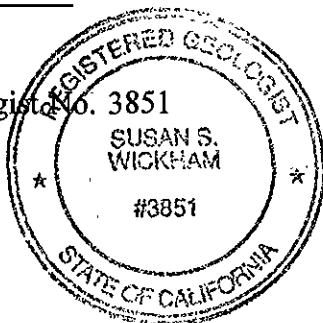

Bart S. Miller
Project Geologist

FEBRUARY 28, 1995
Date

UNDER THE PROFESSIONAL REVIEW AND SUPERVISION OF:


Susan S. Wickham
Senior Geologist
Registered California Geologist No. 3851

2-28-95
Date



January 30, 1995

ESE Project No. 6-94-5240

TABLE OF CONTENTS

	page
1.0 INTRODUCTION	1
2.0 FIELD METHODOLOGY	2
3.0 RESULTS	3
4.0 RECOMMENDATIONS	4
5.0 REFERENCES	5

FIGURES

FIGURE 1. LOCATION MAP

FIGURE 2. GROUND WATER ELEVATION MAP (12/30/94)

APPENDICES

APPENDIX A. SAMPLE COLLECTION LOGS

APPENDIX B. ESE STANDARD OPERATING PROCEDURE NO. 3

APPENDIX C. ANALYTICAL REPORTS WITH CHAIN OF CUSTODY DOCUMENTS

**QUARTERLY MONITORING REPORT
UST 1, 2, 3 SITE
SANTA RITA CORRECTIONAL FACILITY
DUBLIN, CALIFORNIA**

1.0 INTRODUCTION

This report presents the results of quarterly ground water monitoring activities conducted by Environmental Science & Engineering, Inc. (ESE) for the Alameda County General Services Agency, Engineering and Environmental Management Department (County) at the UST 1, 2, 3 Site ("site") on December 30, 1994 (Figure 1 - Location Map). ESE submitted a Site Assessment Report dated December 21, 1994 to the County and the Alameda County Health Care Services Agency (HCSA) recommending that three additional quarters of ground water monitoring be performed at the site prior to requesting site closure from the HCSA (ESE, 1994a).

The objective of this quarterly monitoring event was to confirm that no detectable concentrations of petroleum hydrocarbons occur in ground water samples collected from wells located adjacent to the former underground storage tanks (USTs) identified as USTs 1, 2, and 3.

A comprehensive description of site history, regional geology, and regional hydrology was presented in the Site Assessment Report mentioned above. Methods for ground water sampling and testing, and results are described in the following sections. In addition, this report provides recommendations for future site activities.

2.0 FIELD METHODOLOGY

Prior to beginning fieldwork, ESE reviewed the site specific Health and Safety Plan (HASP) prepared for this work with all onsite personnel, subcontractors, and qualified visitors. ESE performed all fieldwork in accordance with Tri-Regional Water Quality Control Board guidelines (RWQCB, 1990) and other applicable State regulations and standards.

ESE monitored ground water levels and collected one ground water sample from each site well (MW1, MW2, MW3, and MW4; Figure 2) and one duplicate ground water sample from well MW1 (Appendix A - Sample Collection Logs). All monitoring and sampling activities were conducted in accordance with ESE SOP No. 3 (Appendix B - ESE SOP No. 3). Ground water samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D) using EPA Method 8015 (modified per CA LUFT); total oil and grease (TOG) using SMWW 5520; and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020. A travel blank was supplied by the laboratory for quality assurance/quality control (QA/QC) purposes. The travel blank, consisting of deionized water, was analyzed for BTEX only and serves as a check on ESE's sampling handling and transport procedures. The duplicate ground water sample was submitted to the laboratory as a blind sample for TPH-D, TOG, and BTEX analyses, and serves as a QA/QC check on the laboratory's analytical procedures and on ESE's sample collection procedures.

As a result of these site activities, waste materials including rinsates from the decontamination of sampling equipment and purge water, were generated. One 55-gallon-capacity, Department of Transportation (DOT)-rated steel drum containing rinsates and purge water was generated at each well (total of four) by ESE during this fieldwork and left at the site pending receipt of analytical results and authorization from the County to properly dispose of the materials.

3.0 RESULTS

Ground water was estimated to flow toward the north-northeast at a gradient of approximately 0.003 foot per foot (Figure 2). No ground water samples collected from the site wells were reported to contain detectable concentrations of TPH-D, TOG, and BTEX (Appendix C).

