desert petroleum inc.

John Rutherford
Director
Environmental Affairs

90 APR 12 AM 10:51

April 5, 1990

Mr. Ariu Levi
Hazardous Materials Specialist
Alameda County Health Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

RE: Desert Petroleum Station #793
4035 Park Blvd., Oakland, CA

Dear Mr. Levi:

Enclosed is our consultant's Quarterly Progress Report of the above location as requested.

If you have any questions, please feel free to give me a call.

Very truly yours,

John D. Rutherford

JDR:jc

enclosure

cc: M. Thomson
Alameda County District Attorney's Office

REMEDIATION SERVICE, INT'L.
P.O. BOX 1601, OXNARD, CALIFORNIA 93032
(805) 644-5892 • FAX (805) 654-0720

QUARTERLY REPORT

FOR

DESERT PETROLEUM STATION NO. 793
4035 Park Boulevard
Oakland, California

Prepared for:
DESERT PETROLEUM, INC.
2060 Knoll Drive
Ventura, CA 93032

Prepared by:
RSI - REMEDIATION SERVICE, INT'L
P.O. BOX 1601
Oxnard, CA 93032

April 5, 1990

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REMEDIATION SERVICE, INT'L.

P.O. BOX 1601, OXNARD, CALIFORNIA 93032
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April 5, 1990

Alameda County Health Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Attn: Ariu Levi
Hazardous Materials Specialist

Re: Quarterly Report on Desert Petroleum
4035 Park Blvd., Oakland, CA

This update report is to provide you with the information which is available to further update clean-up status at this site. To summarize this progress:

1. Vapor equipment has been running on this site since the first wells were installed in December, 1989.

2. The permanent vapor extraction unit has removed over 1001.7 gallons of gasoline from the soil, in those wells located on site. Two wells located near the island leak and adjacent to the sewer line have shown substantial reductions of soil vapors, and no free product exists on site.

3. The portable RSI vapor unit on Brighton Street has removed an average of 100 gallons per month (299.7 total) since its start up. This unit has been effective in preventing any free product from entering the sewer system, and it is currently operated seven days per week during daylight hours. For safety and security reasons, this unit is manned by an operator who transports the equipment to the street site and sets it up daily.

4. Emergency operating permits for the water treatment system (which is part of each RSI vapor unit) were applied for in December 1989, and on-site testing of the unit was supervised by Ray Kahler of the Regional Water Quality Control Board. See attached water testing results and letter confirming testing.

5. Since that time emergency permits were denied, due to the RWQB opinion that water on site may not constitute actual ground water, and could instead be leakage from the sewage system. Permits for a standard NPDS discharge permit through sewers has been filed through the Sanitary District.

6. Water treatment through both units will start as soon as these permits are issued, as well as treatment of water currently stored on site in the tank from the tank testing.

7. In February 1990, a request was filed with SRWQCB for enhanced bio-augmentation on site utilizing inoculated biocultures. Solmar Corp. of Orange, California, has had extensive use and success using this program. A copy of the Solmar program is enclosed. When approved it will begin as quickly as possible. The process is to flush nutrients and gasoline consuming bacteria at the site of the pipeline leak. As the nutrients follow the migration pathways toward the sewer on Brighton Street, all traces of gasoline will be consumed. This program will provide the safest, and least invasive alternative to that small section of soil contaminated around the sewage line, since 600-900 feet of line buried at the rear of 8-10 properties would be impractical to treat in any other manner.

9. Monitoring of the bioculture program will be by SRWQCB and manufacturer's guidelines; the soil venting program and water treatment program will also continue to operate during this time.

