REPORT
GW-1/GW-2 IRM ANNUAL AIR EMISSIONS
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

DAMES & MOORE

SAC140.19

APRIL 1995
JOB NO. 00173-080-044

DAMES & MOORE
8801 FOLSOM BOULEVARD, SUITE 200, SACRAMENTO, CALIFORNIA 95826
(916) 387-8800 FAX: (916) 387-0802

April 19, 1995

Ms. Loni Adams
Air Pollution Control Specialist
Sacramento Metropolitan Air Quality Management District
8411 Jackson Road
Sacramento, CA 95826

Re: Annual Report
Groundwater Treatment System
Authority to Construct
Application Nos. 10877/10878
Union Pacific Railroad Company
Sacramento, California

Dear Ms. Adams:

This letter has been prepared in accordance with the Sacramento Metropolitan Air Quality Management District's (SMAQMD) annual reporting requirements outlined in Item 9 of the Authorization to Construct, Application Nos. 10877/10878, dated December 15, 1992. As required by the permit, enclosed is a summary of inlet and outlet water concentrations, treated water volume, and mass emission estimates for the calendar year 1994 from the groundwater treatment system operating at 3675 Western Pacific Avenue. The groundwater treatment system is comprised of three extraction wells, MW-4, MW-32, and EW-1 (EW-1 started operation in November 1994), a packless air stripper (groundwater treatment), and two 2,000-pound vapor phase carbon units (air stripper — off-gas treatment).

Influent from the extraction wells and the treatment system effluent are monitored monthly. Water samples are collected and analyzed for chlorinated volatile organic compounds (CVOCs by EPA Method 8010), benzene, toluene, ethylbenzene, and xylenes (BTEX by EPA Method 8020), total petroleum hydrocarbons (TPH as gasoline by EPA Method 8015 Modified), and nickel (by EPA Method 7512). Tables 1 through 3 summarize the laboratory testing results. Laboratory reports are included as an attachment. Samples were not collected in August because the system was down for conducting on-site aquifer pumping tests.

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Treated water volume and associated concentration data are summarized in Table 4 as follows:

- Monthly volume of water produced from each well;
- Monthly concentrations of constituents for samples collected from each well;
- Total volume and concentration of constituents for groundwater treatment system effluent;
- Total mass of constituents removed from groundwater (in pounds); and
- Air emission rates from the vapor phase carbon units, assuming a 90% removal efficiency.

It should be noted that the SMAQMD permit reporting requirements dictate that a removal efficiency of 90% be assumed for carbon treatment of air when estimating air emission rates. However, assuming a 90% removal efficiency over-estimates the amount of air emissions, since carbon actually removes 100% of the organic constituents until breakthrough occurs. With two units operating in series, actual removal efficiency should achieve 100%.

As shown in Table 4, air emission rates for all constituents are below the SMAQMD permit limits, except for total petroleum hydrocarbons as gasoline (TPH-gas). This is a result of applying the 90% removal efficiency assumption to the total mass removal rates.

In addition to the monthly monitoring, a summary of the operation and maintenance items that have occurred on the treatment system over the calendar year 1994 include:

- January 1994 — Carbon in both vessels (4,000 pounds total) changed;
- July 1994 — Air stripper cleaned to remove scale build-up;
- August 1994 — Carbon in primary vessel changed (2,000 pounds); secondary vessel is changed to primary vessel; and
- November 1994 — New extraction well EW-1 is brought on-line.

We trust this includes the information as required for the Annual Report for 1994. If additional information is required or if you have any questions, please feel free to contact either of the undersigned at (916) 387-8800.

Sincerely,

DAMES & MOORE

Jim Brake, R.G.
Project Manager

Donald P. Walker
Engineer

Enclosure

SAC140.19

DISTRIBUTION LIST: **UNION PACIFIC RAILROAD YARD**
SACRAMENTO, CALIFORNIA
PROJECT NUMBER 00173-080-044

Mr. Glenn Thomas
Manager Environmental Site Remediation
Environmental Management Group
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Mr. James Tjosvold, Acting Branch Chief
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California Environmental Protection Agency
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Attn: Jose Salcedo, Project Engineer

Ms. Wendy L. Cohen, P.E.
Senior Water Resources Control Engineer
Regional Water Quality Control Board
3443 Routier Road
Sacramento, CA 95827-3098

Mr. Joe Serna, Jr., Mayor
City of Sacramento
915 I Street, Room 205
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Attn: Sally Hencken, Aide

Mr. Tom Finley, Division Manager
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Ms. Carol Branan
Environmental Services Manager
City of Sacramento
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DISTRIBUTION LIST: **UNION PACIFIC RAILROAD YARD**
SACRAMENTO, CALIFORNIA
PROJECT NUMBER 00173-080-044

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Deputy City Manager
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DISTRIBUTION LIST: **UNION PACIFIC RAILROAD YARD**
SACRAMENTO, CALIFORNIA
PROJECT NUMBER 00173-080-044

Ms. Ava R. Langston-Kenney
Senior Planner-Toxics
City of Sacramento
Department of Planning and Development
1231 I Street, Room 300
Sacramento, CA 95814

TABLES

TABLE 1
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE DATE / ANALYTE		EFFLUENT 01/14/94	EFFLUENT 02/11/94	EFFLUENT 03/02/94	EFFLUENT 04/07/94	EFFLUENT 05/05/94	EFFLUENT 06/08/94	EFFLUENT 07/08/94	EFFLUENT 09/14/94
1,1,1-TRICHLOROETHANE	200.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2,2-TETRACHLOROETHANE	1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-TRICHLOROETHANE	32.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-DICHLOROETHANE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-DICHLOROETHENE	6.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROBENZENE	600.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROETHANE	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROETHENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROPROPANE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-DICHLOROBENZENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-DICHLOROBENZENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMODICHLOROMETHANE	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOFORM	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOMETHANE	-	< 1.00	< 1.00	< 1.00	< 0.50	< 0.50	< 1.00	< 1.00	< 0.50
CARBON TETRACHLORIDE	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROBENZENE	30.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROETHANE	-	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CHLOROFORM	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROMETHANE	-	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CIS-1,3-DICHLOROPROPENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

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TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE DATE / ANALYTE		EFFLUENT 01/14/94	EFFLUENT 02/11/94	EFFLUENT 03/02/94	EFFLUENT 04/07/94	EFFLUENT 05/05/94	EFFLUENT 06/08/94	EFFLUENT 07/08/94	EFFLUENT 09/14/94
DIBROMOCHLOROMETHANE	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
METHYLENE CHLORIDE	5.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
TETRACHLOROETHENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRANS-1,3-DICHLOROPROPENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRICHLOROETHENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRICHLOROFLUOROMETHANE	150.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
VINYL CHLORIDE	0.5	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
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CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE DATE / ANALYTE	MCL	EFFLUENT 10/10/94	EFFLUENT 11/08/94	EFFLUENT 12/07/94	EW-1 11/08/94	EW-1 12/07/94	MW-04 01/14/94	MW-04 02/11/94	MW-04 03/02/94
1,1,1-TRICHLOROETHANE	200.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.30	1.80	1.20
1,1,2,2-TETRACHLOROETHANE	1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-TRICHLOROETHANE	32.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-DICHLOROETHANE	5.0	< 0.50	< 0.50	< 0.50	7.80	6.10	4.60	4.60	3.90
1,1-DICHLOROETHENE	6.0	< 0.50	< 0.50	< 0.50	13.00	11.00	52.00	64.00	41.00
1,2-DICHLOROBENZENE	600.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROETHANE	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.40	4.60	3.30
1,2-DICHLOROETHENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROPROPANE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-DICHLOROBENZENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-DICHLOROBENZENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMODICHLOROMETHANE	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOFORM	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOMETHANE	-	< 1.00	< 0.50	< 1.00	< 0.50	< 1.00	< 1.00	< 1.00	< 1.00
CARBON TETRACHLORIDE	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROBENZENE	30.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROETHANE	-	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CHLOROFORM	100.0	< 0.50	< 0.50	< 0.50	1.30	1.50	< 0.50	< 0.50	< 0.50
CHLOROMETHANE	-	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CIS-1,3-DICHLOROPROPENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
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UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE / DATE / ANALYTE		EFFLUENT 10/10/94	EFFLUENT 11/08/94	EFFLUENT 12/07/94	EW-1 11/08/94	EW-1 12/07/94	MW-04 01/14/94	MW-04 02/11/94	MW-04 03/02/94
DIBROMOCHLOROMETHANE	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
METHYLENE CHLORIDE	5.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
TETRACHLOROETHENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.10	1.50	1.40
TRANS-1,3-DICHLOROPROPENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRICHLOROETHENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.90	3.00	2.60
TRICHLOROFLUOROMETHANE	150.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
VINYL CHLORIDE	0.5	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

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TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE / DATE / ANALYTE		MW-04 04/07/94	MW-04 05/05/94	MW-04 06/08/94	MW-04 07/08/94	MW-04 09/14/94	MW-04 10/10/94	MW-04 11/08/94	MW-04 12/07/94
1,1,1-TRICHLOROETHANE	200.0	1.50	0.66	< 0.50	1.10	< 0.50	1.30	0.62	1.00
1,1,2,2-TETRACHLOROETHANE	1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-TRICHLOROETHANE	32.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-DICHLOROETHANE	5.0	3.60	3.30	2.90	3.20	2.40	2.40	3.80	3.40
1,1-DICHLOROETHENE	6.0	53.00	37.00	37.00	39.00	38.00	39.00	33.00	33.00
1,2-DICHLOROBENZENE	600.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROETHANE	0.5	2.70	2.90	1.80	< 0.50	2.10	2.50	3.30	2.90
1,2-DICHLOROETHENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROPROPANE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-DICHLOROBENZENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-DICHLOROBENZENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMODICHLOROMETHANE	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOFORM	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOMETHANE	-	< 0.50	< 0.50	< 1.00	< 1.00	< 0.50	< 1.00	< 0.50	< 1.00
CARBON TETRACHLORIDE	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROBENZENE	30.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROETHANE	-	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CHLOROFORM	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROMETHANE	-	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CIS-1,3-DICHLOROPROPENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

All units reported as ug/L (ppb)

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TABLE 1 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE / DATE / ANALYTE		MW-04 04/07/94	MW-04 05/05/94	MW-04 06/08/94	MW-04 07/08/94	MW-04 09/14/94	MW-04 10/10/94	MW-04 11/08/94	MW-04 12/07/94
DIBROMOCHLOROMETHANE	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
METHYLENE CHLORIDE	5.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
TETRACHLOROETHENE	5.0	1.30	1.00	0.88	1.00	0.70	1.20	1.10	1.40
TRANS-1,3-DICHLOROPROPENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRICHLOROETHENE	5.0	2.70	2.40	2.10	< 0.50	1.60	2.80	2.60	2.50
TRICHLOROFLUOROMETHANE	150.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
VINYL CHLORIDE	0.5	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

All units reported as ug/L (ppb)

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TABLE 1 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE DATE ANALYTE		MW-32 01/14/94	MW-32 02/11/94	MW-32 03/02/94	MW-32 04/07/94	MW-32 05/05/94	MW-32 06/08/94	MW-32 07/08/94	MW-32 09/14/94
1,1,1-TRICHLOROETHANE	200.0	< 5.00	1.40	1.20	1.20	0.67	0.81	1.00	0.50
1,1,2,2-TETRACHLOROETHANE	1.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-TRICHLOROETHANE	32.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-DICHLOROETHANE	5.0	< 5.00	4.50	4.30	4.00	3.70	4.00	3.80	0.80
1,1-DICHLOROETHENE	6.0	44.00	58.00	41.00	52.00	33.00	39.00	44.00	19.00
1,2-DICHLOROBENZENE	600.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROETHANE	0.5	< 5.00	0.53	0.70	< 0.50	< 0.50	0.65	0.98	< 0.50
1,2-DICHLOROETHENE	-	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROPROPANE	5.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-DICHLOROBENZENE	-	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-DICHLOROBENZENE	5.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMODICHLOROMETHANE	100.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOFORM	100.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOMETHANE	-	<10.00	< 1.00	< 1.00	< 0.50	< 0.50	< 1.00	< 1.00	< 0.50
CARBON TETRACHLORIDE	0.5	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROBENZENE	30.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROETHANE	-	<10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CHLOROFORM	100.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROMETHANE	-	<10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CIS-1,3-DICHLOROPROPENE	-	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 1 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE / DATE / ANALYTE		MW-32 01/14/94	MW-32 02/11/94	MW-32 03/02/94	MW-32 04/07/94	MW-32 05/05/94	MW-32 06/08/94	MW-32 07/08/94	MW-32 09/14/94
DIBROMOCHLOROMETHANE	100.0	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
METHYLENE CHLORIDE	5.0	<10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
TETRACHLOROETHENE	5.0	< 5.00	0.53	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRANS-1,3-DICHLOROPROPENE	-	< 5.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRICHLOROETHENE	5.0	< 5.00	7.40	7.20	6.80	6.50	6.20	4.90	4.10
TRICHLOROFLUOROMETHANE	150.0	<10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
VINYL CHLORIDE	0.5	<10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 1 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE DATE ANALYTE		MW-32 10/10/94	MW-32 11/08/94	MW-32 12/07/94	TRIP BLANK 11/08/94	TRIP BLANK 12/07/94
1,1,1-TRICHLOROETHANE	200.0	0.86	< 0.50	0.93	< 0.50	< 0.50
1,1,2,2-TETRACHLOROETHANE	1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-TRICHLOROETHANE	32.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-DICHLOROETHANE	5.0	2.00	1.40	4.20	< 0.50	< 0.50
1,1-DICHLOROETHENE	6.0	26.00	25.00	39.00	< 0.50	< 0.50
1,2-DICHLOROBENZENE	600.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROETHANE	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROETHENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-DICHLOROPROPANE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-DICHLOROBENZENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-DICHLOROBENZENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMODICHLOROMETHANE	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOFORM	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
BROMOMETHANE	-	< 1.00	< 0.50	< 1.00	< 0.50	< 1.00
CARBON TETRACHLORIDE	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROBENZENE	30.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROETHANE	-	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CHLOROFORM	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
CHLOROMETHANE	-	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
CIS-1,3-DICHLOROPROPENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 1 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
CHLORINATED VOLATILE ORGANIC COMPOUNDS (EPA METHOD 601)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE / DATE / ANALYTE	MCL	MW-32 10/10/94	MW-32 11/08/94	MW-32 12/07/94	TRIP BLANK 11/08/94	TRIP BLANK 12/07/94
DIBROMOCHLOROMETHANE	100.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
METHYLENE CHLORIDE	5.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
TETRACHLOROETHENE	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRANS-1,3-DICHLOROPROPENE	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TRICHLOROETHENE	5.0	6.30	5.40	6.50	< 0.50	< 0.50
TRICHLOROFLUOROMETHANE	150.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
VINYL CHLORIDE	0.5	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 2
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
AROMATIC COMPOUNDS (EPA METHOD 602)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

ANALYTE	MCL	EFFLUENT 01/14/94	EFFLUENT 02/11/94	EFFLUENT 03/02/94	EFFLUENT 04/07/94	EFFLUENT 05/05/94	EFFLUENT 06/08/94	EFFLUENT 07/08/94	EFFLUENT 09/14/94
BENZENE	1	0.93	< 0.50	0.84	< 0.50	< 0.50	< 0.50	0.74	0.52
ETHYL BENZENE	680	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TOLUENE	1000	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
XYLENE	1750	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 2 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
AROMATIC COMPOUNDS (EPA METHOD 602)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

ANALYTE	SAMPLE DATE		EFFLUENT 10/10/94		EFFLUENT 11/08/94		EFFLUENT 12/07/94		EW-1 12/07/94		MW-04 01/14/94	MW-04 02/11/94	MW-04 03/02/94	MW-04 04/07/94
BENZENE	1		0.60		< 0.50		< 0.50		< 0.50		110.00	110.00	110.00	120.00
ETHYL BENZENE	680	<	0.50		< 0.50		< 0.50		< 0.50		4.40	4.30	4.00	3.70
TOLUENE	1000	<	0.50		< 0.50		< 0.50		< 0.50		14.00	14.00	13.00	14.00
XYLENE	1750	<	0.50		< 0.50		< 0.50		< 0.50		19.00	17.00	16.00	19.00

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 2 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
AROMATIC COMPOUNDS (EPA METHOD 602)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE DATE / ANALYTE	MCL	MW-04 05/05/94	MW-04 06/08/94	MW-04 07/08/94	MW-04 09/14/94	MW-04 10/10/94	MW-04 11/08/94	MW-04 12/07/94	MW-32 01/14/94
BENZENE	1	61.00	75.00	88.00	84.00	110.00	96.00	94.00	< 5.00
ETHYL BENZENE	680	2.20	< 0.50	3.60	3.50	7.40	4.50	4.50	< 5.00
TOLUENE	1000	6.90	< 0.50	12.00	11.00	12.00	13.00	12.00	< 5.00
XYLENE	1750	8.60	< 0.50	13.00	17.00	15.00	17.00	16.00	< 5.00

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 2 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
AROMATIC COMPOUNDS (EPA METHOD 602)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE / DATE / ANALYTE		MW-32 02/11/94	MW-32 03/02/94	MW-32 04/07/94	MW-32 05/05/94	MW-32 06/08/94	MW-32 07/08/94	MW-32 09/14/94	MW-32 10/10/94
BENZENE	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
ETHYL BENZENE	680	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TOLUENE	1000	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
XYLENE	1750	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 2 (cont.)
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
AROMATIC COMPOUNDS (EPA METHOD 602)
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE		MW-32	MW-32	TRIP BLANK
DATE		11/08/94	12/07/94	12/07/94
ANALYTE				
BENZENE	1	< 0.50	< 0.50	< 0.50
ETHYL BENZENE	680	< 0.50	< 0.50	< 0.50
TOLUENE	1000	< 0.50	< 0.50	< 0.50
XYLENE	1750	< 0.50	< 0.50	< 0.50

All units reported as ug/L (ppb)

< = Constituent below detection limits. Detection limits may vary depending on interference by other sample constituents.
MCL = California Department of Health Services (DHS) Maximum Contaminant Level (primary), Title 22 of the California Code of Regulations, Division 4, Chapter 15, "Domestic Water Quality and Monitoring."