4.0 RECOMMENDATIONS

Based on the results of this monitoring event at the UST 1, 2, 3 site, ESE recommends the following:

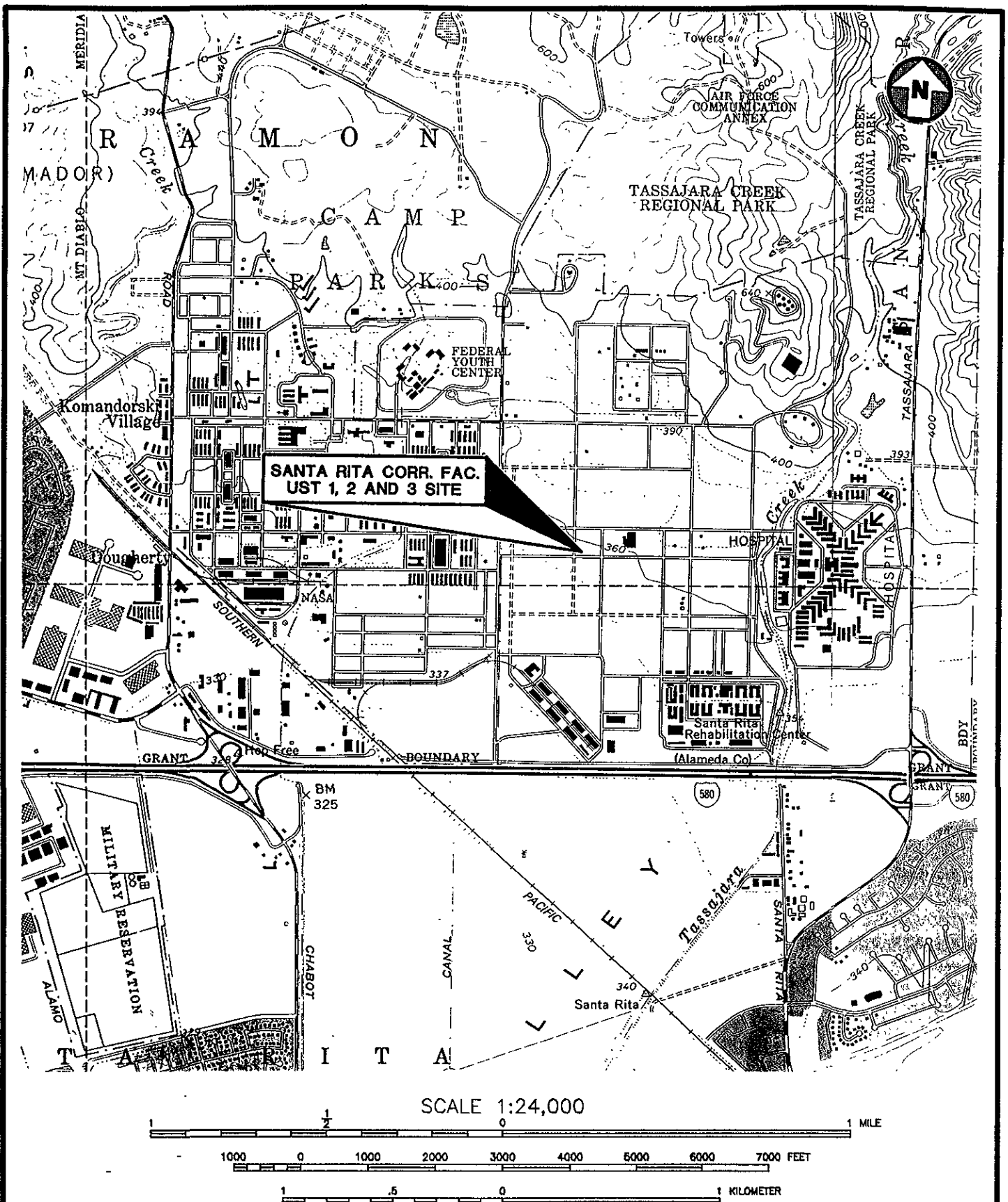
- Two additional quarters of ground water monitoring be performed at the site prior to requesting site closure from the HCSA. The data collected during these two additional quarters will provide sufficient site history for the HCSA to grant closure when requested by County.
- Upon approval of site closure, the ground monitoring wells should be properly abandoned.