10. Water samples and vapor sampling will continue, and progress will be reported to agencies on a quarterly basis.

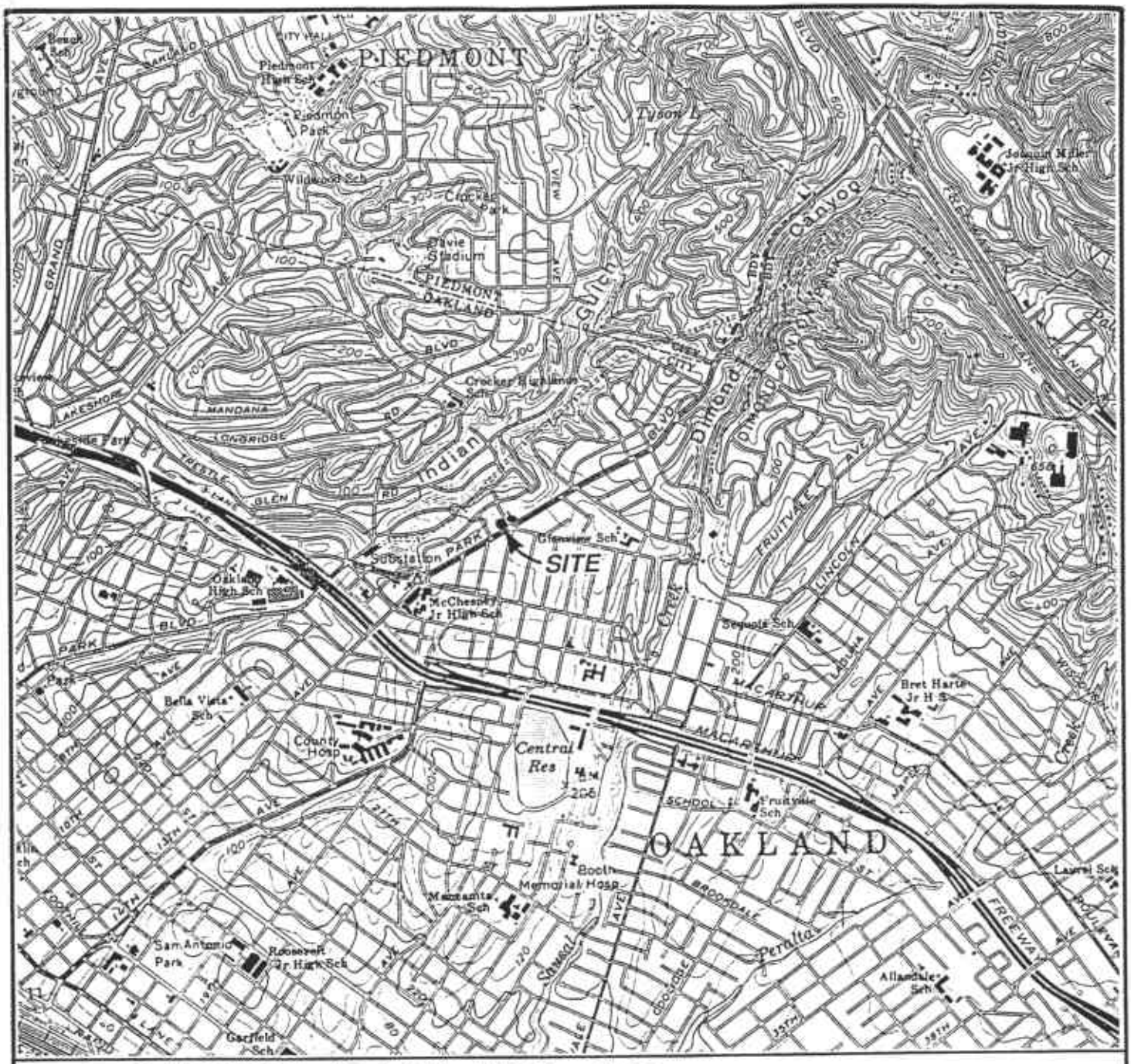
11. Tank testing has been completed on all tanks and lines at the site. No leak was found in any spot other than the line leak reported in the Unauthorized Release Report. That point of release was under the east pump island in a product line.

I have on many occasions tried to contact you, or your staff to meet on site and discuss progress on this site. After review of this progress report we can schedule this meeting. I look forward to our meeting. If you have any questions, do not hesitate to call me at 805-644-5892.