TABLE 3
TREATMENT SYSTEM: 1994 ANALYTICAL RESULTS
TPH GASOLINE and NICKEL
UNION PACIFIC RAILROAD YARD
SACRAMENTO, CALIFORNIA

SAMPLE	DATE	TPH/GASOLINE ug/L (ppb)	NICKEL ug/L (ppb)
EFFLUENT	01/14/94	< 50	17.0
EFFLUENT	02/11/94	< 50	13.0
EFFLUENT	03/02/94	< 50	13.0
EFFLUENT	04/07/94	< 50	9.6
EFFLUENT	05/05/94	< 50	6.5
EFFLUENT	06/08/94	< 50	87.0
EFFLUENT	07/08/94	< 50	37.0
EFFLUENT	09/14/94	< 50	17.0
EFFLUENT	10/10/94	< 50	8.2
EFFLUENT	11/08/94	< 50	< 5.0
EFFLUENT	12/07/94	< 50	10.0
EW-1	11/08/94	-	< 5.0
EW-1	12/07/94	< 50	< 5.0
MW-04	01/14/94	510	7.8
MW-04	02/11/94	330	13.0
MW-04	03/02/94	580	24.0
MW-04	04/07/94	660	9.6
MW-04	05/05/94	380	6.0
MW-04	06/08/94	415	< 5.0
MW-04	07/08/94	150	8.0
MW-04	09/14/94	310	17.0
MW-04	10/10/94	430	25.0
MW-04	11/08/94	470	22.0
MW-04	12/07/94	430	30.0
MW-32	01/14/94	< 50	18.0
MW-32	02/11/94	< 50	20.0
MW-32	03/02/94	< 50	21.0
MW-32	04/07/94	< 50	18.0
MW-32	05/05/94	< 50	18.0
MW-32	06/08/94	< 50	15.0
MW-32	07/08/94	< 50	17.0
MW-32	09/14/94	< 50	16.0
MW-32	10/10/94	< 50	18.0
MW-32	11/08/94	< 50	14.0
MW-32	12/07/94	< 50	22.0
TRIP BLANK	12/07/94	< 50	-

DATE refers to date sampled.
- = Parameter not analyzed.

TABLE 4
EXTRACTED VOLUMES, CONCENTRATIONS, AND MASS REMOVAL RATES
ON-SITE INTERIM REMEDIAL MEASURE TREATMENT SYSTEM
UNION PACIFIC RAILROAD

MW-4, VOLUME OF GROUNDWATER (gallons) AND CONCENTRATIONS (ug/L)

DATE	METER READING	VOLUME (gallon)	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	NI
31-JAN-94	5,174,748	696,848	110	14	19	4.4	1.3	4.6	52	3.4	ND	2.9	1.1	510	7.8
28-FEB-94	5,675,860	626,390	110	14	17	4.3	1.8	4.6	64	4.6	ND	3	1.5	330	13
31-MAR-94	6,258,818	728,698	110	13	16	4	1.2	3.9	41	3.3	ND	2.6	1.4	580	24
28-APR-94	6,727,750	586,165	120	14	19	3.7	1.5	3.6	53	2.7	ND	2.7	1.3	660	9.6
31-MAY-94	7,289,670	702,400	61	6.9	8.6	2.2	0.66	3.3	37	2.9	ND	2.4	1	380	6
30-JUN-94	7,987,090	871,775	75	ND	ND	ND	ND	2.9	37	1.6	ND	2.1	0.88	415	ND
27-JUL-94	8,425,570	754,813	88	12	13	3.6	1.1	3.2	39	ND	ND	ND	1	150	8
30-SEP-94	9,038,230	559,113	84	11	17	3.5	ND	2.4	38	2.1	ND	1.6	0.7	310	17
31-OCT-94	9,328,450	362,775	110	12	15	7.4	1.3	2.4	39	2.5	ND	2.8	1.2	430	25
29-NOV-94	10,076,280	747,830	96	13	17	4.5	0.62	3.8	33	3.3	ND	2.6	1.1	470	22
31-DEC-94	10,954,540	878,260	94	12	16	4.5	1	3.4	33	2.9	ND	2.5	1.4	430	30
TOTALS		7,515,065													

MW-32, VOLUME OF GROUNDWATER (gallons) AND CONCENTRATIONS (ug/L)

DATE	METER READING	VOLUME (gallon)	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	NI
31-JAN-94	4,532,690	401,242	ND	ND	ND	ND	ND	ND	44	ND	ND	ND	ND	ND	18
28-FEB-94	4,858,540	309,558	ND	ND	ND	ND	1.4	4.5	58	0.53	ND	7.4	0.53	ND	20
31-MAR-94	5,256,060	377,644	ND	ND	ND	ND	1.2	4.3	41	0.7	ND	7.2	ND	ND	21
28-APR-94	5,594,290	321,319	ND	ND	ND	ND	1.2	4	52	ND	ND	6.8	ND	ND	18
31-MAY-94	6,011,890	396,720	ND	ND	ND	ND	0.67	3.7	33	ND	ND	6.5	ND	ND	18
30-JUN-94	6,572,560	532,637	ND	ND	ND	ND	0.81	4	39	0.65	ND	6.2	ND	ND	15
27-JUL-94	6,910,870	440,154	ND	ND	ND	ND	1	3.8	44	0.98	ND	4.9	ND	ND	17
30-SEP-94	7,208,970	164,436	ND	ND	ND	ND	0.5	0.8	19	ND	ND	4.1	ND	ND	16
31-OCT-94	7,258,090	46,664	ND	ND	ND	ND	0.86	2	26	ND	ND	6.3	ND	ND	18
29-NOV-94	7,550,130	292,040	ND	ND	ND	ND	ND	1.4	25	ND	ND	5.4	ND	ND	14
31-DEC-94	8,132,490	582,360	ND	ND	ND	ND	0.93	4.2	39	ND	ND	6.5	ND	ND	22
TOTALS		3,864,772													

EW-1, VOLUME OF GROUNDWATER (gallons) AND CONCENTRATIONS (ug/L)

DATE	METER READING	VOLUME (gallon)	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	NI
29-NOV-94	340,600	340,600	ND	ND	ND	ND	ND	7.8	13	ND	ND	ND	ND	ND	ND
31-DEC-94	770,260	429,660	ND	ND	ND	ND	ND	6.1	11	ND	ND	ND	ND	ND	ND
TOTALS		770,260													

TREATMENT SYSTEM VOLUMES (gallons) AND CONCENTRATIONS (ug/L)

DATE	VOLUME (gallon)	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	NI
31-JAN-94	1,098,090	0.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17
28-FEB-94	935,948	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13
31-MAR-94	1,106,342	0.84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13
28-APR-94	907,484	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.6
31-MAY-94	1,099,120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.5
30-JUN-94	1,404,412	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	87
27-JUL-94	1,194,967	0.74	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37
30-SEP-94	723,548	0.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17
31-OCT-94	409,439	0.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.2
29-NOV-94	1,380,470	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31-DEC-94	1,890,280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
TOTALS	12,150,097													

TABLE 4 (cont.)
EXTRACTED VOLUMES, CONCENTRATIONS, AND MASS REMOVAL RATES
ON-SITE INTERIM REMEDIAL MEASURE TREATMENT SYSTEM
UNION PACIFIC RAILROAD

MW-4 MASS REMOVED, IN POUNDS

MONTH	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	Ni
JAN	0.64	0.08	0.11	0.03	0.008	0.03	0.30	0.020	0.00	0.02	0.006	2.96	0.05
FEB	0.57	0.07	0.09	0.02	0.009	0.02	0.33	0.024	0.00	0.02	0.008	1.72	0.07
MAR	0.67	0.08	0.10	0.02	0.007	0.02	0.25	0.020	0.00	0.02	0.009	3.52	0.15
APR	0.59	0.07	0.09	0.02	0.007	0.02	0.26	0.013	0.00	0.01	0.006	3.23	0.05
MAY	0.36	0.04	0.05	0.01	0.004	0.02	0.22	0.017	0.00	0.01	0.006	2.23	0.04
JUN	0.55	0.00	0.00	0.00	0.000	0.02	0.27	0.013	0.00	0.02	0.006	3.02	0.00
JUL-AUG	0.55	0.08	0.08	0.02	0.007	0.02	0.25	0.000	0.00	0.00	0.006	0.94	0.05
SEP	0.39	0.05	0.08	0.02	0.000	0.01	0.18	0.010	0.00	0.01	0.003	1.45	0.08
OCT	0.33	0.04	0.05	0.02	0.004	0.01	0.12	0.008	0.00	0.01	0.004	1.30	0.08
NOV	0.60	0.08	0.11	0.03	0.004	0.02	0.21	0.021	0.00	0.02	0.007	2.93	0.14
DEC	0.69	0.09	0.12	0.03	0.007	0.02	0.24	0.021	0.00	0.02	0.010	3.15	0.22
TOTALS	5.94	0.67	0.87	0.23	0.057	0.22	2.62	0.166	0.00	0.14	0.072	26.44	0.90

MW-32 MASS REMOVED, IN POUNDS

MONTH	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	Ni
JAN	0.00	0.00	0.00	0.00	0.000	0.00	0.15	0.000	0.00	0.00	0.000	0.00	0.06
FEB	0.00	0.00	0.00	0.00	0.004	0.01	0.15	0.001	0.00	0.02	0.001	0.00	0.05
MAR	0.00	0.00	0.00	0.00	0.004	0.01	0.13	0.002	0.00	0.02	0.000	0.00	0.07
APR	0.00	0.00	0.00	0.00	0.003	0.01	0.14	0.000	0.00	0.02	0.000	0.00	0.05
MAY	0.00	0.00	0.00	0.00	0.002	0.01	0.11	0.000	0.00	0.02	0.000	0.00	0.06
JUN	0.00	0.00	0.00	0.00	0.004	0.02	0.17	0.003	0.00	0.03	0.000	0.00	0.07
JUL-AUG	0.00	0.00	0.00	0.00	0.004	0.01	0.16	0.004	0.00	0.02	0.000	0.00	0.06
SEP	0.00	0.00	0.00	0.00	0.001	0.00	0.03	0.000	0.00	0.01	0.000	0.00	0.02
OCT	0.00	0.00	0.00	0.00	0.000	0.00	0.01	0.000	0.00	0.00	0.000	0.00	0.01
NOV	0.00	0.00	0.00	0.00	0.000	0.00	0.06	0.000	0.00	0.01	0.000	0.00	0.03
DEC	0.00	0.00	0.00	0.00	0.005	0.02	0.19	0.000	0.00	0.03	0.000	0.00	0.11
TOTALS	0.00	0.00	0.00	0.00	0.026	0.11	1.30	0.010	0.00	0.18	0.001	0.00	0.58

EW-1 MASS REMOVED, IN POUNDS

MONTH	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	Ni
NOV	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00
DEC	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	0.00	0.00	0.00	0.00	0.00	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.00

TOTAL MASS REMOVED ALL EXTRACTION WELLS, IN POUNDS

MONTH	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	Ni
JAN	0.64	0.08	0.11	0.03	0.008	0.03	0.45	0.020	0.00	0.02	0.006	2.96	0.11
FEB	0.57	0.07	0.09	0.02	0.013	0.04	0.48	0.025	0.00	0.03	0.009	1.72	0.12
MAR	0.67	0.08	0.10	0.02	0.011	0.04	0.38	0.022	0.00	0.04	0.009	3.52	0.21
APR	0.59	0.07	0.09	0.02	0.011	0.03	0.40	0.013	0.00	0.03	0.006	3.23	0.10
MAY	0.36	0.04	0.05	0.01	0.006	0.03	0.33	0.017	0.00	0.04	0.006	2.23	0.09
JUN	0.55	0.00	0.00	0.00	0.004	0.04	0.44	0.016	0.00	0.04	0.006	3.02	0.07
JUL-AUG	0.55	0.08	0.08	0.02	0.011	0.03	0.41	0.004	0.00	0.02	0.006	0.94	0.11
SEP	0.39	0.05	0.08	0.02	0.001	0.01	0.20	0.010	0.00	0.01	0.003	1.45	0.10
OCT	0.33	0.04	0.05	0.02	0.004	0.01	0.13	0.008	0.00	0.01	0.004	1.30	0.08
NOV	0.60	0.08	0.11	0.03	0.004	0.05	0.30	0.021	0.00	0.03	0.007	2.93	0.17
DEC	0.69	0.09	0.12	0.03	0.012	0.07	0.47	0.021	0.00	0.05	0.010	3.15	0.33
TOTALS	5.94	0.67	0.87	0.23	0.083	0.37	3.99	0.176	0.00	0.32	0.073	26.44	1.49

TABLE 4 (cont.)
EXTRACTED VOLUMES, CONCENTRATIONS, AND MASS REMOVAL RATES
ON-SITE INTERIM REMEDIAL MEASURE TREATMENT SYSTEM
UNION PACIFIC RAILROAD

TOTAL MASS REMOVAL RATE, ALL EXTRACTION WELLS, IN POUNDS/DAY

MONTH	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS	NI
JAN	0.021	0.003	0.004	0.001	<0.001	0.001	0.014	0.001	<0.001	0.001	<0.001	0.096	0.003
FEB	0.021	0.003	0.003	0.001	<0.001	0.001	0.017	0.001	<0.001	0.001	<0.001	0.062	0.004
MAR	0.022	0.003	0.003	0.001	<0.001	0.001	0.012	0.001	<0.001	0.001	<0.001	0.114	0.007
APR	0.020	0.002	0.003	0.001	<0.001	0.001	0.013	<0.001	<0.001	0.001	<0.001	0.108	0.003
MAY	0.012	0.001	0.002	<0.001	<0.001	0.001	0.011	0.001	<0.001	0.001	<0.001	0.072	0.003
JUN	0.018	<0.001	<0.001	<0.001	<0.001	0.001	0.015	0.001	<0.001	0.001	<0.001	0.101	0.002
JUL-AUG	0.009	0.001	0.001	<0.001	<0.001	0.001	0.007	<0.001	<0.001	<0.001	<0.001	0.015	0.002
SEP	0.013	0.002	0.003	0.001	<0.001	<0.001	0.007	<0.001	<0.001	<0.001	<0.001	0.048	0.003
OCT	0.011	0.001	0.001	0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	0.042	0.003
NOV	0.020	0.003	0.004	0.001	<0.001	0.002	0.010	0.001	<0.001	0.001	<0.001	0.098	0.006
DEC	0.022	0.003	0.004	0.001	<0.001	0.002	0.015	0.001	<0.001	0.002	<0.001	0.102	0.011

AIR EMMISIONS, POUNDS/DAY, ASSUMING 90% REMOVAL

MONTH	B	T	X	E	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE	TCE	PCE	TPH GAS
JAN	0.0021	0.0003	0.0004	0.0001	<0.0001	0.0001	0.0014	0.0001	<0.0001	0.0001	<0.0001	0.0096
FEB	0.0021	0.0003	0.0003	0.0001	<0.0001	0.0001	0.0017	0.0001	<0.0001	0.0001	<0.0001	0.0062
MAR	0.0022	0.0003	0.0003	0.0001	<0.0001	0.0001	0.0012	0.0001	<0.0001	0.0001	<0.0001	0.0114
APR	0.0020	0.0002	0.0003	0.0001	<0.0001	0.0001	0.0013	<0.0001	<0.0001	0.0001	<0.0001	0.0108
MAY	0.0012	0.0001	0.0002	<0.0001	<0.0001	0.0001	0.0011	0.0001	<0.0001	0.0001	<0.0001	0.0072
JUN	0.0018	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0015	0.0001	<0.0001	0.0001	<0.0001	0.0101
JUL-AUG	0.0009	0.0001	0.0001	<0.0001	<0.0001	0.0001	0.0007	<0.0001	<0.0001	<0.0001	<0.0001	0.0015
SEP	0.0013	0.0002	0.0003	0.0001	<0.0001	<0.0001	0.0007	<0.0001	<0.0001	<0.0001	<0.0001	0.0048
OCT	0.0011	0.0001	0.0001	0.0001	<0.0001	<0.0001	0.0004	<0.0001	<0.0001	<0.0001	<0.0001	0.0042
NOV	0.0020	0.0003	0.0004	0.0001	<0.0001	0.0002	0.0010	0.0001	<0.0001	0.0001	<0.0001	0.0098
DEC	0.0022	0.0003	0.0004	0.0001	<0.0001	0.0002	0.0015	0.0001	<0.0001	0.0002	<0.0001	0.0102
SMAQMD EMISSIONS LIMITS (lbs/day)	0.003	NO LIMIT	NO LIMIT	NO LIMIT	0.0005	0.0007	0.008	0.0002	NO LIMIT	0.0005	NO LIMIT	0.004