5.0 REFERENCES

Environmental Science & Engineering, Inc. (ESE), 1994a. Site Assessment Report, Alameda County General Services Agency (GSA), UST 1, 2, 3 Site; December 21, 1994.

State of California Regional Water Quality Control Board (RWQCB), 1990. Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites; August 10, 1990.

FIGURES



ADAPTED FROM U.S.G.S. DUBLIN AND LIVERMORE, CALIFORNIA, 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAPS, 1980.



**Environmental
Science &
Engineering, Inc.**

DATE
11/23/94

REVISED

CAD FILE
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LOCATION MAP

FIGURE NO.

1

4090 NELSON AVENUE, SUITE J
CONCORD, CA 94520

ALAMEDA COUNTY — UST 1,2,3 SITE
SANTA RITA CORRECTIONAL FACILITY
DUBLIN, CALIFORNIA

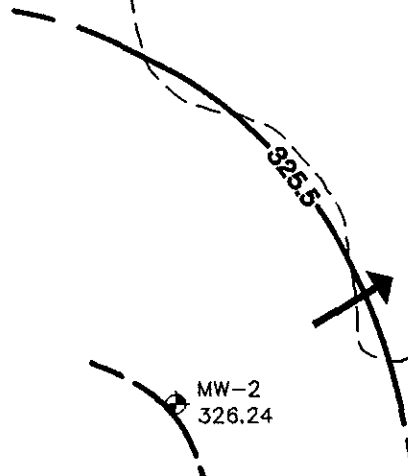
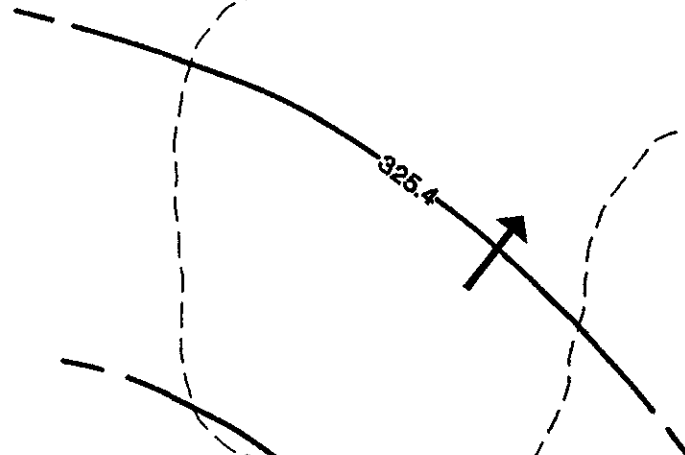
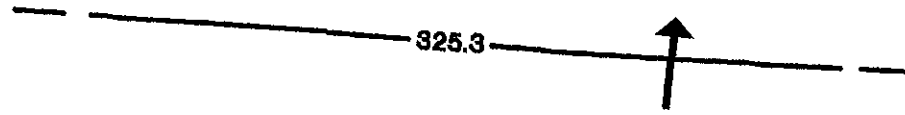
PROJ. NO.
6-94-5240



MW-1
325.96

MW-4
325.32

OFFUTT AVENUE



MW-2
326.24

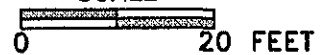
MW-3
325.45

APPROXIMATE FORMER LIMIT OF EXCAVATION

LEGEND

- GROUND WATER MONITORING WELL
- 325.45 RELATIVE GROUND WATER ELEVATION IN FEET ABOVE MEAN SEAL LEVEL (AMSL)
- GROUND WATER ELEVATION CONTOUR IN FEET AMSL (DASHED WHERE INFERRED)
- ESTIMATED GROUND WATER FLOW DIRECTION

SCALE



Environmental
Science &
Engineering, Inc.

DATE
11/23/94

REVISED
1/30/95

CAD FILE
52400004

GROUND WATER ELEVATION MAP
DECEMBER 30, 1994

FIGURE NO.

2

4090 NELSON AVENUE, SUITE J
CONCORD, CA 94520

ALAMEDA COUNTY GSA - UST 1,2,3 SITE
SANTA RITA CORRECTIONAL FACILITY
DUBLIN, CALIFORNIA

PROJ. NO.
6-94-5240

APPENDIX A
SAMPLE COLLECTION LOGS



Environmental
Science &
Engineering, Inc.