Very truly yours,

Rick Jirsa
Project Manager

cc: M. Thomson, Alameda County District Attorney's Office



A portion of the U.S.G.S. "Oakland East, California" 7 1/2' quadrangle

LOCATION MAP

DESERT PETROLEUM STATION NO. 793

OAKLAND, CALIFORNIA

Prepared for

DESERT PETROLEUM

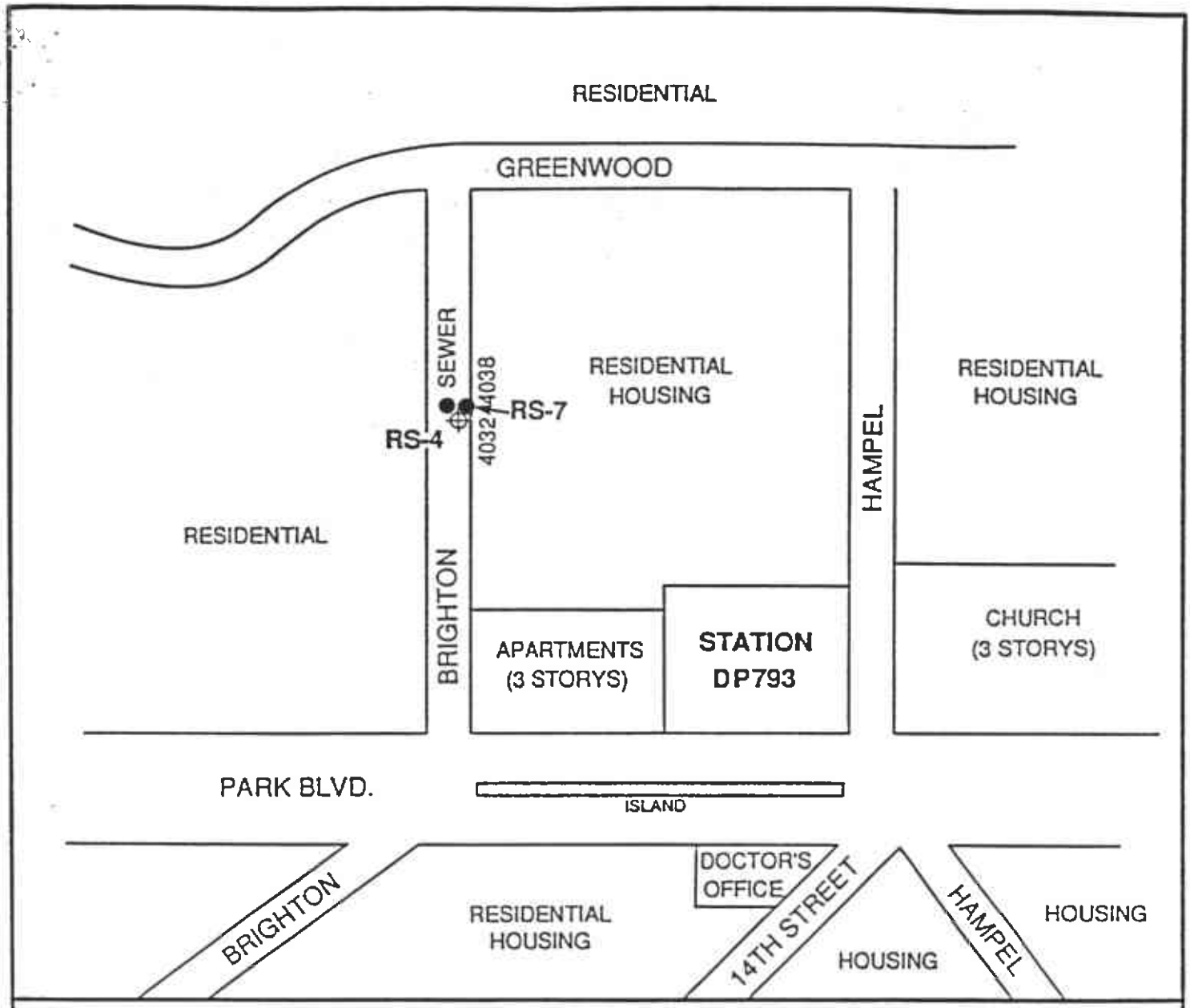
VENTURA, CALIFORNIA

N

0 2000 4000

SCALE IN FEET

FIGURE 1



VICINITY MAP
DESERT PETROLEUM STATION NO. 793
OAKLAND, CALIFORNIA
Prepared for
DESERT PETROLEUM
VENTURA, CALIFORNIA

EXPLANATION

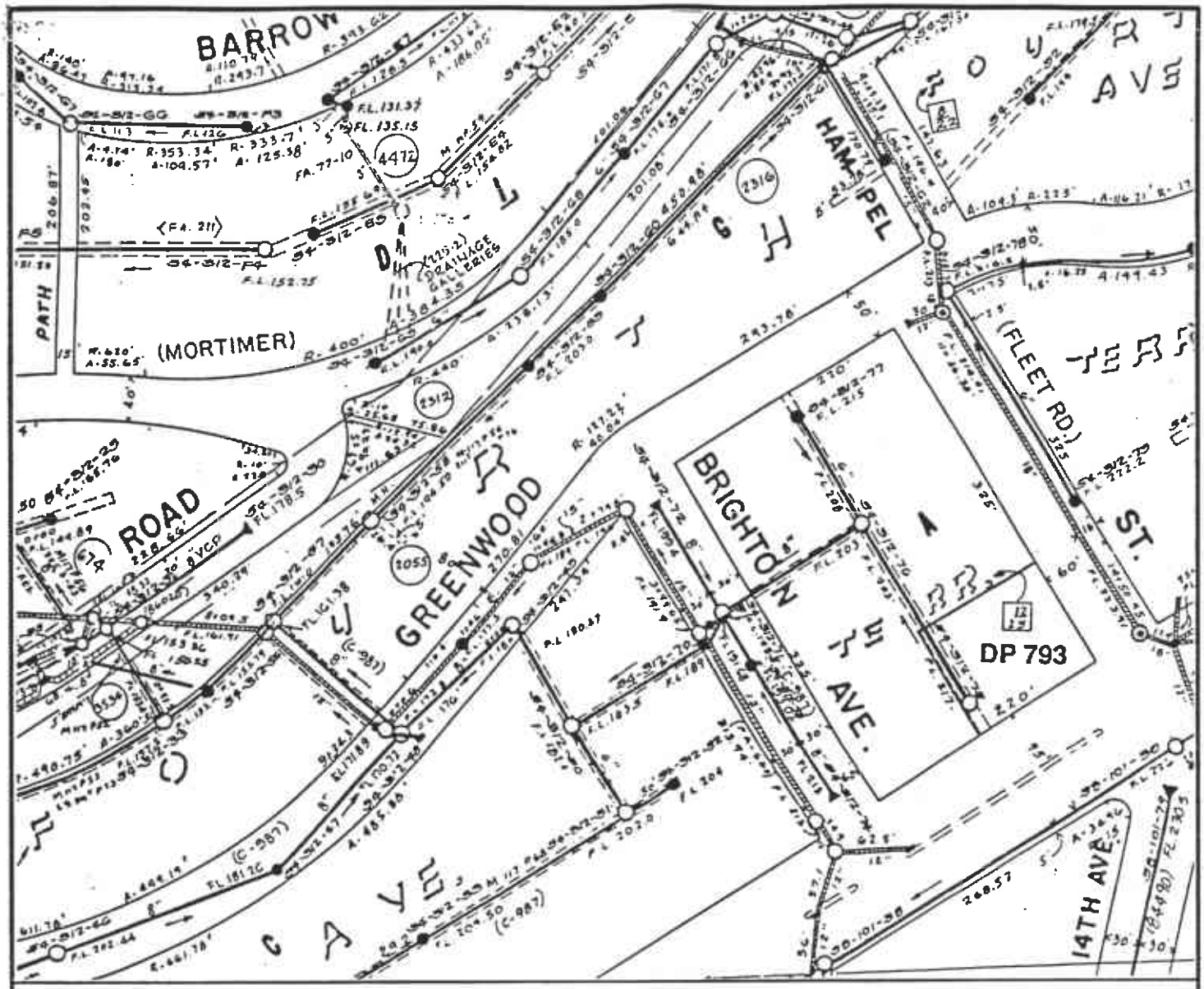
RS-4 ⊕ RSI Boring (12/12/89)

RS-7 ● Extraction Well (12-13-89)