Data Reports

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ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-4
Lab Id: L9405058-1

Collected: 05-MAY-94
Received: 06-MAY-94
Reported: 27-MAY-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010W						
Bromodichloromethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Bromoform	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Bromomethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Carbon Tetrachloride	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chloroethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Chloroform	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chloromethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Dibromochloromethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,3-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,4-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,1-Dichloroethane	3.3		0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloroethane	2.9		0.500	ug/L	09-MAY-94	09-MAY-94
1,1-Dichloroethene	37.		2.50	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloroethene (Total)	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloropropane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Cis-1,3-Dichloropropene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Trans-1,3-Dichloropropene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Methylene Chloride	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
1,1,2,2-Tetrachloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Tetrachloroethene	1.0		0.500	ug/L	09-MAY-94	09-MAY-94
1,1,1-Trichloroethane	0.66		0.500	ug/L	09-MAY-94	09-MAY-94
1,1,2-Trichloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Trichloroethene	2.4		0.500	ug/L	09-MAY-94	09-MAY-94
Trichlorofluoromethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Vinyl Chloride	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Surrogate:						
4-Bromofluorobenzene	89.0		-	%	09-MAY-94	09-MAY-94
Comments:	None					
GAS/BTEX-W						
Benzene	61.0		0.500	ug/L	09-MAY-94	09-MAY-94
Ethyl Benzene	2.20		0.50	ug/L	09-MAY-94	09-MAY-94
Toluene	6.90		0.50	ug/L	09-MAY-94	09-MAY-94
Xylene	8.60		0.50	ug/L	09-MAY-94	09-MAY-94
Gasoline	0.380		0.050	mg/L	09-MAY-94	09-MAY-94
Surrogate:						
Bromofluorobenzene	105.		-	%	09-MAY-94	09-MAY-94
Comments:	None					
WATER-GF						
Nickel - EPA 7521	0.0060		0.0050	mg/L	10-MAY-94	18-MAY-94

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ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-32
Lab Id: L9405058-2

Collected: 05-MAY-94
Received: 06-MAY-94
Reported: 27-MAY-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010W						
Bromodichloromethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Bromoform	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Bromomethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Carbon Tetrachloride	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chloroethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Chloroform	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chloromethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Dibromochloromethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,3-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,4-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,1-Dichloroethane	3.7		0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,1-Dichloroethene	33.		2.50	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloroethene (Total)	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloropropane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Cis-1,3-Dichloropropene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Trans-1,3-Dichloropropene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Methylene Chloride	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
1,1,2,2-Tetrachloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Tetrachloroethene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,1,1-Trichloroethane	0.67		0.500	ug/L	09-MAY-94	09-MAY-94
1,1,2-Trichloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Trichloroethene	6.5		0.500	ug/L	09-MAY-94	09-MAY-94
Trichlorofluoromethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Vinyl Chloride	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene	97.0		-	%	09-MAY-94	09-MAY-94
-	-					
Comments:	None					
GAS/BTEX-W						
Benzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Ethyl Benzene	ND	<	0.50	ug/L	09-MAY-94	09-MAY-94
Toluene	ND	<	0.50	ug/L	09-MAY-94	09-MAY-94
Xylene	ND	<	0.50	ug/L	09-MAY-94	09-MAY-94
Gasoline	ND	<	0.050	mg/L	09-MAY-94	09-MAY-94
-	-					
Surrogate:	-					
Bromofluorobenzene	112.		-	%	09-MAY-94	09-MAY-94
-	-					
Comments:	None					
-	-					
-	-					
WATER-GF						
Nickel - EPA 7521	0.018		0.0050	mg/L	10-MAY-94	18-MAY-94

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ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: SYSTEM DISCHARGE
Lab Id: L9405058-3

Collected: 05-MAY-94
Received: 06-MAY-94
Reported: 27-MAY-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010W						
Bromodichloromethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Bromoform	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Bromomethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Carbon Tetrachloride	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chloroethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Chloroform	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Chloromethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Dibromochloromethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,3-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,4-Dichlorobenzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,1-Dichloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,1-Dichloroethene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloroethene (Total)	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloropropane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Cis-1,3-Dichloropropene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Trans-1,3-Dichloropropene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Methylene Chloride	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
1,1,2,2-Tetrachloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Tetrachloroethene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,1,1-Trichloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
1,1,2-Trichloroethane	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Trichloroethene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Trichlorofluoromethane	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Vinyl Chloride	ND	<	1.00	ug/L	09-MAY-94	09-MAY-94
Surrogate:						
4-Bromofluorobenzene	94.0		-	%	09-MAY-94	09-MAY-94
Comments:	None					
GAS/BTEX-W						
Benzene	ND	<	0.500	ug/L	09-MAY-94	09-MAY-94
Ethyl Benzene	ND	<	0.50	ug/L	09-MAY-94	09-MAY-94
Toluene	ND	<	0.50	ug/L	09-MAY-94	09-MAY-94
Xylene	ND	<	0.50	ug/L	09-MAY-94	09-MAY-94
Gasoline	ND	<	0.050	mg/L	09-MAY-94	09-MAY-94
Surrogate:						
Bromofluorobenzene	113.		-	%	09-MAY-94	09-MAY-94
Comments:	None					
WATER-GF						
Nickel - EPA 7521	0.0065		0.0050	mg/L	10-MAY-94	18-MAY-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: SYSTEM DISCHARGE-1
Lab Id: L9401123-1

Collected: 14-JAN-94
Received: 17-JAN-94
Reported: 25-JAN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020W					
Benzene	0.93	0.50	ug/L	19-JAN-94	19-JAN-94
Bromodichloromethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Bromoform	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Bromomethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Carbon Tetrachloride	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chloroethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Chloroform	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chloromethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
DiBromochloromethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1-Dichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1-Dichloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichloropropane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Ethyl Benzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Methylene Chloride	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Tetrachloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Toluene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trichloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trichlorofluoromethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Vinyl Chloride	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Xylene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
-	-				
Comments:	None				
8015GW					
Gasoline	ND <	0.050	mg/L	21-JAN-94	21-JAN-94
-	-				
Comments:	None				
Surrogate	-				
4-Bromofluorobenzene	84.	-	%	21-JAN-94	21-JAN-94
WATER-UPRRSAC					
Nickel - EPA 7521	0.017	0.0050	mg/L	19-JAN-94	20-JAN-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-4
Lab Id: L9401123-2

Collected: 14-JAN-94
Received: 17-JAN-94
Reported: 25-JAN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020W					
Benzene	110	5.0	ug/L	19-JAN-94	19-JAN-94
Bromodichloromethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Bromoform	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Bromomethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Carbon Tetrachloride	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chloroethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Chloroform	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chloromethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
DiBromochloromethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1-Dichloroethane	4.6	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichloroethane	3.4	0.50	ug/L	19-JAN-94	19-JAN-94
1,1-Dichloroethene	52.	5.0	ug/L	19-JAN-94	19-JAN-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichloropropane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Ethyl Benzene	4.4	0.50	ug/L	19-JAN-94	19-JAN-94
Methylene Chloride	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Tetrachloroethene	1.1	0.50	ug/L	19-JAN-94	19-JAN-94
Toluene	14.	0.50	ug/L	19-JAN-94	19-JAN-94
1,1,1-Trichloroethane	1.3	0.50	ug/L	19-JAN-94	19-JAN-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trichloroethene	2.9	0.50	ug/L	19-JAN-94	19-JAN-94
Trichlorofluoromethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Vinyl Chloride	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Xylene	19.	0.50	ug/L	19-JAN-94	19-JAN-94
-	-				
Comments:	None				
8015GW					
Gasoline	0.51	0.050	mg/L	21-JAN-94	21-JAN-94
-	-				
Comments:	None				
Surrogate	-				
4-Bromofluorobenzene	84.	-	%	21-JAN-94	21-JAN-94
WATER-UPRRSAC					
Nickel - EPA 7521	0.0078	0.0050	mg/L	19-JAN-94	20-JAN-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-32
Lab Id: L9401123-3

Collected: 14-JAN-94
Received: 17-JAN-94
Reported: 25-JAN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020W					
Benzene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Bromodichloromethane	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Bromoform	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Bromomethane	ND <	10.	ug/L	19-JAN-94	19-JAN-94
Carbon Tetrachloride	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Chlorobenzene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Chloroethane	ND <	10.	ug/L	19-JAN-94	19-JAN-94
Chloroform	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Chloromethane	ND <	10.	ug/L	19-JAN-94	19-JAN-94
DiBromochloromethane	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,4-Dichlorobenzene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,3-Dichlorobenzene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,2-Dichlorobenzene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,1-Dichloroethane	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,2-Dichloroethane	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,1-Dichloroethene	44.	5.0	ug/L	19-JAN-94	19-JAN-94
Trans-1,2-Dichloroethene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,2-Dichloropropane	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Cis-1,3-Dichloropropene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Trans-1,3-Dichloropropene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Ethyl Benzene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Methylene Chloride	ND <	10.	ug/L	19-JAN-94	19-JAN-94
1,1,2,2-Tetrachloroethane	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Tetrachloroethene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Toluene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,1,1-Trichloroethane	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
1,1,2-Trichloroethane	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Trichloroethene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
Trichlorofluoromethane	ND <	10.	ug/L	19-JAN-94	19-JAN-94
Vinyl Chloride	ND <	10.	ug/L	19-JAN-94	19-JAN-94
Xylene	ND <	5.0	ug/L	19-JAN-94	19-JAN-94
-	-				
Comments:	None				
8015GW					
Gasoline	ND <	0.050	mg/L	21-JAN-94	21-JAN-94
-	-				
Comments:	None				
Surrogate	-				
4-Bromofluorobenzene	88.	-	%	21-JAN-94	21-JAN-94
WATER-UPRRSAC					
Nickel - EPA 7521	0.018	0.0050	mg/L	19-JAN-94	20-JAN-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG3778-4

Reported: 02-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-UPRRSAC					
Arsenic- EPA 7060	ND <	0.0050	mg/L	19-JAN-94	20-JAN-94
Chromium - EPA 7191	ND <	0.0050	mg/L	19-JAN-94	20-JAN-94
Nickel - EPA 7521	ND <	0.0050	mg/L	19-JAN-94	20-JAN-94
Lead - EPA 7421	ND <	0.0030	mg/L	19-JAN-94	20-JAN-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG3778-5

Reported: 21-JAN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-UPRRSAC							
Arsenic- EPA 7060	0.0288	mg/L	.025	mg/L	115	19-JAN-94	20-JAN-94
Chromium - EPA 7191	0.0595	mg/L	.05	mg/L	119	19-JAN-94	20-JAN-94
Nickel - EPA 7521	0.0609	mg/L	.05	mg/L	122	19-JAN-94	20-JAN-94
Lead - EPA 7421	0.0249	mg/L	.025	mg/L	99.6	19-JAN-94	20-JAN-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG3778-1

Reported: 02-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-UPRRSAC					
Arsenic- EPA 7060	ND <	0.0050	mg/L	19-JAN-94	20-JAN-94
Chromium - EPA 7191	ND <	0.0050	mg/L	19-JAN-94	20-JAN-94
Nickel - EPA 7521	ND <	0.0050	mg/L	19-JAN-94	20-JAN-94
Lead - EPA 7421	ND <	0.0030	mg/L	19-JAN-94	20-JAN-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG3778-2

Reported: 21-JAN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-UPRRSAC							
Arsenic- EPA 7060	0.0242	mg/L	.025	mg/L	97	19-JAN-94	20-JAN-94
Chromium - EPA 7191	0.0581	mg/L	.05	mg/L	116	19-JAN-94	20-JAN-94
Nickel - EPA 7521	0.0528	mg/L	.05	mg/L	106	19-JAN-94	20-JAN-94
Lead - EPA 7421	0.0280	mg/L	.025	mg/L	112	19-JAN-94	20-JAN-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG3778-3

Reported: 21-JAN-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
WATER-UPRRSAC						
Arsenic- EPA 7060	0.0246	mg/L	98	1.6	19-JAN-94	20-JAN-94
Chromium - EPA 7191	0.0547	mg/L	115	6.7	19-JAN-94	20-JAN-94
Nickel - EPA 7521	0.0538	mg/L	108	1.9	19-JAN-94	20-JAN-94
Lead - EPA 7421	0.0304	mg/L	122	8.2	19-JAN-94	20-JAN-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG3773-6

Reported: 25-JAN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8015GW					
Gasoline	ND <	0.050	mg/L	21-JAN-94	21-JAN-94
-	-				
Comments:	None				
Surrogate	-				
4-Bromofluorobenzene	87.	-	%	21-JAN-94	21-JAN-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG3773-7

Reported: 25-JAN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8015GW							
Gasoline	0.102	mg/L	.1	mg/L	102%	21-JAN-94	21-JAN-94
-	-						
Comments:	None						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG3773-1

Reported: 25-JAN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX-W					
Gasoline	ND <	0.050	mg/L	19-JAN-94	19-JAN-94
-	-				
Comments:	MX = L9401115-8.				
Surrogate	91.	-	%	19-JAN-94	19-JAN-94
Bromofluorobenzene	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG3773-2

Reported: 25-JAN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Gasoline	0.900	mg/L	1	mg/L	90%	19-JAN-94	19-JAN-94
-	-						
Comments:	Gasoline mix for spiking does not contain surrogate.						
Surrogate		%				19-JAN-94	19-JAN-94
Bromofluorobenzene	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG3773-3

Reported: 25-JAN-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX-W						
Gasoline	0.927	mg/L	93%	3.0	19-JAN-94	19-JAN-94
-	-					
Comments:	Gasoline mix for spiking does not contain surrogate.					
Surrogate		%			19-JAN-94	19-JAN-94
Bromofluorobenzene	-					

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG3755-6

Reported: 20-JAN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020W					
Benzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Bromodichloromethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Bromoform	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Bromomethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Carbon Tetrachloride	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chloroethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Chloroform	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Chloromethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
DiBromochloromethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1-Dichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1-Dichloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,2-Dichloropropane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Ethyl Benzene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Methylene Chloride	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Tetrachloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Toluene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trichloroethene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
Trichlorofluoromethane	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Vinyl Chloride	ND <	1.0	ug/L	19-JAN-94	19-JAN-94
Xylene	ND <	0.50	ug/L	19-JAN-94	19-JAN-94
-	-				
Comments:	None				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG3755-7

Reported: 20-JAN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020W-QC							
1,1-Dichloroethene	20.8	ug/L	20	ug/L	104	19-JAN-94	19-JAN-94
Trichloroethene	20.2	ug/L	20	ug/L	101	19-JAN-94	19-JAN-94
Chlorobenzene-601	20.8	ug/L	20	ug/L	104	19-JAN-94	19-JAN-94
Benzene	21.0	ug/L	20	ug/L	105	19-JAN-94	19-JAN-94
Toluene	20.9	ug/L	20	ug/L	104	19-JAN-94	19-JAN-94
Chlorobenzene-602	20.9	ug/L	20	ug/L	104	19-JAN-94	19-JAN-94

Comments: None

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG3755-1

Reported: 20-JAN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020W					
Benzene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Bromodichloromethane	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Bromoform	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Bromomethane	ND <	1.0	ug/L	18-JAN-94	18-JAN-94
Carbon Tetrachloride	1.6	0.50	ug/L	18-JAN-94	18-JAN-94
Chlorobenzene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Chloroethane	ND <	1.0	ug/L	18-JAN-94	18-JAN-94
Chloroform	2.5	0.50	ug/L	18-JAN-94	18-JAN-94
Chloromethane	ND <	1.0	ug/L	18-JAN-94	18-JAN-94
DiBromochloromethane	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
1,1-Dichloroethane	2.6	0.50	ug/L	18-JAN-94	18-JAN-94
1,2-Dichloroethane	1.2	0.50	ug/L	18-JAN-94	18-JAN-94
1,1-Dichloroethene	36.	0.50	ug/L	18-JAN-94	18-JAN-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
1,2-Dichloropropane	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Ethyl Benzene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Methylene Chloride	ND <	1.0	ug/L	18-JAN-94	18-JAN-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Tetrachloroethene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Toluene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
1,1,1-Trichloroethane	2.4	0.50	ug/L	18-JAN-94	18-JAN-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	18-JAN-94	18-JAN-94
Trichloroethene	1.2	0.50	ug/L	18-JAN-94	18-JAN-94
Trichlorofluoromethane	ND <	1.0	ug/L	18-JAN-94	18-JAN-94
Vinyl Chloride	ND <	1.0	ug/L	18-JAN-94	18-JAN-94
Xylene	ND <	0.50	ug/L	18-JAN-94	18-JAN-94

Comments: MX=L9401109-6, MW-54

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG3755-2

Reported: 20-JAN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020W-QC							
1,1-Dichloroethene	20.6	ug/L	20	ug/L	103	18-JAN-94	18-JAN-94
Trichloroethene	20.8	ug/L	20	ug/L	104	18-JAN-94	18-JAN-94
Chlorobenzene-601	20.1	ug/L	20	ug/L	101	18-JAN-94	18-JAN-94
Benzene	20.6	ug/L	20	ug/L	103	18-JAN-94	18-JAN-94
Toluene	20.4	ug/L	20	ug/L	102	18-JAN-94	18-JAN-94
Chlorobenzene-602	20.2	ug/L	20	ug/L	101	18-JAN-94	18-JAN-94
-	-						
Comments:	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG3755-3

Reported: 20-JAN-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010/8020W-QC						
1,1-Dichloroethene	16.2	ug/L	81	24.	18-JAN-94	18-JAN-94
Trichloroethene	20.9	ug/L	104	0.48	18-JAN-94	18-JAN-94
Chlorobenzene-601	21.9	ug/L	110	3.9	18-JAN-94	18-JAN-94
Benzene	20.5	ug/L	102	0.49	18-JAN-94	18-JAN-94
Toluene	20.3	ug/L	102	0.49	18-JAN-94	18-JAN-94
Chlorobenzene-602	20.2	ug/L	101	0.0	18-JAN-94	18-JAN-94
Comments:	See Footnote (8).					