SAMPLE COLLECTION LOG

PROJECT NAME: UST 1,2,3; AL. CO GSA
PROJECT NO.: 6-94-5240
DATE: 12/30/94

SAMPLE LOCATION I.D.: MW1
SAMPLER: JAY CARPENTER
PROJECT MANAGER: BART MILLER

CASING DIAMETER

2" _____
4" _____
Other _____

SAMPLE TYPE

Ground Water
Surface Water _____
Treat. Influent _____
Treat. Effluent _____
Other _____

WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: 0 (ft.) PRODUCT THICKNESS: 0 (ft.) MINIMUM PURGE VOLUME
DEPTH TO WATER: 38.02 (ft.) WATER COLUMN: 13.06 (ft.) (3 or 4 WCV): 34.10 (gal)
DEPTH OF WELL: 51.08 (ft.) WELL CASING VOLUME: 8.53 (gal) ACTUAL VOLUME PURGED: 35.0 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
<u>12:52</u>	<u><1</u>	<u>7.81</u>	<u>600</u>	<u>58.7</u>	_____	<u>TRANSLUCENT BROWN</u>
<u>12:57</u>	<u>20</u>	<u>7.74</u>	<u>719</u>	<u>61.0</u>	_____	<u>TRANSLUCENT</u>
<u>13:06</u>	<u>40</u>	<u>7.81</u>	<u>756</u>	<u>60.3</u>	_____	<u>"</u>
<u>13:10</u>	<u>52</u>	<u>7.79</u>	<u>759</u>	<u>61.7</u>	_____	<u>"</u>

INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE HYDAC UNIT# _____ DATE: 12/30/94 TIME: 11:15 BY: JEC
TURBIDITY: TYPE _____ UNIT# _____ DATE: _____ TIME: _____ BY: _____

PURGE METHOD

___ Displacement Pump ___ Other
___ Bailer (Teflon/PVC/SS) Submersible Pump

SAMPLE METHOD

___ Bailer (Teflon/PVC/SS) ___ Dedicated
 Bailer (Disposable) ___ Other

SAMPLES COLLECTED

SAMPLE	ID	TIME	DATE	LAB	ANALYSES
DUPLICATE	<u>MW1</u>	<u>13:</u>	<u>12/30/94</u>	<u>ILCC/AM/MS</u>	<u>TPH-D/OTEX</u>
SPLIT	<u>DWP</u>	_____	<u>"</u>	<u>"</u>	<u>"</u>
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: _____

SAMPLER: _____

PROJECT MANAGER: _____



Environmental
Science &
Engineering, Inc.

SAMPLE COLLECTION LOG

PROJECT NAME: UST 1,2,3; AL. CO. GSA
PROJECT NO.: 6-94-5240
DATE: 12/30/94

SAMPLE LOCATION I.D.: MW2
SAMPLER: JAY CARPENTER
PROJECT MANAGER: BAR MILLER

CASING DIAMETER

2" _____
4" _____
Other _____

SAMPLE TYPE

Ground Water
Surface Water _____
Treat. Influent _____
Treat. Effluent _____
Other _____

WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
<u>4.0</u>	0.6528
6.0	1.4690

DEPTH TO PRODUCT: 0 (ft.) PRODUCT THICKNESS: 0 (ft.) MINIMUM PURGE VOLUME
DEPTH TO WATER: 36.06 (ft.) WATER COLUMN: 15.6 (ft.) (3 or 4 WCV): 40.7 (gal)
DEPTH OF WELL: 51.66 (ft.) WELL CASING VOLUME: 10.18 (gal) ACTUAL VOLUME PURGED: 55 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
<u>11:38</u>	<u><1</u>	<u>7.56</u>	<u>1139</u>	<u>65.5</u>	_____	<u>TRANSLUCENT - BROWN</u>
<u>11:40</u>	<u>20</u>	<u>7.62</u>	<u>1102</u>	<u>63.8</u>	_____	<u>"</u>
<u>11:43</u>	<u>40</u>	<u>7.69</u>	<u>1036</u>	<u>61.2</u>	_____	<u>"</u>
<u>11:48</u>	<u>55</u>	<u>7.75</u>	<u>1061</u>	<u>60.8</u>	_____	<u>TRANSLUCENT</u>

INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE HYDAC UNIT# _____ DATE: 12/30/94 TIME: 11:15 BY: JEC
TURBIDITY: TYPE _____ UNIT# _____ DATE: _____ TIME: _____ BY: _____