0 100 200

SCALE IN FEET

FIGURE 2

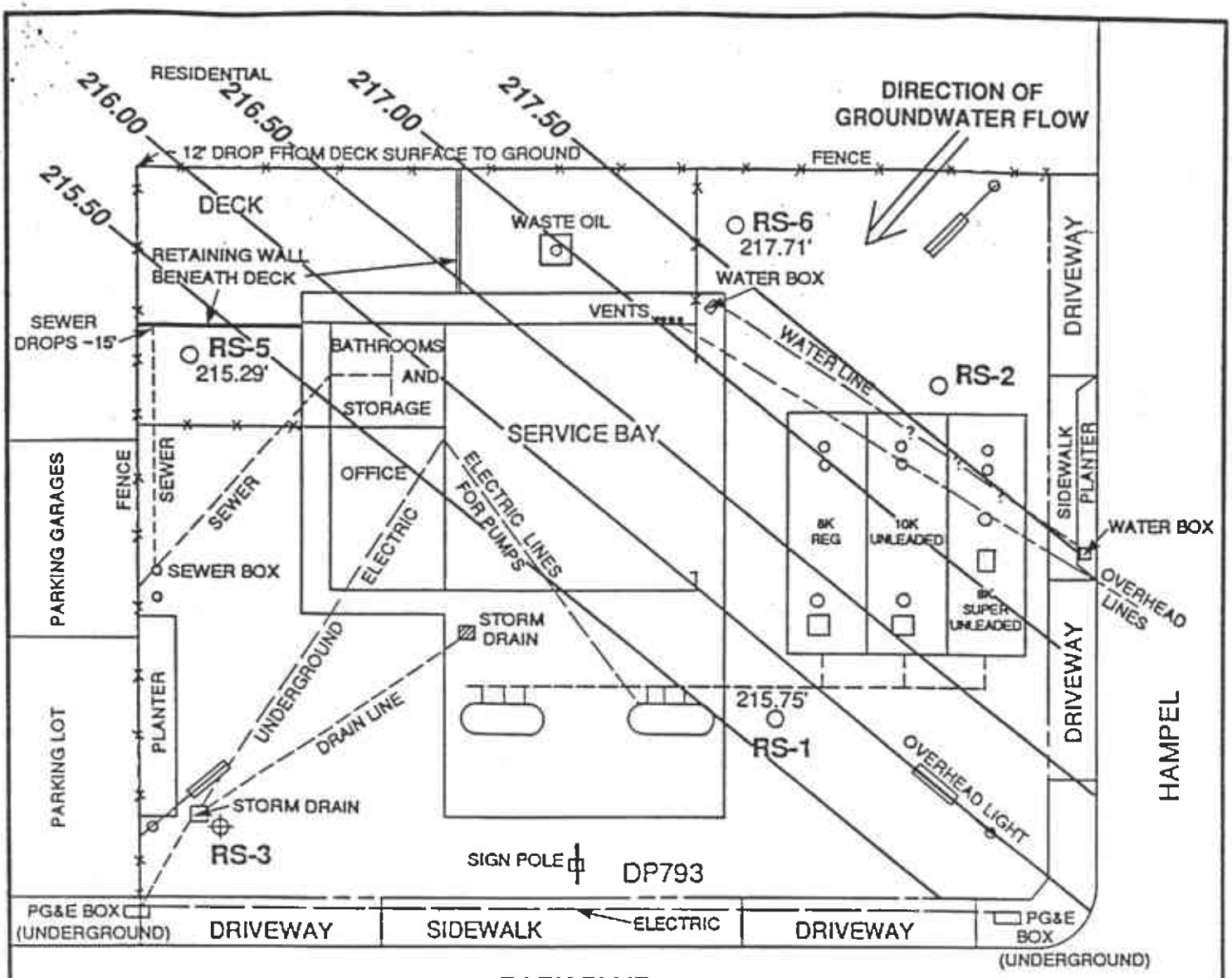


SEWER LINE MAP
DESERT PETROLEUM STATION NO. 793
OAKLAND, CALIFORNIA

Prepared for

DESERT PETROLEUM
VENTURA, CALIFORNIA

FIGURE 4



WATER TABLE ELEVATION MAP
DECEMBER 14, 1989
DESERT PETROLEUM STATION NO. 793
OAKLAND, CALIFORNIA

Prepared for

DESERT PETROLEUM
VENTURA, CALIFORNIA

ELEVATIONS ARE IN FEET ABOVE MSL

EXPLANATION

RS-4 ⊕ RSI Boring (12/89)

RS-6 ○ RSI Monitoring Well (12/89)

0 20 40

SCALE IN FEET

FIGURE 5

Vapor Extracted Results

The RSI S.A.V.E. System pulls vapors from the ground, mixes these vapors with fresh air, and injects them onto a four cylinder Ford engine. The engine then burns the vapors as fuel, much as a car does. Emissions from the engine are controlled and regulated by permit from the East Bay Air Quality Management District.

To monitor removal rates, tedlar bag samples are taken from the well vapor flow. These bags are then measured for:

Benzene	-	B
Xylene	-	X
Toluene	-	T
Ethyl Benzene	-	EB
Total Petroleum Hydrocarbons	-	TPH

See attached data sheets.

Once the amount of fuel available is known, the hours of operation and the flow rates are used to calculate Total Contaminant Removed (see data sheets). Rates of removal are shown, and while total amounts removed per month may be fairly stable, many adjustments to the equipment and recovery were made daily. Due to noise problems, the unit is run during daylight hours only.