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

D&M LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES
3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 Fax: (707) 763-4065

Att: Robin Cockerham

L9401123

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name Dames + Moore Phone (916) 387-8800
Address 8801 Folsom Blvd. #200
City, State, Zip Sacramento, CA 95826
Client's or Representative's Signature Mary Dickerson
(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pick up samples.

PROJ. NO. 00177-080 -044 | PROJECT NAME UPRR - Sac.

SAMPLERS (Signature) Mary Dickerson

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	601	602	TPH-g	Nickel			REMARKS	LAB USE ONLY LAB NO.
SD-1	1/14/94	1150		✓	SD-1	7	X	X	X	X				
MW-4	↓	1225		✓	MW-4	7	X	X	X	X				
MW-32	↓	1250		✓	MW-32	7	X	X	X	X				

- 601, 602, and TPH-g samples are preserved with HCl.
- Nickel samples are preserved with HNO_3.

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐ N/A
COOLER TEMPERATURE 11 °C

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

18 VOAS - 3 500ml WATERS - UPS Red

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Mary Dickerson	1/14/94	1400	Christy Cockerham
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

General Remarks:
Sent results to Sacto. office.
Att: Jim Brake
Please return cooler + Blue Ice.

RECEIVED
JAN 14 1994
ENVIRONMENTAL
ANALYSIS
LABORATORY

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: TS-1
Lab Id: L9402100-1

Collected: 11-FEB-94
Received: 14-FEB-94
Reported: 22-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF,CV					
Nickel - EPA 7521	0.013	0.0050	mg/L	15-FEB-94	17-FEB-94
8015GW					
Gasoline	ND <	0.050	mg/L	17-FEB-94	17-FEB-94
-	-				
Comments:	None				
Surrogate	-				
4-Bromofluorobenzene	90.	-	%	17-FEB-94	17-FEB-94
8010/8020W					
Benzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromodichloromethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromoform	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromomethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Carbon Tetrachloride	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chloroethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Chloroform	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chloromethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
DiBromochloromethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1-Dichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1-Dichloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichloropropane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Ethyl Benzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Methylene Chloride	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Tetrachloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Toluene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trichloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trichlorofluoromethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Vinyl Chloride	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Xylene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
-	-				
Comments:	None				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-4
Lab Id: L9402100-2

Collected: 11-FEB-94
Received: 14-FEB-94
Reported: 22-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF,CV					
Nickel - EPA 7521	0.013	0.0050	mg/L	15-FEB-94	17-FEB-94
8015GW					
Gasoline	0.33	0.050	mg/L	17-FEB-94	17-FEB-94
-	-				
Comments:	None				
Surrogate	-				
4-Bromofluorobenzene	93.	-	%	17-FEB-94	17-FEB-94
8010/8020W					
Benzene	110	5.0	ug/L	15-FEB-94	15-FEB-94
Bromodichloromethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromoform	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromomethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Carbon Tetrachloride	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chloroethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Chloroform	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chloromethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
DiBromochloromethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1-Dichloroethane	4.6	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichloroethane	4.6	0.50	ug/L	15-FEB-94	15-FEB-94
1,1-Dichloroethene	64.	5.0	ug/L	15-FEB-94	15-FEB-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichloropropane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Ethyl Benzene	4.3	0.50	ug/L	15-FEB-94	15-FEB-94
Methylene Chloride	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Tetrachloroethene	1.5	0.50	ug/L	15-FEB-94	15-FEB-94
Toluene	14.	0.50	ug/L	15-FEB-94	15-FEB-94
1,1,1-Trichloroethane	1.8	0.50	ug/L	15-FEB-94	15-FEB-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trichloroethene	3.0	0.50	ug/L	15-FEB-94	15-FEB-94
Trichlorofluoromethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Vinyl Chloride	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Xylene	17.	0.50	ug/L	15-FEB-94	15-FEB-94
-	-				
Comments:	None				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-32
Lab Id: L9402100-3

Collected: 11-FEB-94
Received: 14-FEB-94
Reported: 22-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF,CV					
Nickel - EPA 7521	0.020	0.0050	mg/L	15-FEB-94	17-FEB-94
8015GW					
Gasoline	ND <	0.050	mg/L	17-FEB-94	17-FEB-94
-	-				
Comments:	None				
Surrogate	-				
4-Bromofluorobenzene	92.	-	%	17-FEB-94	17-FEB-94
8010/8020W					
Benzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromodichloromethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromoform	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromomethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Carbon Tetrachloride	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chloroethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Chloroform	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chloromethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
DiBromochloromethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1-Dichloroethane	4.5	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichloroethane	0.53	0.50	ug/L	15-FEB-94	15-FEB-94
1,1-Dichloroethene	58.	5.0	ug/L	15-FEB-94	15-FEB-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichloropropane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Ethyl Benzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Methylene Chloride	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Tetrachloroethene	0.53	0.50	ug/L	15-FEB-94	15-FEB-94
Toluene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1,1-Trichloroethane	1.4	0.50	ug/L	15-FEB-94	15-FEB-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trichloroethene	7.4	0.50	ug/L	15-FEB-94	15-FEB-94
Trichlorofluoromethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Vinyl Chloride	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Xylene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
-	-				
Comments:	None				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG3996-14

Reported: 17-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF,CV					
Nickel - EPA 7521	ND	0.0050	mg/L	15-FEB-94	17-FEB-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG3996-15

Reported: 17-FEB-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-GF,CV							
Nickel - EPA 7521	0.0573	mg/L	.05	mg/L	115	15-FEB-94	17-FEB-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG3996-11

Reported: 17-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF,CV					
Nickel - EPA 7521	0.0133	0.0050	mg/L	15-FEB-94	17-FEB-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG3996-12

Reported: 17-FEB-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-GF,CV							
Nickel - EPA 7521	0.0602	mg/L	.05	mg/L	94	15-FEB-94	17-FEB-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG3996-13

Reported: 18-FEB-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
WATER-GF,CV						
Nickel - EPA 7521	0.0600	mg/L	93	0.33	15-FEB-94	17-FEB-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG3773-12

Reported: 18-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8015GW [redacted]					
Gasoline	ND <	0.050	mg/L	17-FEB-94	17-FEB-94
-	-				
Comments:	None				
Surrogate	-				
4-Bromofluorobenzene	85.	-	%	17-FEB-94	17-FEB-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG3773-13

Reported: 24-FEB-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Gasoline	0.990	mg/L	1	mg/L	99%	17-FEB-94	17-FEB-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG3773-1

Reported: 18-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8015GW					
Gasoline	ND <	0.050	mg/L	19-JAN-94	19-JAN-94
-	-				
Comments:	MX = L9401115-8.				
Surrogate	-				
4-Bromofluorobenzene	91.	-	%	19-JAN-94	19-JAN-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG3773-2

Reported: 24-FEB-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Gasoline	0.900	mg/L	1	mg/L	90%	19-JAN-94	19-JAN-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG3773-2

Reported: 24-FEB-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX-W						
Gasoline	0.900	mg/L	90%	1.0	19-JAN-94	19-JAN-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG3972-8

Reported: 15-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020W					
Benzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromodichloromethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromoform	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Bromomethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Carbon Tetrachloride	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chloroethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Chloroform	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Chloromethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
DiBromochloromethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1-Dichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1-Dichloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,2-Dichloropropane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Ethyl Benzene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Methylene Chloride	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Tetrachloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Toluene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trichloroethene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
Trichlorofluoromethane	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Vinyl Chloride	ND <	1.0	ug/L	15-FEB-94	15-FEB-94
Xylene	ND <	0.50	ug/L	15-FEB-94	15-FEB-94
-	-				
Comments:	None				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG3972-9

Reported: 15-FEB-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020W-QC							
1,1-Dichloroethene	21.5	ug/L	20	ug/L	108	15-FEB-94	15-FEB-94
Trichloroethene	20.5	ug/L	20	ug/L	102	15-FEB-94	15-FEB-94
Chlorobenzene-601	24.2	ug/L	20	ug/L	121	15-FEB-94	15-FEB-94
Benzene	18.7	ug/L	20	ug/L	94	15-FEB-94	15-FEB-94
Toluene	19.1	ug/L	20	ug/L	96	15-FEB-94	15-FEB-94
Chlorobenzene-602	19.3	ug/L	20	ug/L	96	15-FEB-94	15-FEB-94
-	-						
Comments:	None						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG3972-1

Reported: 15-FEB-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020W					
Benzene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Bromodichloromethane	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Bromoform	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Bromomethane	ND <	1.0	ug/L	09-FEB-94	09-FEB-94
Carbon Tetrachloride	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Chlorobenzene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Chloroethane	5.4	1.0	ug/L	09-FEB-94	09-FEB-94
Chloroform	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Chloromethane	ND <	1.0	ug/L	09-FEB-94	09-FEB-94
DiBromochloromethane	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
1,1-Dichloroethane	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
1,2-Dichloroethane	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
1,1-Dichloroethene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Trans-1,2-Dichloroethene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
1,2-Dichloropropane	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Ethyl Benzene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Methylene Chloride	ND <	1.0	ug/L	09-FEB-94	09-FEB-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Tetrachloroethene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Toluene	0.62	0.50	ug/L	09-FEB-94	09-FEB-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Trichloroethene	ND <	0.50	ug/L	09-FEB-94	09-FEB-94
Trichlorofluoromethane	ND <	1.0	ug/L	09-FEB-94	09-FEB-94
Vinyl Chloride	ND <	1.0	ug/L	09-FEB-94	09-FEB-94
Xylene	1.9	0.50	ug/L	09-FEB-94	09-FEB-94

Comments: MX=L9402064-4, SB-2

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG3972-2

Reported: 15-FEB-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020W-QC							
1,1-Dichloroethene	21.0	ug/L	20	ug/L	105	09-FEB-94	09-FEB-94
Trichloroethene	20.7	ug/L	20	ug/L	104	09-FEB-94	09-FEB-94
Chlorobenzene-601	22.1	ug/L	20	ug/L	111	09-FEB-94	09-FEB-94
Benzene	21.1	ug/L	20	ug/L	106	09-FEB-94	09-FEB-94
Toluene	21.2	ug/L	20	ug/L	106	09-FEB-94	09-FEB-94
Chlorobenzene-602	21.6	ug/L	20	ug/L	108	09-FEB-94	09-FEB-94
-	-						
Comments:	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG3972-3

Reported: 15-FEB-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010/8020W-QC						
1,1-Dichloroethene	19.9	ug/L	100	5.4	09-FEB-94	09-FEB-94
Trichloroethene	21.3	ug/L	106	2.8	09-FEB-94	09-FEB-94
Chlorobenzene-601	23.2	ug/L	116	4.8	09-FEB-94	09-FEB-94
Benzene	21.7	ug/L	108	2.8	09-FEB-94	09-FEB-94
Toluene	21.7	ug/L	108	2.3	09-FEB-94	09-FEB-94
Chlorobenzene-602	22.2	ug/L	111	2.7	09-FEB-94	09-FEB-94
-	-					
Comments:	None					

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result ÷ MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

L9402100

Attn: Robin Cockerham

D&M LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES
3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 Fax: (707) 763-4065

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name Dames + Moore Phone (916) 387-8600
Address 8601 Folsom Blvd #200
City, State, Zip Sacramento, CA 95826
Client's or Representative's Signature Tracy Dickerson
(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pick up samples.

PROJ. NO. 00173-000-044 | PROJECT NAME UPRR-Sec.

SAMPLERS (Signature) Tracy Dickerson

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	Soil	GOZ	TPHg	Nickel			REMARKS	LAB USE ONLY LAB NO.
TS-1	2/11/94	1132		✓	TS-1	1	X	X	X	X				
MW-4	↓	1205		✓	MW-4	7	X	X	X	X				
MW-32	↓	1230		✓	MW-32	7	X	X	X	X				

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

18 VOAS - 3 500ml WATER - UPS Red

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐ N/A
COOLER TEMPERATURE 8 deg cc °C

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Tracy Dickerson	2/11/94	1330	Christy Cockerham
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

General Remarks:
Send results to Sacto. office
Attn. Jim Bralic
Please return cooler + Blue Ice

RECEIVED FEB 15 1994

PART ONE - CLIENT COPY

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: SYSTEM DISCHARGE
Lab Id: L9403021-1

Collected: 02-MAR-94
Received: 03-MAR-94
Reported: 14-MAR-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020W						
Benzene	0.84		0.50	ug/L	04-MAR-94	04-MAR-94
Bromodichloromethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromoform	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromomethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Carbon Tetrachloride	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chloroethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Chloroform	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chloromethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Dibromochloromethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloropropane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Ethyl Benzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Methylene Chloride	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Tetrachloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Toluene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trichloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trichlorofluoromethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Vinyl Chloride	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Xylenes (Total)	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	82.0		-	%	04-MAR-94	04-MAR-94
4-Bromofluorobenzene (8020)	91.0		-	%	04-MAR-94	04-MAR-94
-	-					
Comments:	None					
8015GW						
Gasoline	ND	<	0.050	mg/L	07-MAR-94	07-MAR-94
-	-					
Comments:	None					
Surrogate	-					
4-Bromofluorobenzene	60.		-	%	07-MAR-94	07-MAR-94
WATER-GF						
Nickel - EPA 7521	0.013		0.0050	mg/L	11-MAR-94	11-MAR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-4
Lab Id: L9403021-2

Collected: 02-MAR-94
Received: 03-MAR-94
Reported: 14-MAR-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020W						
Benzene	110		5.0	ug/L	04-MAR-94	04-MAR-94
Bromodichloromethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromoform	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromomethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Carbon Tetrachloride	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chloroethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Chloroform	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chloromethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Dibromochloromethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethane	3.9		0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethane	3.3		0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethene	41.		5.0	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloropropane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Ethyl Benzene	4.0		0.50	ug/L	04-MAR-94	04-MAR-94
Methylene Chloride	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Tetrachloroethene	1.4		0.50	ug/L	04-MAR-94	04-MAR-94
Toluene	13.		0.50	ug/L	04-MAR-94	04-MAR-94
1,1,1-Trichloroethane	1.2		0.50	ug/L	04-MAR-94	04-MAR-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trichloroethene	2.6		0.50	ug/L	04-MAR-94	04-MAR-94
Trichlorofluoromethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Vinyl Chloride	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Xylenes (Total)	16.		0.50	ug/L	04-MAR-94	04-MAR-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	86.0		-	%	04-MAR-94	04-MAR-94
4-Bromofluorobenzene (8020)	94.0		-	%	04-MAR-94	04-MAR-94
-	-					
Comments:	None					
8015GW						
Gasoline	0.58		0.050	mg/L	07-MAR-94	07-MAR-94
-	-					
Comments:	None					
Surrogate	-					
4-Bromofluorobenzene	89.		-	%	07-MAR-94	07-MAR-94
WATER-GF						
Nickel - EPA 7521	0.024		0.0050	mg/L	11-MAR-94	11-MAR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-32
Lab Id: L9403021-3

Collected: 02-MAR-94
Received: 03-MAR-94
Reported: 14-MAR-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020W						
Benzene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Bromodichloromethane	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Bromoform	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Bromomethane	ND <		1.0	ug/L	04-MAR-94	04-MAR-94
Carbon Tetrachloride	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Chlorobenzene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Chloroethane	ND <		1.0	ug/L	04-MAR-94	04-MAR-94
Chloroform	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Chloromethane	ND <		1.0	ug/L	04-MAR-94	04-MAR-94
Dibromochloromethane	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichlorobenzene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
1,3-Dichlorobenzene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
1,4-Dichlorobenzene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethane	4.3		0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethane	0.70		0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethene	41.		5.0	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethene (Total)	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloropropane	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Cis-1,3-Dichloropropene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Trans-1,3-Dichloropropene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Ethyl Benzene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Methylene Chloride	ND <		1.0	ug/L	04-MAR-94	04-MAR-94
1,1,2,2-Tetrachloroethane	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Tetrachloroethene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Toluene	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
1,1,1-Trichloroethane	1.2		0.50	ug/L	04-MAR-94	04-MAR-94
1,1,2-Trichloroethane	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
Trichloroethene	7.2		0.50	ug/L	04-MAR-94	04-MAR-94
Trichlorofluoromethane	ND <		1.0	ug/L	04-MAR-94	04-MAR-94
Vinyl Chloride	ND <		1.0	ug/L	04-MAR-94	04-MAR-94
Xylenes (Total)	ND <		0.50	ug/L	04-MAR-94	04-MAR-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	86.0	-		%	04-MAR-94	04-MAR-94
4-Bromofluorobenzene (8020)	93.0	-		%	04-MAR-94	04-MAR-94
-	-					
Comments:	None					
8015GW						
Gasoline	ND <		0.050	mg/L		
-	-					
Comments:	None					
Surrogate	-					
4-Bromofluorobenzene	81.	-		%		
WATER-GF						
Nickel - EPA 7521	0.021		0.0050	mg/L	11-MAR-94	11-MAR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4108-4