PURGE METHOD

___ Displacement Pump ___ Other
___ Bailer (Teflon/PVC/SS) Submersible Pump

SAMPLE METHOD

___ Bailer (Teflon/PVC/SS) ___ Dedicated
 Bailer (Disposable) ___ Other

SAMPLES COLLECTED

SAMPLE	ID	TIME	DATE	LAB	ANALYSES
_____	<u>MW2</u>	<u>13:38</u>	<u>12/30/94</u>	<u>MCCAMMELL</u>	<u>TPO/BIEX</u>
DUPLICATE	_____	_____	_____	_____	_____
SPLIT	_____	_____	_____	_____	_____
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: _____

SAMPLER: [Signature] PROJECT MANAGER: [Signature]
4090 Nelson Avenue, Suite J Concord, CA 94520 Phone (510) 685-4053 Fax (510) 685-5323



Environmental
Science &
Engineering, Inc.

SAMPLE COLLECTION LOG

PROJECT NAME: UST 1,2,3 AL. CO. GSA
PROJECT NO.: 6-94-5240
DATE: 12/30/94

SAMPLE LOCATION I.D.: MW3
SAMPLER: JAY CARPENTER
PROJECT MANAGER: BART MILLER

CASING DIAMETER

2" _____
4"
Other _____

SAMPLE TYPE

Ground Water
Surface Water _____
Treat. Influent _____
Treat. Effluent _____
Other _____

WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: 0 (ft.) PRODUCT THICKNESS: 0 (ft.) MINIMUM PURGE VOLUME
DEPTH TO WATER: 37.0 (ft.) WATER COLUMN: 13.38 (ft.) (3 or 4 WCV): 35 (gal)
DEPTH OF WELL: 50.38 (ft.) WELL CASING VOLUME: 8.74 (gal) ACTUAL VOLUME PURGED: 20 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
<u>11:59</u>	<u><1</u>	<u>7.66</u>	<u>1283</u>	<u>60.4</u>	_____	<u>TRANSLUCENT-BROWN</u>
<u>12:11</u>	<u>20</u>	<u>7.70</u>	<u>1318</u>	<u>62.4</u>	_____	<u>TRANSPARENT</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE HYDAC UNIT# _____ DATE: 12/30/94 TIME: 11:15 BY: JEC
TURBIDITY: TYPE _____ UNIT# _____ DATE: _____ TIME: _____ BY: _____

PURGE METHOD

___ Displacement Pump ___ Other
___ Bailer (Teflon/PVC/SS) Submersible Pump

SAMPLE METHOD

___ Bailer (Teflon/PVC/SS) ___ Dedicated
 Bailer (Disposable) ___ Other

SAMPLES COLLECTED

SAMPLE	ID	TIME	DATE	LAB	ANALYSES
_____	<u>MW3</u>	_____	<u>12/30/94</u>	<u>ACCUMUL</u>	<u>TM-D/BRE</u>
DUPLICATE	_____	_____	_____	_____	_____
SPLIT	_____	_____	_____	_____	_____
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: PUMPED DRY AT 12:04 PUMPED DRY SECOND TIME AT 12:11

SAMPLER: _____

PROJECT MANAGER: _____



Environmental
Science &
Engineering, Inc.

SAMPLE COLLECTION LOG

PROJECT NAME: UST 1,2,3 ; AL. CO. GSA
PROJECT NO.: 6-94-5240
DATE: 12/30/94

SAMPLE LOCATION I.D.: MW 4
SAMPLER: JAY CARPENTER
PROJECT MANAGER: BART MILLER

CASING DIAMETER

2" _____
4" _____
Other _____

SAMPLE TYPE

Ground Water
Surface Water _____
Treat. Influent _____
Treat. Effluent _____
Other _____