The main unit on site started and ran for several weeks from well vapors only. As product was removed, propane fuel has had to be

added back to the unit and it is now running with approximately 40% propane. Through 2/22/90 the unit ran 594 hours and consumed 1001.7 gallons from the ground around the spill site and adjacent sewer line.

RSI - Mobil 793 has operated 400 hours and removed 299.7 gallons from the one well adjacent to the sewer on Brighton Street. The December total of 80.7 gallons was from a partial month and supplemented with free product removal by pump truck during the first days of operation. By late December the S.A.V.E. unit was able to remove enough vapors to prevent free product from entering the sewer system. Since this time, the total recovery rate of the unit has slowed. The unit is now running with 50-70% propane fuel, and may soon have few if any vapors to utilize. Vapor extraction will continue, however, to force pull any "pockets" of free gasoline migrating down the sewer trench line.

Sampling data and results will be reported with the next report.

QUARTERLY PERFORMANCE DATA

PROJECT LOCATION. D.P. 793. PARK STREET STATION UNIT

MONTH			DECEMBER	JANUARY	FEBRUARY				TOTAL
GROUNDWATER NOTE1	SPRAY AERATOR WATER IN	GALLONS							
		TPH-PPM*							
	SPRAY AERATOR WATER OUT	GALLONS							
		TPH-PPM*							
VAPOR NOTE 1	RECOVERED VAPORS FROM WELLS	SCFM*	23.7	38.0	35.6				
		TPH-PPM*	47500.0	20000.0	12000.0				
	TOTAL VAPORS TO ENGINE	SCF	225822.7	508866.5	453246.0				
		TPH-PPM*	47500.0	20000.0	12000.0				
AIR NOTE 1	TO SPRAY AERATOR	SCF	138710.4	123459.7	129383.9				
	TO ENGINE	SCF	138710.4	123459.7	129383.9				
FREE PRODUCT	RECOVERED FROM WELLS	GALLONS	0.0	0.0	0.0				
ENGINE	EXHAUST	TPH-PPM*	0.0						
		CO-PPM*	13.0						
	OPERATION	HOURS	159.0	223.0	212.0				
	SPEED	RPM	1884.4	1800.0	1793.8				
TOTAL CONTAMINANT REMOVED	FROM THE PROJECT LOCATION	GALLONS	407.9	387.0	206.8				

* DENOTES AVERAGE CONCENTRATIONS.

NOTES: 1. PROVIDE SAMPLE CALCULATIONS FOR EACH OF THE CALCULATED DATA.

ENVIRONMENTAL SAMPLES LOG FOR MONTH.

PROJECT LOCATION.

DATE	TIME	BY	EXTRACTED H2O TO AERATOR	DISCHARGED H2O FROM AERATOR	EXTRACTED VAPOR FROM WELLS	ENGINE EXHAUST (LAB)
18		A.D	TPH.	TPH.	TPH. 41000.0	TPH. ND
			B.	B.	B. 180.0	B. ND
			T.	T.	T. 60.0	T. ND
			EB.	EB.	EB. 9.5	EB. ND
			X.	X.	X. 41.0	X. ND
19		R.J	TPH.	TPH.	TPH. 54000.0	TPH. ND
			B.	B.	B. 260.0	B. 1.5
			T.	T.	T. 780.0	T. 3.5
			EB.	EB.	EB. 230.0	EB. ND
			X.	X.	X. 1000.0	X. 2.6
			TPH.	TPH.	TPH.	TPH.
			B.	B.	B.	B.
			T.	T.	T.	T.
			EB.	EB.	EB.	X.
			X.	X.	X.	
			TPH.	TPH.	TPH.	TPH.
			B.	B.	B.	B.
			T.	T.	T.	T.
			EB.	EB.	EB.	EB.
			X.	X.	X.	X.

Notes: Reference Analytical Methods: _____ For Water.

_____ For Gas.

ND: Non Detectable.

MONITORING DATA LOG FOR MONTH DECEMBER, 1989.

PROJECT LOCATION O.P. 793.

DATE	TIME	ENGINE OPERATION DATA		PRESSURE READINGS AT				
		RUNNING TIME (HOURS)	SPEED (RPM)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	SPRAY AERATOR (INCH Hg)	RECIRC WATER (PSI)
		0.0						
18	09.00	0.0	2000.0	29.0				
22	12.00	98.0	1900.0	30.0				
23	11.45	105.0	2000.0	30.0				
24	12.10	110.0	1800.0	30.0				
27	09.30	122.0	2000.0	30.0				
28	08.45	130.0	1875.0	30.0				
29	12.45	142.0	1800.0	30.0				
31	12.30	156.0	1700.0	30.0				
END		159.0						

NOTES:

MONTH DECEMBER.

PROJECT LOCATION O.P. 793.

DATE	TEMPERATURE READINGS AT					FLOW READINGS AT			
	AMBIENT AIR (F)	EXTRACTED VAPOR (F)	ENGINE OUTLET (F)	CATALYST OUTLET (F)	RECIRC WATER (F)	AIR TO SPRAY TANK (CFM)	EXTRACTED VAPORS (CFM)	AUXILIARY FUEL (CFH)	WATER TO SEWER (GALS)
18	55.0	55.0				18.0	8.0	0.0	
22	55.0	55.0				18.0	18.0	0.0	
23	55.0	55.0				30.0	32.0	0.0	
24	55.0	55.0				15.0	35.0	20.0	
27	50.0	50.0				25.0	30.0	7.0	
28	40.0	40.0				7.0	25.0	0.0	
29	55.0	55.0				0.0	25.0	0.0	
31	55.0	55.0				0.0	25.0	0.0	

NOTES:

MONTH

PROJECT LOCATION

DATE	EXHAUST GAS COMPONENTS				
	H-C (%)	CO (PPM)	CO2 (%)	O2 (%)	NOx (PPM)
18	0.0	23.0	12.1	2.6	80.0
27	0.0	3.0	11.7	3.3	65.0

NOTES:

MONITORING DATA LOG FOR MONTH JANUARY, 1990.