Reported: 07-MAR-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020W						
Benzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromodichloromethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromoform	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromomethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Carbon Tetrachloride	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chloroethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Chloroform	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chloromethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Dibromochloromethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloropropane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Ethyl Benzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Methylene Chloride	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Tetrachloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Toluene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trichloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trichlorofluoromethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Vinyl Chloride	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Xylenes (Total)	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	83.0		-	%	04-MAR-94	04-MAR-94
4-Bromofluorobenzene (8020)	94.0		-	%	04-MAR-94	04-MAR-94
-	-					
Comments:	None					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4108-5

Reported: 07-MAR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020W-QC							
1,1-Dichloroethene	18.2	ug/L	20	ug/L	91	04-MAR-94	04-MAR-94
Trichloroethene	18.5	ug/L	20	ug/L	92	04-MAR-94	04-MAR-94
Chlorobenzene-601	17.2	ug/L	20	ug/L	86	04-MAR-94	04-MAR-94
Benzene	19.4	ug/L	20	ug/L	97	04-MAR-94	04-MAR-94
Toluene	19.4	ug/L	20	ug/L	97	04-MAR-94	04-MAR-94
Chlorobenzene-602	19.3	ug/L	20	ug/L	96	04-MAR-94	04-MAR-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	93.0	%				04-MAR-94	04-MAR-94
4-Bromofluorobenzene (8020)	98.0	%				04-MAR-94	04-MAR-94
-	-						
Comments:	None						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4108-1

Reported: 07-MAR-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020W						
Benzene	0.84		0.50	ug/L	04-MAR-94	04-MAR-94
Bromodichloromethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromoform	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Bromomethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Carbon Tetrachloride	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chloroethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Chloroform	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Chloromethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Dibromochloromethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1-Dichloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,2-Dichloropropane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Ethyl Benzene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Methylene Chloride	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Tetrachloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Toluene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trichloroethene	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
Trichlorofluoromethane	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Vinyl Chloride	ND	<	1.0	ug/L	04-MAR-94	04-MAR-94
Xylenes (Total)	ND	<	0.50	ug/L	04-MAR-94	04-MAR-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	82.0	-		%	04-MAR-94	04-MAR-94
4-Bromofluorobenzene (8020)	91.0	-		%	04-MAR-94	04-MAR-94
-	-					

Comments: MX=L9403021-1, SYSTEM DISCHARGE

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4108-2

Reported: 07-MAR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020W-QC							
1,1-Dichloroethene	18.8	ug/L	20	ug/L	94	04-MAR-94	04-MAR-94
Trichloroethene	18.6	ug/L	20	ug/L	93	04-MAR-94	04-MAR-94
Chlorobenzene-601	19.1	ug/L	20	ug/L	96	04-MAR-94	04-MAR-94
Benzene	19.6	ug/L	20	ug/L	94	04-MAR-94	04-MAR-94
Toluene	19.0	ug/L	20	ug/L	95	04-MAR-94	04-MAR-94
Chlorobenzene-602	18.8	ug/L	20	ug/L	94	04-MAR-94	04-MAR-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	89.0	%				04-MAR-94	04-MAR-94
4-Bromofluorobenzene (8020)	95.0	%				04-MAR-94	04-MAR-94
-	-						
Comments:	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4108-3

Reported: 07-MAR-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010/8020W-QC						
1,1-Dichloroethene	18.8	ug/L	94	0.0	04-MAR-94	04-MAR-94
Trichloroethene	18.7	ug/L	94	0.54	04-MAR-94	04-MAR-94
Chlorobenzene-601	17.9	ug/L	90	6.5	04-MAR-94	04-MAR-94
Benzene	19.6	ug/L	94	0.0	04-MAR-94	04-MAR-94
Toluene	19.0	ug/L	95	0.0	04-MAR-94	04-MAR-94
Chlorobenzene-602	18.8	ug/L	94	0.0	04-MAR-94	04-MAR-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	93.0	%			04-MAR-94	04-MAR-94
4-Bromofluorobenzene (8020)	94.0	%			04-MAR-94	04-MAR-94
-	-					
Comments:	None					

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4072-10

Reported: 08-MAR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX-W					
Gasoline	ND <	0.050	mg/L	07-MAR-94	07-MAR-94
Surrogate: Bromofluorobenzene	100	-	%	07-MAR-94	07-MAR-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4072-11

Reported: 08-MAR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Gasoline	0.950	mg/L	1	mg/L	95%	07-MAR-94	07-MAR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4072-1

Reported: 08-MAR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX-W					
Benzene	ND <	0.50	ug/L	02-MAR-94	02-MAR-94
Ethyl Benzene	ND <	0.50	ug/L	02-MAR-94	02-MAR-94
Toluene	ND <	0.50	ug/L	02-MAR-94	02-MAR-94
Xylene	ND <	0.50	ug/L	02-MAR-94	02-MAR-94
Gasoline	ND <	0.050	mg/L	02-MAR-94	02-MAR-94
-	-				
Surrogate:	-				
Bromofluorobenzene	110	-	%	02-MAR-94	02-MAR-94
-	-				
Comments:	MX = L9402188-3.				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4072-2

Reported: 08-MAR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Benzene	25.	ug/L	25	ug/L	101%	07-MAR-94	07-MAR-94
Ethyl Benzene	25.3	ug/L	25	ug/L	101%	07-MAR-94	07-MAR-94
Toluene	25.0	ug/L	25	ug/L	100%	07-MAR-94	07-MAR-94
Xylene	75.7	ug/L	75	ug/L	101%	07-MAR-94	07-MAR-94
Gasoline	0.940	mg/L	1	mg/L	94%	07-MAR-94	07-MAR-94
-	-						
Surrogate:	-						
Bromofluorobenzene	104.	%	25	ug/L		07-MAR-94	07-MAR-94
-	-						
Comments:	8020 MS = L9402188-20.						
-	GAS MS = L9402188-3.						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4072-3

Reported: 08-MAR-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX-W						
Benzene	27.	ug/L	108%	6.8	07-MAR-94	07-MAR-94
Ethyl Benzene	27.2	ug/L	109%	7.2	07-MAR-94	07-MAR-94
Toluene	26.7	ug/L	107%	6.7	07-MAR-94	07-MAR-94
Xylene	81.2	ug/L	108%	7.0	07-MAR-94	07-MAR-94
Gasoline	0.820	mg/L	84%	11.	07-MAR-94	07-MAR-94
-	-					
Surrogate:	-					
Bromofluorobenzene	103.	%		25.	07-MAR-94	07-MAR-94
-	-					
Comments:	8020 MSD = L9402188-20.					
-	GAS MSD = L9402188-3.					
-	-					

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4147-4

Reported: 14-MAR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF					
Nickel - EPA 7521	ND<	0.0050	mg/L	11-MAR-94	11-MAR-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4147-5

Reported: 14-MAR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-GF							
Nickel - EPA 7521	0.0550	mg/L	.05	mg/L	110	11-MAR-94	11-MAR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4147-1

Reported: 14-MAR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF					
Nickel - EPA 7521	0.0128	0.00500	mg/L	11-MAR-94	11-MAR-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4147-2

Reported: 14-MAR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-GF							
Nickel - EPA 7521	0.0585	mg/L	.05	mg/L	91	11-MAR-94	11-MAR-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4147-3

Reported: 14-MAR-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
WATER-GF						
Nickel - EPA 7521	0.0592	mg/L	93	1.2	11-MAR-94	11-MAR-94

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

L9403021

DAN LABORATORIES
3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 Fax: (707) 763-4065

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name UPRR Dunnigan Phone (916) 347-7537
Address 6801 Front Street
City, State, Zip Sacramento, CA 95814
Client's or Representative's Signature
(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pick up samples.

PROJ. NO. 1044 PROJECT NAME UPRR Dunnigan Groundwater
SAMPLERS (Signature)

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	601	602	TPHg	Nickel			REMARKS	LAB USE ONLY LAB NO.
System Discharge	3/1/94			X	UPRR SAC, GW-1	7	X	X	X	X			All VOAs preserved	
MW-4	"			X	" "	7	X	X	X	X			All VOAs	
MW-32	"			X	" "	7	X	X	X	X			All VOAs preserved	
													Metals Analysis	

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☑ N/A
COOLER TEMPERATURE COLD °C

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
	3/1/94		
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
	3-3-94	9:35AM.	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

General Remarks:
18 VOAs - 3 - 1 Lt. Plastic

PART TWO - LAB COPY

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-4
Lab Id: L9404058-1

Collected: 07-APR-94
Received: 08-APR-94
Reported: 25-APR-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010W						
Bromodichloromethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Bromoform	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Bromomethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Carbon Tetrachloride	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chloroethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Chloroform	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chloromethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Dibromochloromethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethane	3.6		0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethane	2.7		0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethene	53.		5.0	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloropropane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Methylene Chloride	ND	<	1.0	ug/L	19-APR-94	19-APR-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Tetrachloroethene	1.3		0.50	ug/L	19-APR-94	19-APR-94
1,1,1-Trichloroethane	1.5		0.50	ug/L	19-APR-94	19-APR-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Trichloroethene	2.7		0.50	ug/L	19-APR-94	19-APR-94
Trichlorofluoromethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Vinyl Chloride	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Surrogate:						
4-Bromofluorobenzene	96.0		-	%	19-APR-94	19-APR-94
Comments:	None					
GAS/BTEX-W						
Benzene	120		0.50	ug/L	20-APR-94	20-APR-94
Ethyl Benzene	3.7		0.50	ug/L	20-APR-94	20-APR-94
Toluene	14.		0.50	ug/L	20-APR-94	20-APR-94
Xylene	19.		0.50	ug/L	20-APR-94	20-APR-94
Gasoline	0.66		0.050	mg/L	20-APR-94	20-APR-94
Surrogate:						
Bromofluorobenzene	110		-	%	20-APR-94	20-APR-94
Comments:	None					
WATER-GF						
Nickel - EPA 7521	0.0096		0.0050	mg/L	12-APR-94	18-APR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: MW-32
Lab Id: L9404058-2

Collected: 07-APR-94
Received: 08-APR-94
Reported: 25-APR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010W					
Bromodichloromethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Bromoform	ND <	0.50	ug/L	19-APR-94	19-APR-94
Bromomethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Carbon Tetrachloride	ND <	0.50	ug/L	19-APR-94	19-APR-94
Chlorobenzene	ND <	0.50	ug/L	19-APR-94	19-APR-94
Chloroethane	ND <	1.0	ug/L	19-APR-94	19-APR-94
Chloroform	ND <	0.50	ug/L	19-APR-94	19-APR-94
Chloromethane	ND <	1.0	ug/L	19-APR-94	19-APR-94
Dibromochloromethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethane	4.0	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethene	52.	5.0	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloropropane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	19-APR-94	19-APR-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	19-APR-94	19-APR-94
Methylene Chloride	ND <	1.0	ug/L	19-APR-94	19-APR-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Tetrachloroethene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,1,1-Trichloroethane	1.2	0.50	ug/L	19-APR-94	19-APR-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Trichloroethene	6.8	0.50	ug/L	19-APR-94	19-APR-94
Trichlorofluoromethane	ND <	1.0	ug/L	19-APR-94	19-APR-94
Vinyl Chloride	ND <	1.0	ug/L	19-APR-94	19-APR-94
Surrogate:					
4-Bromofluorobenzene	90.0	-	%	19-APR-94	19-APR-94
Comments:	None				
GAS/BTEX-W					
Benzene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Ethyl Benzene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Toluene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Xylene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Gasoline	ND <	0.050	mg/L	20-APR-94	20-APR-94
Surrogate:					
Bromofluorobenzene	100	-	%	20-APR-94	20-APR-94
Comments:	None				
WATER-GF					
Nickel - EPA 7521	0.018	0.0050	mg/L	12-APR-94	18-APR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR Sacto
Sample Id: SYSTEM DISCHARGE
Lab Id: L9404058-3

Collected: 07-APR-94
Received: 08-APR-94
Reported: 25-APR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010W					
Bromodichloromethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Bromoform	ND <	0.50	ug/L	19-APR-94	19-APR-94
Bromomethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Carbon Tetrachloride	ND <	0.50	ug/L	19-APR-94	19-APR-94
Chlorobenzene	ND <	0.50	ug/L	19-APR-94	19-APR-94
Chloroethane	ND <	1.0	ug/L	19-APR-94	19-APR-94
Chloroform	ND <	0.50	ug/L	19-APR-94	19-APR-94
Chloromethane	ND <	1.0	ug/L	19-APR-94	19-APR-94
Dibromochloromethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloropropane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	19-APR-94	19-APR-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	19-APR-94	19-APR-94
Methylene Chloride	ND <	1.0	ug/L	19-APR-94	19-APR-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Tetrachloroethene	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	19-APR-94	19-APR-94
Trichloroethene	ND <	0.50	ug/L	19-APR-94	19-APR-94
Trichlorofluoromethane	ND <	1.0	ug/L	19-APR-94	19-APR-94
Vinyl Chloride	ND <	1.0	ug/L	19-APR-94	19-APR-94
Surrogate:					
4-Bromofluorobenzene	115.	-	%	19-APR-94	19-APR-94
Comments:	None				
GAS/BTEX-W					
Benzene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Ethyl Benzene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Toluene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Xylene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Gasoline	ND <	0.050	mg/L	20-APR-94	20-APR-94
Surrogate:					
Bromofluorobenzene	110	-	%	20-APR-94	20-APR-94
Comments:	None				
WATER-GF					
Nickel - EPA 7521	0.0096	0.0050	mg/L	12-APR-94	18-APR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4483-4

Collected:
Received: 19-APR-94
Reported: 19-APR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF					
Nickel - EPA 7521	ND<	0.0050	mg/L	12-APR-94	18-APR-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4483-5

Reported: 19-APR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-GF							
Nickel - EPA 7521	0.0519	mg/L	.05	mg/L	104	12-APR-94	18-APR-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4483-1

Reported: 19-APR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF					
Nickel - EPA 7521	0.0111	0.00500	mg/L	12-APR-94	18-APR-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4483-2

Reported: 19-APR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-GF							
Nickel - EPA 7521	0.0224	mg/L	.05	mg/L	22	12-APR-94	18-APR-94

Comments: Nickel: See notes #8 and #10.

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4483-3

Reported: 19-APR-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
WATER-GF						
Nickel - EPA 7521	0.0316	mg/L	41	34.	12-APR-94	18-APR-94
Comments:	Nickel: See notes #8 and #10.					

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4523-4

Reported: 25-APR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX-W					
Benzene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Ethyl Benzene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Toluene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Xylene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Gasoline	ND <	0.050	mg/L	20-APR-94	20-APR-94
-	-				
Surrogate:	-				
Bromofluorobenzene	110	-	%	20-APR-94	20-APR-94
-	-				
Comments:	None				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4523-5

Reported: 25-APR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Benzene	24.	ug/L	25	ug/L	94.4 %	20-APR-94	20-APR-94
Ethyl Benzene	23.4	ug/L	25	ug/L	94.6 %	20-APR-94	20-APR-94
Toluene	23.3	ug/L	25	ug/L	93.2 %	20-APR-94	20-APR-94
Xylene	69.4	ug/L	75	ug/L	92.5 %	20-APR-94	20-APR-94
Gasoline	0.950	mg/L	1	mg/L	95.0 %	20-APR-94	20-APR-94
-	-						
Surrogate:							
Bromofluorobenzene	111.	%	25	ug/L	111 %	20-APR-94	20-APR-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4523-1

Reported: 25-APR-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX-W					
Benzene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Ethyl Benzene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Toluene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Xylene	ND <	0.50	ug/L	20-APR-94	20-APR-94
Gasoline	ND <	0.050	mg/L	20-APR-94	20-APR-94
Surrogate:					
Bromofluorobenzene	110	-	%	20-APR-94	20-APR-94
Comments:	MX = L904058-3				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4523-2

Reported: 25-APR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Benzene	29.	ug/L	25	ug/L	117 %	20-APR-94	20-APR-94
Ethyl Benzene	29.0	ug/L	25	ug/L	116 %	20-APR-94	20-APR-94
Toluene	28.2	ug/L	25	ug/L	113 %	20-APR-94	20-APR-94
Xylene	85.6	ug/L	75	ug/L	114 %	20-APR-94	20-APR-94
Gasoline	0.980	mg/L	1	mg/L	98.0 %	20-APR-94	20-APR-94
-	-						
Surrogate:	-						
Bromofluorobenzene	113.	%	25	ug/L	113 %	20-APR-94	20-APR-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4523-3

Reported: 25-APR-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX-W						
Benzene	30.	ug/L	118 %	1.4	20-APR-94	20-APR-94
Ethyl Benzene	29.5	ug/L	118 %	1.7	20-APR-94	20-APR-94
Toluene	28.7	ug/L	115 %	1.8	20-APR-94	20-APR-94
Xylene	87.0	ug/L	116 %	1.6	20-APR-94	20-APR-94
Gasoline	1.00	mg/L	100 %	2.0	20-APR-94	20-APR-94
Surrogate: Bromofluorobenzene	114.	%			20-APR-94	20-APR-94
Comments:	None					