WELL VOLUMES PER UNIT

Well Casing	
I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: 0 (ft.) PRODUCT THICKNESS: 0 (ft.) MINIMUM PURGE VOLUME
DEPTH TO WATER: 37.88 (ft.) WATER COLUMN: 13.02 (ft.) (3 or 4 WCV): 34 (gal)
DEPTH OF WELL: 50.90 (ft.) WELL CASING VOLUME: 8.5 (gal) ACTUAL VOLUME PURGED: 55 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
<u>12:23</u>	<u>41</u>	<u>7.79</u>	<u>687</u>	<u>60.4</u>	_____	<u>TRANSLUCENT - BROWN</u>
<u>12:29</u>	<u>20</u>	<u>7.73</u>	<u>727</u>	<u>61.0</u>	_____	<u>TRANSLUCENT</u>
<u>12:35</u>	<u>40</u>	<u>7.75</u>	<u>737</u>	<u>59.3</u>	_____	<u>"</u>
<u>12:39</u>	<u>41</u>	<u>7.73</u>	<u>764</u>	<u>61.1</u>	_____	<u>"</u>

INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE HYDAC UNIT# _____ DATE: 12/30/94 TIME: 11:15 BY: JEC
TURBIDITY: TYPE _____ UNIT# _____ DATE: _____ TIME: _____ BY: _____

PURGE METHOD

___ Displacement Pump
___ Bailer (Teflon/PVC/SS) Other Submersible Pump

SAMPLE METHOD

___ Bailer (Teflon/PVC/SS) Dedicated
 Bailer (Disposable) Other

SAMPLES COLLECTED

SAMPLE	ID	TIME	DATE	LAB	ANALYSES
DUPLICATE	<u>MW4</u>	_____	<u>12/30/94</u>	<u>McCAMPELL</u>	<u>TPH-DIBTEX</u>
SPLIT	_____	_____	_____	_____	_____
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: WELL PUMPED DRY @ 41 GALLONS

SAMPLER: [Signature] PROJECT MANAGER: [Signature]
4090 Nelson Avenue, Suite J Concord, CA 94520 Phone (510) 685-4053 Fax (510) 685-5323

APPENDIX B
ESE STANDARD OPERATING PROCEDURE NO. 3

**ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
CONCORD, CALIFORNIA OFFICE**

**STANDARD OPERATING PROCEDURE NO. 3
FOR GROUND-WATER MONITORING AND SAMPLING FROM MONITORING WELLS**

Environmental Science & Engineering, Inc. (ESE) typically performs ground-water monitoring at project sites on a quarterly basis. As part of the monitoring program an ESE staff member will first gauge the depth to water and free product (if present) in each well, then collect ground-water samples from each well. Depth to water measurements are taken by lowering an electric fiberglass tape measure into the well and recording the occurrence of water in feet below a fixed datum set on the top of the well-casing. If free-phase liquid hydrocarbons (free product) are known or suspected to be present in the well, then an electric oil/water interface probe is used to determine the depth to the occurrence of ground-water and the free product in feet below the fixed datum on the top of the well-casing. Depth to water and depth to product measurements are measured and recorded within an accuracy of 0.005-foot. The electric tape and the electric oil/water interface probe are washed with an Alconox® detergent and tap water solution then rinsed with tap water between uses in different wells.

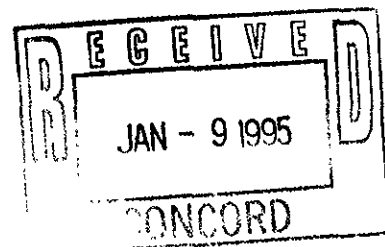
Ground-water samples are collected from a well subsequent to purging a minimum of three to four well-casing volumes of ground water from the well, if the well bails dry prior to the removal of the required minimum volume, then the samples are collected upon the recovery of the ground water in that well to 80% of its initial static level. Ground water is typically purged from monitoring wells using either a hand-operated positive displacement pump, constructed of polyvinylchloride (PVC); a new (precleaned), disposable polyethylene bailer; or, a variable-flow submersible pump, constructed of stainless steel and Teflon®. The hand pumps and the submersible pumps are cleaned between each use with an Alconox® detergent and tap water solution followed by a tap water rinse. During the well purging process the conductivity, pH and temperature of the ground water are monitored by the ESE staff member. Ground-water samples are collected from the well subsequent to the stabilization of the of the conductivity, pH and temperature of the purge water, and the removal of four well-casing volumes of ground-water (unless the well bails dry). The parameters are deemed to have stabilized when two consecutive measurements are within 10% of each other, for each respective parameter. The temperature, pH, conductivity and purge volume measurements, and observations of water clarity and sediment content will be documented by the ESE staff member on ESE Ground-Water Sampling Data Forms.