PROJECT LOCATION O.P. 793.

DATE	TIME	ENGINE OPERATION DATA		PRESSURE READINGS AT				
		RUNNING TIME (HOURS)	SPEED (RPM)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	SPRAY AERATOR (INCH Hg)	RECIRC WATER (PSI)
		159.0						
2	11.45	160.0	1650.0	30.0				
12	10.00	250.0	1850.0	30.0				
8	14.45	203.0	1900.0	30.0				
17	14.00	276.0	1800.0	30.0				
23	14.30	320.0	1800.0	30.0				
24	11.30	325.0	1800.0	30.0				
27	12.20	352.0	1800.0	30.0				
28	^11.35	358.0	1800.0	30.0				
END		382.0						

NOTES:

MONTH JANUARY.

PROJECT LOCATION O.P. 793.

DATE	TEMPERATURE READINGS AT					FLOW READINGS AT			
	AMBIENT AIR (F)	EXTRACTED VAPOR (F)	ENGINE OUTLET (F)	CATALYST OUTLET (F)	RECIRC WATER (F)	AIR TO SPRAY TANK (CFM)	EXTRACTED VAPORS (CFM)	AUXILIARY FUEL (CFH)	WATER TO SEWER (GALS)
2	55.0	55.0				5.0	40.0	0.0	
12	55.0	55.0				11.0	40.0	15.0	
8	55.0	55.0				4.0	40.0	8.0	
17	55.0	55.0				12.0	40.0	22.0	
23	55.0	55.0				10.0	40.0	30.0	
24	55.0	55.0				10.0	40.0	30.0	
27	55.0	55.0				10.0	40.0	30.0	
28	55.0	55.0				10.0	40.0	30.0	

NOTES:

MONITORING DATA LOG FOR MONTH FEBRUARY, 1990.

PROJECT LOCATION D.P. 793.

DATE	TIME	ENGINE OPERATION DATA		PRESSURE READINGS AT				
		RUNNING TIME (HOURS)	SPEED (RPM)	EXTRACTION WELL____ (INCH H20)	EXTRACTION WELL____ (INCH H20)	EXTRACTION WELL____ (INCH H20)	SPRAY AERATOR (INCH Hg)	RECIRC WATER (PSI)
		383.0						
1	14.30	385.0	1850.0	30.0				
3	11.20	396.0	1800.0	30.0				
4	13.40	404.0	1800.0	30.0				
5	15.15	414.0	1800.0	30.0				
7	12.15	442.0	1800.0	30.0				
8	15.30	456.0	1800.0	30.0				
9	14.45	471.0	1700.0	30.0				
22	10.30	535.0	1800.0	30.0				
END		595.0						

NOTES:

MONTH FEBRYARY.

PROJECT LOCATION D.P. 793.

DATE	TEMPERATURE READINGS AT					FLOW READINGS AT			
	AMBIENT AIR (F)	EXTRACTED VAPOR (F)	ENGINE OUTLET (F)	CATALYST OUTLET (F)	RECIRC WATER (F)	AIR TO SPRAY TANK (CFM)	EXTRACTED VAPORS (CFM)	AUXILIARY FUEL (CFH)	WATER TO SEWER (GALS)
1	60.0	60.0				12.0	40.0	47.0	
3	60.0	60.0				3.2	40.0	35.0	
4	60.0	60.0				12.0	40.0	25.0	
5	55.0	55.0				1.7	40.0	30.0	
7	50.0	50.0				8.0	40.0	42.0	
8	45.0	45.0				14.0	40.0	47.0	
9	45.0	45.0				18.0	40.0	45.0	
22	54.0	54.0				10.0	24.0	65.0	

NOTES:

QUARTERLY PERFORMANCE DATA

PROJECT LOCATION. O.P. 793, MOBILE.

MONTH			DECEMBER	JANUARY	FEBRUARY				TOTAL
GROUNDWATER NOTE1	SPRAY AERATOR WATER IN	GALLONS							
		TPH-PPM*							
	SPRAY AERATOR WATER OUT	GALLONS							
		TPH-PPM*							
VAPOR NOTE 1	RECOVERED VAPORS FROM WELLS	SCFM*	23.2	25.6	23.6				
		TPH-PPM*	14500.0	14500.0	11000.0				
	TOTAL VAPORS TO ENGINE	SCF	146410.8	207176.3	226550.4				
		TPH-PPM*	14500.0	14500.0	11000.0				
AIR NOTE 1	TO SPRAY AERATOR	SCF	0.0	0.0	0.0				
	TO ENGINE	SCF	0.0	0.0	0.0				
FREE PRODUCT	RECOVERED FROM WELLS	GALLONS	0.0	0.0	0.0				
ENGINE	EXHAUST	TPH-PPM*							
		CO-PPM*							
	OPERATION	HOURS	105.0	135.0	160.0				
	SPEED	RPM	1706.3	1775.0	1843.8				
TOTAL CONTAMINANT REMOVED	FROM THE PROJECT LOCATION	GALLONS	80.7	114.2	94.8				

* DENOTES AVERAGE CONCENTRATIONS.