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4525-4

Reported: 22-APR-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010W						
Bromodichloromethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Bromoform	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Bromomethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Carbon Tetrachloride	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chloroethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Chloroform	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chloromethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Dibromochloromethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloropropane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Methylene Chloride	ND	<	1.0	ug/L	19-APR-94	19-APR-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Tetrachloroethene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Trichloroethene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Trichlorofluoromethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Vinyl Chloride	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Surrogate: 4-Bromofluorobenzene	98.0		-	%	19-APR-94	19-APR-94

Comments: None

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4525-5

Reported: 22-APR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010W-QC							
1,1-Dichloroethene	22.8	ug/L	20	ug/L	114 %	19-APR-94	19-APR-94
Trichloroethene	24.0	ug/L	20	ug/L	120 %	19-APR-94	19-APR-94
Chlorobenzene	23.0	ug/L	20	ug/L	115 %	19-APR-94	19-APR-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene	110.	%				19-APR-94	19-APR-94
-	-						
Comments:	-						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4525-1

Reported: 22-APR-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010W						
Bromodichloromethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Bromoform	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Bromomethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Carbon Tetrachloride	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chloroethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Chloroform	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Chloromethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Dibromochloromethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1-Dichloroethene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,2-Dichloropropane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Methylene Chloride	ND	<	1.0	ug/L	19-APR-94	19-APR-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Tetrachloroethene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Trichloroethene	ND	<	0.50	ug/L	19-APR-94	19-APR-94
Trichlorofluoromethane	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Vinyl Chloride	ND	<	1.0	ug/L	19-APR-94	19-APR-94
Surrogate:						
4-Bromofluorobenzene	115.		-	%	19-APR-94	19-APR-94

Comments: MX=L9404058-3 (SYSTEM DISCHARGE)

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4525-2

Reported: 22-APR-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010W-QC							
1,1-Dichloroethene	21.6	ug/L	20	ug/L	108 %	19-APR-94	19-APR-94
Trichloroethene	21.7	ug/L	20	ug/L	108 %	19-APR-94	19-APR-94
Chlorobenzene	20.9	ug/L	20	ug/L	104 %	19-APR-94	19-APR-94
Surrogate:							
4-Bromofluorobenzene	106.	%				19-APR-94	19-APR-94
Comments:							

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4525-3

Reported: 22-APR-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010W-QC						
1,1-Dichloroethene	21.8	ug/L	109 %	0.90	19-APR-94	19-APR-94
Trichloroethene	21.4	ug/L	107 %	1.4	19-APR-94	19-APR-94
Chlorobenzene	21.5	ug/L	108 %	2.8	19-APR-94	19-APR-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene	103.	%			19-APR-94	19-APR-94
-	-					
Comments:	-					

LABORATORY FOOTNOTES

(1) Sample containers were received broken.
(2) The samples were not properly refrigerated during transport to the laboratory.
(3) The samples were not properly preserved.
(4) The information on the chain-of-custody does not match the information on the sample containers.
(5) The samples were received after the required holding time.
(6) This analyte was detected in the method blank above the reporting limit.
(7) This analyte was detected in the trip blank above the reporting limit.
(8) The recovery of the matrix spike indicates the presence of matrix effects. The MBS recovery was acceptable.
(9) The matrix spike recovery is not significant due to the high concentration of the analyte in the sample relativ to the amount of spike added.
(10) The method of standard additions was performed and confirmed a matrix interference.
(11) The variation in spike recoveries reflects the nonhomogeneity of the sample.
(12) Accurate quantitation of the surrogate was not possible due to the extent of sample dilution.
(13) The surrogate recovery was high due to the presence of interfering compounds in the sample.
(14) The surrogate recovery was low due to matrix effects. The analysis was repeated with similiar results.
(15) The detection limit was raised due to the insufficient amount of sample available for analysis.
(16) The detection limit was raised due to the dilution required by high-level analytes in the sample.
(17) The detection limit was raised due to the dilution required by high-level non-target analytes in the sample.
(18) These compounds co-elute; therefore, a total value is reported for both.
(19) The sample was tentatively identified and semi-quantitated based on the best chromatographic fit from the available standards.
(20) The sample chromatograph resembled an "aged" hydrocarbon product.
(21) Hydrocarbons were found in the range of gasoline and diesel but did not resemble a gasoline or diesel fingerprint.
(22) This sample was extracted outside of the required holding time.
(23) This sample was analyzed outside of the required holding time.
(24) The variation in duplicate results reflects the nonhomogeneity of the sample.
(25) The recovery of the matrix spike(s) reflects the nonhomogeneity of the sample. The MBS recovery was acceptable.
(26) The sample was not analyzed on a second column.
(27) The presence of di-n-butyl phthalate may be due to laboratory contamination.
(28) This sample was analyzed outside of the required holding time per client request.
(29) The detection limit was raised due to the high background from matrix interferences.

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

L9404058

D&M LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES
3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 Fax: (707) 763-4065

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name DAMES & MOORE Phone (916) 387-7530
Address 8801 FOLSOM BLVD #200
City, State, Zip Sacramento, CA 95826
Client's or Representative's Signature
(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pick up samples.

PROJ. NO. 00173-080-044
PROJECT NAME UPRR GW-1 IRM O&M
SAMPLERS (Signature)

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH-D	BTEX 8010	Nickel	REMARKS	LAB USE ONLY LAB NO.
MW-4	4/7/94				GW-1 IRM	9	X	X	X		
MW-32	"				" "	9	X	X	X		
System Discharge	"				" "	9	X	X	X		

RECEIVED
DAMES & MOORE
94 APR -8 PM 4:03

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☑ N/A
COOLER TEMPERATURE COLD °C

24 VOAS-3-500ml Plastic (FedEX)

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
	4/7/94	1615	Christy Cockburn
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

General Remarks:
Please send results to Jim Bake in the Sac office.

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4833-4

Reported: 26-MAY-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF					
Nickel - EPA 7521	ND<	0.0050	mg/L	10-MAY-94	18-MAY-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4833-5

Reported: 26-MAY-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-GF							
Nickel - EPA 7521	0.0563	mg/L	.05	mg/L	112	10-MAY-94	18-MAY-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4833-1

Reported: 26-MAY-94

Parameter	Value	Limit	Units	Extracted	Analyzed
WATER-GF					
Nickel - EPA 7521	0.00840	0.00500	mg/L	10-MAY-94	18-MAY-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4833-2

Reported: 26-MAY-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
WATER-GF							
Nickel - EPA 7521	0.0549	mg/L	.05	mg/L	93	10-MAY-94	18-MAY-94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4833-3

Reported: 26-MAY-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
WATER-GF						
Nickel - EPA 7521	0.0563	mg/L	96	2.5	10-MAY-94	18-MAY-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4576-14

Reported: 17-MAY-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX-W					
Benzene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Ethyl Benzene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Toluene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Xylene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Gasoline	ND <	0.050	mg/L	09-MAY-94	09-MAY-94
-	-				
Surrogate:	-				
Bromofluorobenzene	113.	-	%	09-MAY-94	09-MAY-94
-	-				
Comments:	None				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4576-15

Reported: 17-MAY-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Benzene	26.6	ug/L	25	ug/L	106%	09-MAY-94	09-MAY-94
Ethyl Benzene	27.2	ug/L	25	ug/L	109%	09-MAY-94	09-MAY-94
Toluene	27.0	ug/L	25	ug/L	108%	09-MAY-94	09-MAY-94
Xylene	82.0	ug/L	75	ug/L	109%	09-MAY-94	09-MAY-94
Gasoline	0.920	mg/L	1	mg/L	92%	09-MAY-94	09-MAY-94
-	-						
Surrogate:	-						
Bromofluorobenzene	117.	%	25	ug/L		09-MAY-94	09-MAY-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4576-2

Reported: 17-MAY-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX-W							
Benzene	25.0	ug/L	25	ug/L	100%	28-APR-94	28-APR-94
Ethyl Benzene	24.7	ug/L	25	ug/L	98%	28-APR-94	28-APR-94
Toluene	24.4	ug/L	25	ug/L	97%	28-APR-94	28-APR-94
Xylene	69.2	ug/L	75	ug/L	92%	28-APR-94	28-APR-94
Gasoline	1.06	mg/L	1	mg/L	106%	28-APR-94	28-APR-94
-	-						
Surrogate:	-						
Bromofluorobenzene	100.	%	25	ug/L		28-APR-94	28-APR-94
-	-						
Comments:	MS = L9404142-2.						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4576-3

Reported: 17-MAY-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX-W						
Benzene	27.8	ug/L	111%	10.	29-APR-94	29-APR-94
Ethyl Benzene	27.9	ug/L	112%	12.	29-APR-94	29-APR-94
Toluene	27.0	ug/L	108%	10.	29-APR-94	29-APR-94
Xylene	78.9	ug/L	105%	13.	29-APR-94	29-APR-94
Gasoline	1.12	mg/L	112%	5.5	28-APR-94	28-APR-94
-	-					
Surrogate:	-					
Bromofluorobenzene	108.	%		25.	29-APR-94	29-APR-94
-	-					
Comments:	MSD = L9404142-2.					
-	-					
-	-					

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4576-1

Reported: 17-MAY-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX-W					
Benzene	ND <	0.50	ug/L	27-APR-94	27-APR-94
Ethyl Benzene	ND <	0.50	ug/L	27-APR-94	27-APR-94
Toluene	ND <	0.50	ug/L	27-APR-94	27-APR-94
Xylene	ND <	0.50	ug/L	27-APR-94	27-APR-94
Gasoline	ND <	0.050	mg/L	27-APR-94	27-APR-94
Surrogate: Bromofluorobenzene	117.	-	%	27-APR-94	27-APR-94
Comments:	MX = L9404142-2.				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG4698-4

Reported: 13-MAY-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010W					
Bromodichloromethane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Bromoform	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Bromomethane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Carbon Tetrachloride	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Chlorobenzene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Chloroethane	ND <	1.0	ug/L	09-MAY-94	09-MAY-94
Chloroform	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Chloromethane	ND <	1.0	ug/L	09-MAY-94	09-MAY-94
Dibromochloromethane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,1-Dichloroethane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloroethane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,1-Dichloroethene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,2-Dichloropropane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Methylene Chloride	ND <	1.0	ug/L	09-MAY-94	09-MAY-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Tetrachloroethene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Trichloroethene	ND <	0.50	ug/L	09-MAY-94	09-MAY-94
Trichlorofluoromethane	ND <	1.0	ug/L	09-MAY-94	09-MAY-94
Vinyl Chloride	ND <	1.0	ug/L	09-MAY-94	09-MAY-94
Surrogate:					
4-Bromofluorobenzene	100.	-	%	09-MAY-94	09-MAY-94

Comments: None

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG4698-5

Reported: 13-MAY-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010W-QC							
1,1-Dichloroethene	21.5	ug/L	20	ug/L	108 %	09-MAY-94	09-MAY-94
Trichloroethene	20.6	ug/L	20	ug/L	103 %	09-MAY-94	09-MAY-94
Chlorobenzene	21.4	ug/L	20	ug/L	107 %	09-MAY-94	09-MAY-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene	108.	%				09-MAY-94	09-MAY-94
-	-						
Comments:	-						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG4698-1

Reported: 13-MAY-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010W						
Bromodichloromethane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Bromoform	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Bromomethane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Carbon Tetrachloride	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Chlorobenzene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Chloroethane	ND	<	1.00	ug/L	10-MAY-94	10-MAY-94
Chloroform	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Chloromethane	ND	<	1.00	ug/L	10-MAY-94	10-MAY-94
Dibromochloromethane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,2-Dichlorobenzene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,3-Dichlorobenzene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,4-Dichlorobenzene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,1-Dichloroethane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,2-Dichloroethane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,1-Dichloroethene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,2-Dichloroethene (Total)	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,2-Dichloropropane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Cis-1,3-Dichloropropene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Trans-1,3-Dichloropropene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Methylene Chloride	ND	<	1.00	ug/L	10-MAY-94	10-MAY-94
1,1,2,2-Tetrachloroethane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Tetrachloroethene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,1,1-Trichloroethane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
1,1,2-Trichloroethane	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Trichloroethene	ND	<	0.500	ug/L	10-MAY-94	10-MAY-94
Trichlorofluoromethane	ND	<	1.00	ug/L	10-MAY-94	10-MAY-94
Vinyl Chloride	ND	<	1.00	ug/L	10-MAY-94	10-MAY-94
Surrogate:						
4-Bromofluorobenzene	90.0		-	%	10-MAY-94	10-MAY-94

Comments: MX=L9405078-1 (CC-BH1)

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG4698-2

Reported: 13-MAY-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010W-QC							
1,1-Dichloroethene	22.2	ug/L	20	ug/L	111 %	10-MAY-94	10-MAY-94
Trichloroethene	21.1	ug/L	20	ug/L	106 %	10-MAY-94	10-MAY-94
Chlorobenzene	21.8	ug/L	20	ug/L	109 %	10-MAY-94	10-MAY-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene	104.	%				10-MAY-94	10-MAY-94
-	-						
Comments:	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG4698-3

Reported: 13-MAY-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010W-QC						
1,1-Dichloroethene	21.9	ug/L	110 %	1.4	10-MAY-94	10-MAY-94
Trichloroethene	21.0	ug/L	105 %	0.50	10-MAY-94	10-MAY-94
Chlorobenzene	22.4	ug/L	112 %	2.7	10-MAY-94	10-MAY-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene	107.	%			10-MAY-94	10-MAY-94
-	-					
Comments:	-					

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

L9405058

D&M LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES
3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 Fax: (707) 763-4065

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name Dames & Moore / UPRR Phone (916) 387-7530
Address 8801 Folsom Blvd #200
City, State, Zip Sacramento, CA 95826
Client's or Representative's Signature
(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pick up samples.

PROJ. NO. 00173-080-044 | PROJECT NAME UPRR Sacramento
SAMPLERS (Signature)

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EPA 601 (or TPH-g, BTEX)	Boism	Nickel				REMARKS / LAB USE ONLY LAB NO.
MW-4	5/5/94			X	UPSAC GW-1 IRM	9	X	X	X				
MW-32	↓			X	" " "	6	X	X	X				1 VOA Received broken-C
System discharge	↓			X	" " "	6	X	X	X				1 VOA Received broken-C

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐ N/A
COOLER TEMPERATURE COLD °C

2-500ml poly / 16 VOAs (UPS Red)

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
	5/5/94	1400	Christy Cockleham
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

General Remarks: Please send results to Jim Brake in D&M Sac office.

PART ONE - CLIENT COPY

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-214X Union Pacific Railyard
Sample Id: MW-4
Lab Id: L9406095-1

Collected: 08-JUN-94
Received: 10-JUN-94
Reported: 23-JUN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GF,CV,FAA					
Nickel - EPA 7521	ND<	0.0050	mg/L	13-JUN-94	16-JUN-94
GAS/BTEX SOIL					
Gasoline	0.415	0.050	mg/L	14-JUN-94	14-JUN-94
-	-				
Surrogate:	-				
Bromofluorobenzene	64.3	-	%	14-JUN-94	14-JUN-94
-	-				
Comments:	None				
-	-				
-	-				
8010/8020					
Benzene	75.	2.5	ug/L	21-JUN-94	21-JUN-94
Bromodichloromethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Bromoform	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Bromomethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Carbon Tetrachloride	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chloroethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Chloroform	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chloromethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Dibromochloromethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1-Dichloroethane	2.9	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloroethane	1.8	0.50	ug/L	21-JUN-94	21-JUN-94
1,1-Dichloroethene	37.	2.5	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloropropane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Ethyl Benzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Methylene Chloride	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Tetrachloroethene	0.88	0.50	ug/L	21-JUN-94	21-JUN-94
Toluene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Trichloroethene	2.1	0.50	ug/L	21-JUN-94	21-JUN-94
Trichlorofluoromethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Vinyl Chloride	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Xylenes (Total)	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene (8010)	96.0	-	%	21-JUN-94	21-JUN-94
4-Bromofluorobenzene (8020)	100.	-	%	21-JUN-94	21-JUN-94
-	-				
Comments:	None				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-214X Union Pacific Railyard
Sample Id: MW-32
Lab Id: L9406095-2

Collected: 08-JUN-94
Received: 10-JUN-94
Reported: 23-JUN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GF,CV,FAA					
Nickel - EPA 7521	0.015	0.0050	mg/L	13-JUN-94	16-JUN-94
GAS/BTEX SOIL					
Gasoline	ND <	0.050	mg/L	14-JUN-94	14-JUN-94
Surrogate:					
Bromofluorobenzene	66.8	-	%	14-JUN-94	14-JUN-94
Comments:	None				
8010/8020					
Benzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Bromodichloromethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Bromoform	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Bromomethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Carbon Tetrachloride	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chloroethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Chloroform	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chloromethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Dibromochloromethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1-Dichloroethane	4.0	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloroethane	0.65	0.50	ug/L	21-JUN-94	21-JUN-94
1,1-Dichloroethene	39.	2.5	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloropropane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Ethyl Benzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Methylene Chloride	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Tetrachloroethene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Toluene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1,1-Trichloroethane	0.81	0.50	ug/L	21-JUN-94	21-JUN-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Trichloroethene	6.2	0.50	ug/L	21-JUN-94	21-JUN-94
Trichlorofluoromethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Vinyl Chloride	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Xylenes (Total)	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Surrogate:					
4-Bromofluorobenzene (8010)	90.0	-	%	21-JUN-94	21-JUN-94
4-Bromofluorobenzene (8020)	98.0	-	%	21-JUN-94	21-JUN-94
Comments:	None				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-214X Union Pacific Railyard
Sample Id: GW-1 SYSTEM DISCHARG
Lab Id: L9406095-3