Ground-water samples are collected by lowering a new (precleaned), disposable polyethylene bailer into the well using new, disposable nylon cord. The filled bailer is retrieved, emptied, then filled again. The ground water from this bailer is decanted into appropriate laboratory supplied glassware and/or plastic containers (if sample preservatives are required, they are added to the empty containers at the laboratory prior to the sampling event). The containers are filled carefully so that no headspace is present to avoid volatilization of the sample. The filled sample containers are then labeled and placed in a cooler with ice for transport under chain of custody documentation to the designated analytical laboratory. The ESE staff member will document the time and method of sample collection, and the type of sample containers and preservatives (if any) used. These facts will appear on the ESE Ground-Water Sampling Data Forms. ESE will collect a duplicate ground-water sample from one well for every ten wells sampled at each site. The duplicate will be a blind sample (its well designation will be unknown to the laboratory). The duplicate sample is for Quality Assurance and Quality Control (QA/QC) purposes, and provides a check on ESE sampling procedures and laboratory sample handling procedures. When VOCs are included in the laboratory analyses, ESE will include a trip blank, if required, in the cooler with the ground-water samples for analysis for the identical VOCs. The trip blank is supplied by the laboratory and consists of deionized water. The trip blank is for QA/QC purposes and provides a check on both ESE and laboratory sample handling and storage procedures. Since disposable bailers are used for sample collection, and are not reused, no equipment blank (rinsate) samples are collected.

APPENDIX C
ANALYTICAL REPORTS WITH CHAIN OF CUSTODY DOCUMENTS

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622



01/09/95

Dear Bart:

Enclosed are:

- 1). the results of 6 samples from your # 6-94-5240; Alameda County GSA, UST 1,2,3 Site project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

A handwritten signature in cursive script, appearing to read "Ed Hamilton".

Edward Hamilton

QC REPORT FOR HYDROCARBON ANALYSES

Date: 12/31/94

Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
TPH (gas)	0.0	98.9	92.9	100	98.9	92.9	6.3
Benzene	0	10.7	10.8	10	107.0	108.0	0.9
Toluene	0	10.7	10.6	10	107.0	106.0	0.9
Ethyl Benzene	0	10.7	10.6	10	107.0	106.0	0.9
Xylenes	0	32.9	31.6	30	109.7	105.3	4.0
TPH (diesel)	0	151	150	150	101	100	0.5
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

3479AEE108

CHAIN OF CUSTODY RECORD

DATE 12/30/94 PAGE 1 OF 1

PROJECT NAME AL. COUNTY GSA UST 1, 2, 3 SITE

ADDRESS SANTA RITA CORRECTIONAL FAC.

DUBLIN, CA

PROJECT NO. 6-94-5240

SAMPLED BY [Signature] BART MILLER

LAB NAME McCAMPBELL



Environmental Science & Engineering, Inc.

4090 Nelson Avenue
Suite J
Concord, CA 94520

Phone (510) 685-4053

Fax (510) 685-5323

ANALYSES TO BE PERFORMED

MATRIX

CONTAINERS

MATRIX

SAMPLE #	DATE	TIME	LOCATION
----------	------	------	----------

MW1	12/30/94	13:59	
MW2	"	13:38	
MW3	"	13:44	
MW4	"	13:51	
DUP	"		
TRIP	"		

ANALYSES TO BE PERFORMED	MATRIX	CONTAINERS
TRA-D 8015m	WATER	3
STEX 8020	"	3
	"	3
	"	3
	"	3
	"	1

REMARKS (CONTAINER, SIZE, ETC.)

43445
43446
43447
43448
43449
43450

ICE/T PRESERVATIVE
 GOOD CONDITION APPROPRIATE CONTAINERS
 HEAD SPACE ABSENT

RELINQUISHED BY: (signature)

1. [Signature]
2. [Signature]
3.
4.
5.

RECEIVED BY: (signature)

[Signature]

date time

12/30 6:46

16

TOTAL NUMBER OF CONTAINERS

REPORT RESULTS TO:
BART MILLER
ESE

SPECIAL SHIPMENT REQUIREMENTS

COLD TRANSPORT

SAMPLE RECEIPT

INSTRUCTIONS TO LABORATORY (handling, analyses, storage, etc.):

INVOICE TO ALAMEDA COUNTY GSA. NORMAL TAT.

CHAIN OF CUSTODY SEALS

REC'D GOOD CONDITN/COLD

CONFORMS TO RECORD