NOTES: 1. PROVIDE SAMPLE CALCULATIONS FOR EACH OF THE CALCULATED DATA.

ENVIRONMENTAL SAMPLES LOG FOR MONTH. DECEMBER.

PROJECT LOCATION. D.P. 793 MOBILE.

DATE	TIME	BY	EXTRACTED H20 TO AERATOR	DISCHARGED H20 FROM AERATOR	EXTRACTED VAPOR FROM WELLS	ENGINE EXHAUST (LAB)
18		A.D	TPH.	TPH.	TPH. 17000.0	TPH. ND
			B.	B.	B. 700.0	B. ND
			T.	T.	T. 1000.0	T. ND
			EB.	EB.	EB. 110.0	EB. ND
			X.	X.	X. 580.0	X. ND
19		A.D	TPH.	TPH.	TPH. 12000.0	TPH. ND
			B.	B.	B. 400.0	B. ND
			T.	T.	T. 950.0	T. ND
			EB.	EB.	EB. 160.0	EB. ND
			X.	X.	X. 790.0	X. ND
			TPH.	TPH.	TPH.	TPH.
			B.	B.	B.	B.
			T.	T.	T.	T.
			EB.	EB.	EB.	X.
			X.	X.	X.	
			TPH.	TPH.	TPH.	TPH.
			B.	B.	B.	B.
			T.	T.	T.	T.
			EB.	EB.	EB.	EB.
			X.	X.	X.	X.

Notes: Reference Analytical Methods: _____ For Water.

_____ For Gas.

ND: Non Detectable.

ENVIRONMENTAL SAMPLES LOG FOR MONTH. FEBRUARY.

PROJECT LOCATION. D.P. 793, MOBILE.

DATE	TIME	BY	EXTRACTED H2O TO AERATOR	DISCHARGED H2O FROM AERATOR	EXTRACTED VAPOR FROM WELLS	ENGINE EXHAUST (LAB)
22		M.S	TPH.	TPH.	TPH. 11000.0	TPH. ND
			B.	B.	B. 500.0	B. ND
			T.	T.	T. 6600.0	T. ND
			EB.	EB.	EB. 1000.0	EB. ND
			X.	X.	X. 4900.0	X. ND
			TPH.	TPH.	TPH.	TPH.
			B.	B.	B.	B.
			T.	T.	T.	T.
			EB.	EB.	EB.	EB.
			X.	X.	X.	X.
			TPH.	TPH.	TPH.	TPH.
			B.	B.	B.	B.
			T.	T.	T.	T.
			EB.	EB.	EB.	X.
			X.	X.	X.	
			TPH.	TPH.	TPH.	TPH.
			B.	B.	B.	B.
			T.	T.	T.	T.
			EB.	EB.	EB.	EB.
			X.	X.	X.	X.

Notes: Reference Analytical Methods: _____ For Water.

_____ For Gas.

ND: Non Detectable.

MONITORING DATA LOG FOR MONTH DECEMBER, 1989.

PROJECT LOCATION D.P. 793 MOBILE.

DATE	TIME	ENGINE OPERATION DATA		PRESSURE READINGS AT				
		RUNNING TIME (HOURS)	SPEED (RPM)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	SPRAY AERATOR (INCH Hg)	RECIRC WATER (PSI)
		0.0						
18	18.00	27.0	1500.0	1.0				
23	12.00	53.0	1800.0	1.0				
24	13.00	64.0	1800.0	1.0				
27	10.00	73.0	1800.0	1.0				
28	09.40	80.0	1550.0	1.0				
29	12.30	89.0	1900.0	1.0				
30	09.15	94.0	1700.0	1.0				
31	11.17	102.0	1600.0	1.0				
END		105.0						

NOTES:

MONTH DECEMBER.

PROJECT LOCATION D.P. 793, MOBILE.

DATE	TEMPERATURE READINGS AT					FLOW READINGS AT			
	AMBIENT AIR (F)	EXTRACTED VAPOR (F)	ENGINE OUTLET (F)	CATALYST OUTLET (F)	RECIRC WATER (F)	AIR TO SPRAY TANK (CFM)	EXTRACTED VAPORS (CFM)	AUXILIARY FUEL (CFH)	WATER TO SEWER (GALS)
18	65.0	65.0				0.0	20.0	40.0	
23	55.0	55.0				0.0	20.0	60.0	
24	55.0	55.0				0.0	20.0	60.0	
27	55.0	55.0				0.0	20.0	45.0	
28	50.0	50.0				0.0	25.0	45.0	
29	55.0	55.0				0.0	25.0	67.0	
30	60.0	60.0				0.0	25.0	60.0	
31	55.0	55.0				0.0	25.0	55.0	

NOTES:

MONITORING DATA LOG FOR MONTH JANUARY, 1990.

PROJECT LOCATION O.P. 793 MOBILE.

DATE	TIME	ENGINE OPERATION DATA		PRESSURE READINGS AT				
		RUNNING TIME (HOURS)	SPEED (RPM)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	SPRAY AERATOR (INCH Hg)	RECIRC WATER (PSI)
		105.0						
2	11.40	107.0	1600.0	1.0				
4	11.00	122.0	1800.0	1.0				
6	11.35	137.0	1800.0	1.0				
12	14.30	147.0	1800.0	1.0				
16	14.00	159.0	1800.0	1.0				
19	14.30	181.0	1800.0	1.0				
22	14.20	191.0	1800.0	1.0				
30	14.00	234.0	1800.0	1.0				
END		240.0						

NOTES:

MONTH JANUARY.