Collected: 08-JUN-94
Received: 10-JUN-94
Reported: 23-JUN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GF,CV,FAA					
Nickel - EPA 7521	0.087	0.0050	mg/L	13-JUN-94	16-JUN-94
GAS/BTEX SOIL					
Gasoline	ND <	0.050	mg/L	14-JUN-94	14-JUN-94
-	-				
Surrogate:	-				
Bromofluorobenzene	68.0	-	%	14-JUN-94	14-JUN-94
-	-				
Comments:	None				
-	-				
-	-				
8010/8020					
Benzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Bromodichloromethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Bromoform	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Bromomethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Carbon Tetrachloride	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chloroethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Chloroform	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Chloromethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Dibromochloromethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1-Dichloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1-Dichloroethene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,2-Dichloropropane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Ethyl Benzene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Methylene Chloride	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Tetrachloroethene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Toluene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Trichloroethene	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
Trichlorofluoromethane	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Vinyl Chloride	ND <	1.0	ug/L	21-JUN-94	21-JUN-94
Xylenes (Total)	ND <	0.50	ug/L	21-JUN-94	21-JUN-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene (8010)	93.0	-	%	21-JUN-94	21-JUN-94
4-Bromofluorobenzene (8020)	104.	-	%	21-JUN-94	21-JUN-94
-	-				
Comments:	None				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5104-4

Reported: 17-JUN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GF,CV,FAA					
Nickel - EPA 7521	ND<	0.0050	mg/L	13-JUN-94	16-JUN-94
-	-				
Comments:	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5104-5

Reported: 17-JUN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GF,CV,FAA							
Nickel - EPA 7521	0.0540	mg/L	.05	mg/L	108%	13-JUN-94	16-JUN-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG5104-1

Reported: 17-JUN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GF,CV,FAA					
Nickel - EPA 7521	ND<	0.0050	mg/L	13-JUN-94	16-JUN-94
-	-				
Comments:	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG5104-2

Reported: 17-JUN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GF,CV,FAA							
Nickel - EPA 7521	0.0470	mg/L	.05	mg/L	94%	13-JUN-94	16-JUN-94
-	-						
Comments:	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG5104-3

Reported: 17-JUN-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GF,CV,FAA						
Nickel - EPA 7521	0.0510	mg/L	102%	8.2	13-JUN-94	16-JUN-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5056-4

Reported: 22-JUN-94

Parameter	Value		Limit	Units	Extracted	Analyzed
GAS/BTEX SOIL						
Benzene	ND	<	0.50	ug/L	14-JUN-94	14-JUN-94
Ethyl Benzene	ND	<	0.50	ug/L	14-JUN-94	14-JUN-94
Toluene	ND	<	0.50	ug/L	14-JUN-94	14-JUN-94
Xylene	ND	<	0.50	ug/L	14-JUN-94	14-JUN-94
Gasoline	ND	<	0.050	mg/L	14-JUN-94	14-JUN-94
-	-					
Surrogate:	-					
Bromofluorobenzene	70.5		-	%	14-JUN-94	14-JUN-94
-	-					
Comments:	None					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5056-5

Reported: 22-JUN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX SOIL							
Benzene	23.8	ug/L	25	ug/L	95.1%	14-JUN-94	14-JUN-94
Ethyl Benzene	24.7	ug/L	25	ug/L	99%	14-JUN-94	14-JUN-94
Toluene	24.2	ug/L	25	ug/L	96.9%	14-JUN-94	14-JUN-94
Xylene	72.7	ug/L	75	ug/L	97%	14-JUN-94	14-JUN-94
Gasoline	0.953	mg/L	1	mg/L	95.3%	14-JUN-94	14-JUN-94
-	-						
Surrogate:	-						
Bromofluorobenzene	68.0	%	25	ug/L	%	14-JUN-94	14-JUN-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5056-8

Reported: 22-JUN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX SOIL					
Benzene	ND <	0.50	ug/L	16-JUN-94	16-JUN-94
Ethyl Benzene	ND <	0.50	ug/L	16-JUN-94	16-JUN-94
Toluene	ND <	0.50	ug/L	16-JUN-94	16-JUN-94
Xylene	ND <	0.50	ug/L	16-JUN-94	16-JUN-94
Gasoline	ND <	0.050	mg/L	16-JUN-94	16-JUN-94
-	-				
Surrogate:	-				
Bromofluorobenzene	68.2	-	%	16-JUN-94	16-JUN-94
-	-				
Comments:	None				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5056-9

Reported: 22-JUN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX SOIL							
Benzene	23.2	ug/L	25	ug/L	93%	16-JUN-94	16-JUN-94
Ethyl Benzene	24.1	ug/L	25	ug/L	96.4%	16-JUN-94	16-JUN-94
Toluene	23.6	ug/L	25	ug/L	94.5%	16-JUN-94	16-JUN-94
Xylene	70.8	ug/L	75	ug/L	94.4%	16-JUN-94	16-JUN-94
Gasoline	0.852	mg/L	1	mg/L	85.2%	16-JUN-94	16-JUN-94
-	-						
Surrogate:	-						
Bromofluorobenzene	62.0	%	25	ug/L	%	16-JUN-94	16-JUN-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG5056-1

Reported: 22-JUN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX SOIL					
Benzene	ND <	0.50	ug/L	14-JUN-94	14-JUN-94
Ethyl Benzene	ND <	0.50	ug/L	14-JUN-94	14-JUN-94
Toluene	ND <	0.50	ug/L	14-JUN-94	14-JUN-94
Xylene	ND <	0.50	ug/L	14-JUN-94	14-JUN-94
Gasoline	ND <	0.050	mg/L	14-JUN-94	14-JUN-94
-	-				
Surrogate:	-				
Bromofluorobenzene	68.0	-	%	14-JUN-94	14-JUN-94
-	-				
Comments:	MX = sample # L9406095-2 for Gas				
-	MX = sample # L9406095-3 for BTEX				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG5056-2

Reported: 22-JUN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX SOIL							
Benzene	23.2	ug/L	25	ug/L	92.7%	14-JUN-94	14-JUN-94
Ethyl Benzene	23.7	ug/L	25	ug/L	94.7%	14-JUN-94	14-JUN-94
Toluene	23.4	ug/L	25	ug/L	93.4%	14-JUN-94	14-JUN-94
Xylene	69.6	ug/L	75	ug/L	92.8%	14-JUN-94	14-JUN-94
Gasoline	0.892	mg/L	1	mg/L	89.2%	14-JUN-94	14-JUN-94
-	-						
Surrogate:	-						
Bromofluorobenzene	58.2	%	25	ug/L	%	14-JUN-94	14-JUN-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG5056-3

Reported: 22-JUN-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX SOIL						
Benzene	24.4	ug/L	97.8%	5.0	14-JUN-94	14-JUN-94
Ethyl Benzene	25.2	ug/L	100.9%	6.1	14-JUN-94	14-JUN-94
Toluene	24.7	ug/L	98.8%	5.4	14-JUN-94	14-JUN-94
Xylene	73.9	ug/L	98.6%	6.0	14-JUN-94	14-JUN-94
Gasoline	0.946	mg/L	94.6%	1.5	14-JUN-94	14-JUN-94
-	-					
Surrogate:	-					
Bromofluorobenzene	54.0	%	%		14-JUN-94	14-JUN-94
-	-					
Comments:	None					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5152-4

Reported: 23-JUN-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020						
Benzene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Bromodichloromethane	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Bromoform	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Bromomethane	ND	<	1.0	ug/L	20-JUN-94	20-JUN-94
Carbon Tetrachloride	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Chlorobenzene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Chloroethane	ND	<	1.0	ug/L	20-JUN-94	20-JUN-94
Chloroform	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Chloromethane	ND	<	1.0	ug/L	20-JUN-94	20-JUN-94
Dibromochloromethane	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,1-Dichloroethane	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,2-Dichloroethane	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,1-Dichloroethene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,2-Dichloropropane	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Ethyl Benzene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Methylene Chloride	ND	<	1.0	ug/L	20-JUN-94	20-JUN-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Tetrachloroethene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Toluene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Trichloroethene	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
Trichlorofluoromethane	ND	<	1.0	ug/L	20-JUN-94	20-JUN-94
Vinyl Chloride	ND	<	1.0	ug/L	20-JUN-94	20-JUN-94
Xylenes (Total)	ND	<	0.50	ug/L	20-JUN-94	20-JUN-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	106.		-	%	20-JUN-94	20-JUN-94
4-Bromofluorobenzene (8020)	106.		-	%	20-JUN-94	20-JUN-94
-	-					
Comments:	None					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5152-5

Reported: 23-JUN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	22.4	ug/L	20	ug/L	112%	20-JUN-94	20-JUN-94
Trichloroethene	21.3	ug/L	20	ug/L	106%	20-JUN-94	20-JUN-94
Chlorobenzene-601	22.9	ug/L	20	ug/L	114%	20-JUN-94	20-JUN-94
Benzene	21.1	ug/L	20	ug/L	106%	20-JUN-94	20-JUN-94
Toluene	20.7	ug/L	20	ug/L	104%	20-JUN-94	20-JUN-94
Chlorobenzene-602	21.1	ug/L	20	ug/L	106%	20-JUN-94	20-JUN-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	106.	%			%	20-JUN-94	20-JUN-94
4-Bromofluorobenzene (8020)	106.	%			%	20-JUN-94	20-JUN-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG5152-1

Reported: 23-JUN-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020					
Benzene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Bromodichloromethane	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Bromoform	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Bromomethane	ND <	1.0	ug/L	20-JUN-94	20-JUN-94
Carbon Tetrachloride	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Chlorobenzene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Chloroethane	ND <	1.0	ug/L	20-JUN-94	20-JUN-94
Chloroform	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Chloromethane	ND <	1.0	ug/L	20-JUN-94	20-JUN-94
Dibromochloromethane	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,1-Dichloroethane	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,2-Dichloroethane	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,1-Dichloroethene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,2-Dichloropropane	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Ethyl Benzene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Methylene Chloride	ND <	1.0	ug/L	20-JUN-94	20-JUN-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Tetrachloroethene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Toluene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Trichloroethene	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
Trichlorofluoromethane	ND <	1.0	ug/L	20-JUN-94	20-JUN-94
Vinyl Chloride	ND <	1.0	ug/L	20-JUN-94	20-JUN-94
Xylenes (Total)	ND <	0.50	ug/L	20-JUN-94	20-JUN-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene (8010)	102.	-	%	20-JUN-94	20-JUN-94
4-Bromofluorobenzene (8020)	102.	-	%	20-JUN-94	20-JUN-94
-	-				
Comments:	MX=L9406075-3 (DM-1)				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG5152-2

Reported: 23-JUN-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	19.6	ug/L	20	ug/L	98%	20-JUN-94	20-JUN-94
Trichloroethene	18.9	ug/L	20	ug/L	94.5%	20-JUN-94	20-JUN-94
Chlorobenzene-601	20.0	ug/L	20	ug/L	100%	20-JUN-94	20-JUN-94
Benzene	20.4	ug/L	20	ug/L	102%	20-JUN-94	20-JUN-94
Toluene	20.2	ug/L	20	ug/L	101%	20-JUN-94	20-JUN-94
Chlorobenzene-602	20.6	ug/L	20	ug/L	103%	20-JUN-94	20-JUN-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	96.0	%			%	20-JUN-94	20-JUN-94
4-Bromofluorobenzene (8020)	103.	%			%	20-JUN-94	20-JUN-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG5152-3

Reported: 23-JUN-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010/8020-QC						
1,1-Dichloroethene	20.2	ug/L	101%	3.0	20-JUN-94	20-JUN-94
Trichloroethene	19.5	ug/L	97.5%	3.1	20-JUN-94	20-JUN-94
Chlorobenzene-601	21.0	ug/L	105%	4.9	20-JUN-94	20-JUN-94
Benzene	20.4	ug/L	102%	0.0	20-JUN-94	20-JUN-94
Toluene	20.2	ug/L	101%	0.0	20-JUN-94	20-JUN-94
Chlorobenzene-602	20.5	ug/L	102%	0.50	20-JUN-94	20-JUN-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	95.0	%	%		20-JUN-94	20-JUN-94
4-Bromofluorobenzene (8020)	101.	%	%		20-JUN-94	20-JUN-94
-	-					
Comments:	None					
-	None					

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

L9905075

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Date Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020	VOA 624/8240	Semi Vol 625/8270	PEST/PCB 8080	PNA 610/8310	DIESEL 8015M	TPHIDO 8015M	GAS/BTEX	Nickel	TPH 418.1	PH	RCRA METALS (8)	PP METALS (13)	TTLC METALS (17)	Asbestos	FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
MW-4	6/8/94		GW	6VOAs, 2-500ml plastic	X	X						X		X								8	
MW-32	"		GW	" "	X	X						X		X								8	
GW-1 SYSTEM DISCHARGE	"		GW	" "	X	X						X		X								8	
DP Trip Blank																						6	

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐ 6/9/94

COOLER TEMPERATURE 19°C °C

DP

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

RECEIVED
LABORATORY
JUN 10 AM 9 04

RELINQUISHED BY: (Signature) DATE/TIME 6/9/94 1000 RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES: 24 VOAs + 6-500ml. Plastic.
4DS RAD.

Clients Name: Dames & Moore
Address: 8801 Folsom Blvd #200
City, State, Zip: Sacramento, CA 95826
Phone: (916) 387-7530 Fax: (916) 387-0802
Laboratory Contact: DONNA DENNEY

D&M LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245
FAX: (707) 763-4065

JOB NO.: 00173-080-044-214X SHEET 1 OF 1

PROJECT UNION PACIFIC RAILYARD GW-1 Monthly O&M Monit.

LOCATION SACRAMENTO

COLLECTOR Jim Blake DATE OF COLLECTION 6/8/94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-214X Union Pacific Rail Yard
Sample Id: GW-1 EFF.
Lab Id: L9407073-1

Collected: 08-JUL-94
Received: 09-JUL-94
Reported: 03-AUG-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020					
Benzene	0.74	0.50	ug/L	21-JUL-94	21-JUL-94
Bromodichloromethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Bromoform	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Bromomethane	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Carbon Tetrachloride	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Chlorobenzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Chloroethane	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Chloroform	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Chloromethane	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Dibromochloromethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,1-Dichloroethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloroethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,1-Dichloroethene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloropropane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Ethyl Benzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Methylene Chloride	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Tetrachloroethene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Toluene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Trichloroethene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Trichlorofluoromethane	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Vinyl Chloride	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Xylenes (Total)	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene (8010)	72.0	-	%	21-JUL-94	21-JUL-94
4-Bromofluorobenzene (8020)	80.0	-	%	21-JUL-94	21-JUL-94
-	-				
Comments:	None.				
-	-				
Gasoline					
Gasoline	ND <	0.050	mg/L	13-JUL-94	13-JUL-94
-	-				
Surrogate	-				
4-Bromofluorobenzene	92.	-	%	13-JUL-94	13-JUL-94
-	-				
Comments:	None				
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.037	0.0050	mg/L	13-JUL-94	15-JUL-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-214X Union Pacific Rail Yard
Sample Id: MW-4
Lab Id: L9407073-2

Collected: 08-JUL-94
Received: 09-JUL-94
Reported: 03-AUG-94

Parameter	Value	Limit	Units	Extracted	Analyzed
8010/8020					
Benzene	88.	2.5	ug/L	21-JUL-94	21-JUL-94
Bromodichloromethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Bromoform	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Bromomethane	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Carbon Tetrachloride	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Chlorobenzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Chloroethane	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Chloroform	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Chloromethane	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Dibromochloromethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,1-Dichloroethane	3.2	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloroethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,1-Dichloroethene	39.	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloropropane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Ethyl Benzene	3.6	0.50	ug/L	21-JUL-94	21-JUL-94
Methylene Chloride	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Tetrachloroethene	1.0	0.50	ug/L	21-JUL-94	21-JUL-94
Toluene	12.	0.50	ug/L	21-JUL-94	21-JUL-94
1,1,1-Trichloroethane	1.1	0.50	ug/L	21-JUL-94	21-JUL-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Trichloroethene	ND <	0.50	ug/L	21-JUL-94	21-JUL-94
Trichlorofluoromethane	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Vinyl Chloride	ND <	1.0	ug/L	21-JUL-94	21-JUL-94
Xylenes (Total)	13.	0.50	ug/L	21-JUL-94	21-JUL-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene (8010)	80.0	-	%	21-JUL-94	21-JUL-94
4-Bromofluorobenzene (8020)	88.0	-	%	21-JUL-94	21-JUL-94
-	-				
Comments:	None.				
-	-				
Gasoline					
Gasoline	0.15	0.050	mg/L	13-JUL-94	13-JUL-94
-	-				
Surrogate	-				
4-Bromofluorobenzene	94.	-	%	13-JUL-94	13-JUL-94
-	-				
Comments:	None				
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.0080	0.0050	mg/L	13-JUL-94	15-JUL-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-214X Union Pacific Rail Yard
Sample Id: MW-32
Lab Id: L9407073-3