PROJECT LOCATION D.P. 793 MOBILE.

DATE	TEMPERATURE READINGS AT					FLOW READINGS AT			
	AMBIENT AIR (F)	EXTRACTED VAPOR (F)	ENGINE OUTLET (F)	CATALYST OUTLET (F)	RECIRC WATER (F)	AIR TO SPRAY TANK (CFM)	EXTRACTED VAPORS (CFM)	AUXILIARY FUEL (CFH)	WATER TO SEWER (GALS)
2	55.0	55.0				0.0	25.0	57.0	
4	55.0	55.0				0.0	25.0	65.0	
6	55.0	55.0				0.0	25.0	55.0	
12	55.0	55.0				0.0	25.0	30.0	
16	55.0	55.0				0.0	25.0	43.0	
19	55.0	55.0				0.0	25.0	47.0	
22	55.0	55.0				0.0	25.0	47.0	
30	54.0	54.0				0.0	25.0	50.0	

NOTES:

MONITORING DATA LOG FOR MONTH FEBRUARY, 1990.

PROJECT LOCATION D.P. 793, MOBILE.

DATE	TIME	ENGINE OPERATION DATA		PRESSURE READINGS AT				
		RUNNING TIME (HOURS)	SPEED (RPM)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	EXTRACTION WELL____ (INCH H2O)	SPRAY AERATOR (INCH Hg)	RECIRC WATER (PSI)
		240.0						
1	14.15	241.0	1800.0	1.0				
2	13.45	247.0	1800.0	1.0				
4	11.45	258.0	1800.0	1.0				
6	13.00	272.0	1800.0	1.0				
7	11.30	279.0	1800.0	1.0				
8	15.45	283.0	1800.0	1.0				
9	15.15	290.0	1800.0	1.0				
22	11.20	339.0	2150.0	1.0				
END		400.0						

NOTES:

MONTH FEBRUARY.

PROJECT LOCATION D.P. 793, MOBILE.

DATE	TEMPERATURE READINGS AT					FLOW READINGS AT			
	AMBIENT AIR (F)	EXTRACTED VAPOR (F)	ENGINE OUTLET (F)	CATALYST OUTLET (F)	RECIRC WATER (F)	AIR TO SPRAY TANK (CFM)	EXTRACTED VAPORS (CFM)	AUXILIARY FUEL (CFH)	WATER TO SEWER (GALS)
1	60.0	60.0				0.0	25.0	50.0	
2	60.0	60.0				0.0	25.0	53.0	
4	60.0	60.0				0.0	25.0	40.0	
6	50.0	50.0				0.0	25.0	55.0	
7	50.0	50.0				0.0	25.0	45.0	
8	40.0	40.0				0.0	25.0	50.0	
9	48.0	48.0				0.0	25.0	55.0	
22	65.0	65.0				0.0	13.0	53.0	

NOTES:

RSI PO Box 1601 OXNARD 93032 805 644 5892

5154 QA

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	P.O.#
	DP 793	

SAMPLERS. (Signature) mike sullRA

Superior Analytical Inc.
1535 Fairfax, Suite D
San Francisco, CA 94124
(415) 647-2081

SAMPLE NO.	DATE	TIME	COMP.	GRAB	SAMPLE LOCATION	MEDIA	ANALYSES REQ'D: TPH (gasoline)	ANALYSES REQ'D: BTXE	DETECTION LIMIT	TURN-AROUND TIME	SUSPECTED CONTAMINANT
										~~LAST WEEK~~ 24hr	~~GASOLINE~~
01	12-29	1615		X	SAVE OUTLET	H_2O LIQ	X	X			
02	12-29	1647		X	CARBON OUTLET	H_2O LIQ	X	X			
03	12-30	0917		X	SAVE OUT	H_2O LIQ	X	X			
04	12-30	0918		X	SAVE OUT DUPLICATE	H_2O LIQ	X	X			
05	12-30	09:28		X	CARBON OUT	H_2O LIQ	X	X			
06	12-30	0930		X	CARBON OUT DUPLICATE	H_2O LIQ	X	X			
99	12-29	16:24		X	WELL WATER		X	X	—	NORMAL	—

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) mike sullRA	Date / Time 12/30/89 11:07	Received for Laboratory by: (Signature) [illegible]	Date / Time 12/30/89 1107	Remarks ice chest	

SUPERIOR ANALYTICAL LABORATORY, INC.

1385 FAIRFAX ST., STE. D. • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 51541
CLIENT: Remediation Service
JOB NO.: DP793

DATE SAMPLED: 12/30/89
DATE ANALYZED: 01/01/90
DATE REPORTED: 01/02/90

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

Concentration (ug/l)

LAB#	CLIENT ID	Benzene	Toluene	Ethyl Benzene	Xylenes
1	01	59	64	4	21
2	02	2	1	1	4
3	03	110	120	7	38
4	04	100	110	6	30
5	05	0.3	0.4	ND<0.3	0.7
6	06	ND<0.3	ND<0.3	ND<0.3	0.3
7	99	15000	24000	1700	10000

ug/l = part per billion (ppb)
Minimum Detection Limit for BTXE in water = 0.3 ug/l
QA/QC Summary:
Daily standards run at 20 ug/L; RPD = <15%
MS/MSD: Average Recovery = 89%; Duplicate RPD = <9%

Richard Srna, Ph.D.
Laboratory Director