Collected: 08-JUL-94
Received: 09-JUL-94
Reported: 03-AUG-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020						
Benzene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Bromodichloromethane	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Bromoform	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Bromomethane	ND	<	1.0	ug/L	21-JUL-94	21-JUL-94
Carbon Tetrachloride	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Chlorobenzene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Chloroethane	ND	<	1.0	ug/L	21-JUL-94	21-JUL-94
Chloroform	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Chloromethane	ND	<	1.0	ug/L	21-JUL-94	21-JUL-94
Dibromochloromethane	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
1,1-Dichloroethane	3.8		0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloroethane	0.98		0.50	ug/L	21-JUL-94	21-JUL-94
1,1-Dichloroethene	44.		2.5	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
1,2-Dichloropropane	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Ethyl Benzene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Methylene Chloride	ND	<	1.0	ug/L	21-JUL-94	21-JUL-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Tetrachloroethene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Toluene	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
1,1,1-Trichloroethane	1.0		0.50	ug/L	21-JUL-94	21-JUL-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
Trichloroethene	4.9		0.50	ug/L	21-JUL-94	21-JUL-94
Trichlorofluoromethane	ND	<	1.0	ug/L	21-JUL-94	21-JUL-94
Vinyl Chloride	ND	<	1.0	ug/L	21-JUL-94	21-JUL-94
Xylenes (Total)	ND	<	0.50	ug/L	21-JUL-94	21-JUL-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	85.0		-	%	21-JUL-94	21-JUL-94
4-Bromofluorobenzene (8020)	88.0		-	%	21-JUL-94	21-JUL-94
-	-					
Comments:	None.					
-	-					
Gasoline						
Gasoline	ND	<	0.050	mg/L	13-JUL-94	13-JUL-94
-	-					
Surrogate	-					
4-Bromofluorobenzene	94.		-	%	13-JUL-94	13-JUL-94
-	-					
Comments:	None					
Metals by Graphite Furnace/Cold Vapor/Flame AA						
Nickel - EPA 7521	0.017		0.0050	mg/L	13-JUL-94	15-JUL-94

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-214X Union Pacific Rail Yard
Sample Id: TRIP BLANK
Lab Id: L9407073-4

Collected: 08-JUL-94
Received: 09-JUL-94
Reported: 03-AUG-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Gasoline					
Gasoline	ND <	0.050	mg/L	13-JUL-94	13-JUL-94
-	-				
Surrogate	-				
4-Bromofluorobenzene	-		%	13-JUL-94	13-JUL-94
-	-				
Comments:	None				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR, Sacramento
Sample Id: MW4
Lab Id: L9409118-1

Collected: 14-SEP-94
Received: 15-SEP-94
Reported: 29-SEP-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.017	0.0050	mg/L	20-SEP-94	21-SEP-94
-	-				
Comments:	-				
GAS/BTEX					
Benzene	84.	0.50	ug/L	20-SEP-94	20-SEP-94
Ethyl Benzene	3.5	0.50	ug/L	20-SEP-94	20-SEP-94
Toluene	11.	0.50	ug/L	20-SEP-94	20-SEP-94
Xylene	17.	0.50	ug/L	20-SEP-94	20-SEP-94
Gasoline	0.31	0.050	mg/L	20-SEP-94	20-SEP-94
-	-				
Surrogate:	-				
Bromofluorobenzene	91.9	-	%	20-SEP-94	20-SEP-94
-	-				
Comments:	None				
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Bromoform	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Bromomethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Carbon Tetrachloride	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chloroethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Chloroform	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chloromethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Dibromochloromethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1-Dichloroethane	2.4	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloroethane	2.1	0.50	ug/L	19-SEP-94	19-SEP-94
1,1-Dichloroethene	38.	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloropropane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Methylene Chloride	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Tetrachloroethene	0.70	0.50	ug/L	19-SEP-94	19-SEP-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Trichloroethene	1.6	0.50	ug/L	19-SEP-94	19-SEP-94
Trichlorofluoromethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Vinyl Chloride	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene	87.7	-	%	19-SEP-94	19-SEP-94
-	-				
Comments:	None				
-	-				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR, Sacramento
Sample Id: MW32
Lab Id: L9409118-2

Collected: 14-SEP-94
Received: 15-SEP-94
Reported: 29-SEP-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.016	0.0050	mg/L	20-SEP-94	21-SEP-94
-	-				
Comments:	-				
GAS/BTEX					
Benzene	ND <	0.50	ug/L	20-SEP-94	20-SEP-94
Ethyl Benzene	ND <	0.50	ug/L	20-SEP-94	20-SEP-94
Toluene	ND <	0.50	ug/L	20-SEP-94	20-SEP-94
Xylene	ND <	0.50	ug/L	20-SEP-94	20-SEP-94
Gasoline	ND <	0.050	mg/L	20-SEP-94	20-SEP-94
-	-				
Surrogate:	-				
Bromofluorobenzene	65.0	-	%	20-SEP-94	20-SEP-94
-	-				
Comments:	None				
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Bromoform	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Bromomethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Carbon Tetrachloride	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chloroethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Chloroform	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chloromethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Dibromochloromethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1-Dichloroethane	0.80	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1-Dichloroethene	19.	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloropropane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Methylene Chloride	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Tetrachloroethene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1,1-Trichloroethane	0.50	0.50	ug/L	19-SEP-94	19-SEP-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Trichloroethene	4.1	0.50	ug/L	19-SEP-94	19-SEP-94
Trichlorofluoromethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Vinyl Chloride	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene	81.5	-	%	19-SEP-94	19-SEP-94
-	-				
Comments:	None				
-	-				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR, Sacramento
Sample Id: TR
Lab Id: L9409118-3

Collected: 14-SEP-94
Received: 15-SEP-94
Reported: 29-SEP-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.017	0.0050	mg/L	20-SEP-94	21-SEP-94
-	-				
Comments:	-				
GAS/BTEX					
Benzene	0.52	0.50	ug/L	20-SEP-94	20-SEP-94
Ethyl Benzene	ND <	0.50	ug/L	20-SEP-94	20-SEP-94
Toluene	ND <	0.50	ug/L	20-SEP-94	20-SEP-94
Xylene	ND <	0.50	ug/L	20-SEP-94	20-SEP-94
Gasoline	ND <	0.050	mg/L	20-SEP-94	20-SEP-94
-	-				
Surrogate:	-				
Bromofluorobenzene	69.5	-	%	20-SEP-94	20-SEP-94
-	-				
Comments:	None				
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Bromoform	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Bromomethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Carbon Tetrachloride	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chloroethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Chloroform	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Chloromethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Dibromochloromethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1-Dichloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1-Dichloroethene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloropropane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Methylene Chloride	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Tetrachloroethene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Trichloroethene	ND <	0.50	ug/L	19-SEP-94	19-SEP-94
Trichlorofluoromethane	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
Vinyl Chloride	ND <	1.0	ug/L	19-SEP-94	19-SEP-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene	84.5	-	%	19-SEP-94	19-SEP-94
-	-				
Comments:	None				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5833-9

Reported: 23-SEP-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	ND<	0.0050	mg/L	20-SEP-94	21-SEP-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5833-10

Reported: 23-SEP-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521	0.0504	mg/L	.05	mg/L	101%	20-SEP-94	21-SEP-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG5833-6

Reported: 23-SEP-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.0182	0.0050	mg/L	20-SEP-94	21-SEP-94
Comments:	MX = 9104-1				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG5833-7

Reported: 23-SEP-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521	0.0800	mg/L	.05	mg/L	124%	20-SEP-94	21-SEP-94
-	-						
Comments:	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG5833-8

Reported: 23-SEP-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA						
Nickel - EPA 7521	0.0790	mg/L	122%	1.3	20-SEP-94	21-SEP-94
Comments:						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5709-8

Reported: 27-SEP-94

Parameter	Value		Limit	Units	Extracted	Analyzed
GAS/BTEX						
Benzene	ND	<	0.50	ug/L	20-SEP-94	20-SEP-94
Ethyl Benzene	ND	<	0.50	ug/L	20-SEP-94	20-SEP-94
Toluene	ND	<	0.50	ug/L	20-SEP-94	20-SEP-94
Xylene	ND	<	0.50	ug/L	20-SEP-94	20-SEP-94
Gasoline	ND	<	0.050	mg/L	20-SEP-94	20-SEP-94
-	-					
Surrogate:	-					
Bromofluorobenzene	105.		-	%	20-SEP-94	20-SEP-94
-	-					
Comments:	None					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5709-9

Reported: 27-SEP-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	26.	ug/L	25	ug/L	105%	20-SEP-94	20-SEP-94
Ethyl Benzene	26.	ug/L	25	ug/L	105%	20-SEP-94	20-SEP-94
Toluene	27.	ug/L	25	ug/L	106%	20-SEP-94	20-SEP-94
Xylene	81.	ug/L	75	ug/L	108%	20-SEP-94	20-SEP-94
Gasoline	0.99	mg/L	1	mg/L	98.8%	20-SEP-94	20-SEP-94
-	-						
Surrogate:	-						
Bromofluorobenzene	107.	%	25	ug/L		20-SEP-94	20-SEP-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG5709-1

Reported: 27-SEP-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX					
Benzene	ND <	0.50	ug/L	06-SEP-94	06-SEP-94
Ethyl Benzene	2.8	0.50	ug/L	06-SEP-94	06-SEP-94
Toluene	ND <	0.50	ug/L	06-SEP-94	06-SEP-94
Xylene	ND <	0.50	ug/L	06-SEP-94	06-SEP-94
Gasoline	ND <	0.050	mg/L	06-SEP-94	06-SEP-94
-	-				
Surrogate:	-				
Bromofluorobenzene	85.2	-	%	06-SEP-94	06-SEP-94
-	-				
Comments:	MX = Sample # L9408267-1.				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG5709-2

Reported: 27-SEP-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	16.0	ug/L	20	ug/L	79.8%	07-SEP-94	07-SEP-94
Ethyl Benzene	17.8	ug/L	20	ug/L	88%	07-SEP-94	07-SEP-94
Toluene	18.4	ug/L	20	ug/L	92%	07-SEP-94	07-SEP-94
Xylene	55.2	ug/L	60	ug/L	92.1%	07-SEP-94	07-SEP-94
Gasoline	0.969	mg/L	1	mg/L	96.9%	07-SEP-94	07-SEP-94
-	-						
Surrogate:	-						
Bromofluorobenzene	88.8	%	25	ug/L		07-SEP-94	07-SEP-94
-	-						
Comments:	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG5709-3

Reported: 27-SEP-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX						
Benzene	17.1	ug/L	85.6%	6.7	07-SEP-94	07-SEP-94
Ethyl Benzene	18.9	ug/L	94.5%	6.0	07-SEP-94	07-SEP-94
Toluene	17.8	ug/L	89%	3.3	07-SEP-94	07-SEP-94
Xylene	58.1	ug/L	96.8%	5.1	07-SEP-94	07-SEP-94
Gasoline	1.05	mg/L	105%	8.0	07-SEP-94	07-SEP-94
-	-					
Surrogate:	-					
Bromofluorobenzene	87.1	%			07-SEP-94	07-SEP-94
-	-					
Comments:	None					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5787-6

Reported: 23-SEP-94

Parameter	Value		Limit	Units	Extracted	Analyzed
Volatile Halogenated Hydrocarbons						
Bromodichloromethane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Bromoform	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Bromomethane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Carbon Tetrachloride	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Chlorobenzene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Chloroethane	ND	<	1.0	ug/L	19-SEP-94	19-SEP-94
Chloroform	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Chloromethane	ND	<	1.0	ug/L	19-SEP-94	19-SEP-94
Dibromochloromethane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,1-Dichloroethane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloroethane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,1-Dichloroethene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,2-Dichloropropane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Methylene Chloride	ND	<	1.0	ug/L	19-SEP-94	19-SEP-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Tetrachloroethene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Trichloroethene	ND	<	0.50	ug/L	19-SEP-94	19-SEP-94
Trichlorofluoromethane	ND	<	1.0	ug/L	19-SEP-94	19-SEP-94
Vinyl Chloride	ND	<	1.0	ug/L	19-SEP-94	19-SEP-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene	92.0		-	%	19-SEP-94	19-SEP-94
-	-					
Comments:	None					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5787-7

Reported: 23-SEP-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010-QC							
1,1-Dichloroethene	20.1	ug/L	20	ug/L	101%	19-SEP-94	19-SEP-94
Trichloroethene	19.1	ug/L	20	ug/L	95.5%	19-SEP-94	19-SEP-94
Chlorobenzene	21.0	ug/L	20	ug/L	105%	19-SEP-94	19-SEP-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene	92.6	%				19-SEP-94	19-SEP-94
-	-						
Comments:	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG5787-1

Reported: 23-SEP-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Bromoform	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Bromomethane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Carbon Tetrachloride	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Chlorobenzene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Chloroethane	ND <	1.0	ug/L	12-SEP-94	12-SEP-94
Chloroform	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Chloromethane	ND <	1.0	ug/L	12-SEP-94	12-SEP-94
Dibromochloromethane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,1-Dichloroethane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,2-Dichloroethane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,1-Dichloroethene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,2-Dichloropropane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Methylene Chloride	ND <	1.0	ug/L	12-SEP-94	12-SEP-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Tetrachloroethene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Trichloroethene	ND <	0.50	ug/L	12-SEP-94	12-SEP-94
Trichlorofluoromethane	ND <	1.0	ug/L	12-SEP-94	12-SEP-94
Vinyl Chloride	ND <	1.0	ug/L	12-SEP-94	12-SEP-94
Surrogate:					
4-Bromofluorobenzene	78.0	-	%	12-SEP-94	12-SEP-94

Comments: MX=L9409064-1 (MW-8)

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG5787-2

Reported: 23-SEP-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010-QC							
1,1-Dichloroethene	15.9	ug/L	20	ug/L	79.5%	13-SEP-94	13-SEP-94
Trichloroethene	15.9	ug/L	20	ug/L	79.5%	13-SEP-94	13-SEP-94
Chlorobenzene	17.1	ug/L	20	ug/L	85.5%	13-SEP-94	13-SEP-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene	68.0	%				13-SEP-94	13-SEP-94
-	-						
Comments:	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG5787-3

Reported: 23-SEP-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010-QC						
1,1-Dichloroethene	15.6	ug/L	78%	1.9	13-SEP-94	13-SEP-94
Trichloroethene	16.2	ug/L	81%	1.9	13-SEP-94	13-SEP-94
Chlorobenzene	17.6	ug/L	88%	2.9	13-SEP-94	13-SEP-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene	73.0	%			13-SEP-94	13-SEP-94
-	-					
Comments:	-					

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

CHAIN-OF-CUSTODY RECORD L94078

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020	VOA 624/8240	Semi Vol 625/8270	PEST/PCB 8080	PNA 610/8310	DIESEL 8015M	TPH/DO 8015M	GAS/BTEX	GT Metals-Ni	TPH 418.1	PH	RCRA METALS (8)	PP METALS (13)	TTLC METALS (17)	Asbestos	FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
MW4MET1		1400	water	500mL plastic									X								Metals-Ni Only		
MW4VOC1		1400	"	40mL VOA	X	X						X											
MW4VOC2		1400	"	"	X	X																	
MW4VOC3		1400	"	"	X	X																	
MW4VOC4		1400	"	"	X	X																	
MW32MET1		1400	"	500mL plastic								DO X	X										
MW32VOC1		1400	"	40mL VOA	X	X						X											
MW32VOC2		1400	"	"	X	X																	
MW32VOC3		1400	"	"	X	X																	
MW32VOC4		1400	"	"	X	X																	
TRMET1		1400	"	500ml plastic									X										
TRVOC1		1600	"	40 ml VOA	X	X						X											
TRVOC2		1400	"	"	X	X																	
TRVOC3		1400	"	"	X	X																	
TRVOC4		1400	"	"	X	X																	
TRIP Blank				LOT 090694	6	6															Hold		
TRIP Blank				LOT 090694																			
TRIP Blank				LOT 090694																	15 VOA's - 3 500ml plastic - UPS Red		

RECEIVED SEP 16 '94 DFS #6

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

Tex Hall DM 9/14/94/1630 9/15 10:05

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:

* Bubble

COOLER CUSTODY S

COOLER TEMPE

Quote # 7602

Monthly Monitoring Sampling
Treatment System
Gw-I On-Site Tim
00173-089-04

ICT VIA

ED IN GOOD CONDITION
LEAKING CONTAINERS

Clients Name: DMSAC

Address:

City, State, Zip:

Phone: Fax:

Laboratory Contact:

JOB NO.: UPRR, SAC 8

PROJECT ~~Gary Dickens~~

LOCATION SACRAMENTO

COLLECTOR Tex Lee DATE OF COLLECTION 9/14/94

SHEET 1 OF 1

AKE

D&M LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245
FAX: (707) 763-4065

L9410105

ACCULAB ENVIRONMENTAL SERVICES
3700 Lakeville Highway, Petaluma, CA 94952
P.O. Box 808024, Petaluma, CA, 94975-8024
Telephone: (707)763-8245 FAX: (707)763-4065

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name DAMES & MOORE Phone (916) 387-8800
Address 8801 FOLSOM BLVD. SUITE 200
City, State, Zip SACRAMENTO, CA 95826
Client's or Representative's Signature Kim Thomason
(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fail to pick up samples.

PROJ. NO. 00173-080-044 | PROJECT NAME UPRR-SAC.
SAMPLERS (Signature) Kim Thomason

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA-8010/BETX/TPHgas	POLY - Ni	VOA - 8010	REMARKS	LAB USE ONLY LAB NO.
[redacted]											
GW-1 EFFLUENT	10/10/94	1820		X		7	6	1			
MW-32	10/10/94	1835		X		7	6	1			
MW-4	10/10/94	1840		X		7	6	1			
MW-44	10/11/94	1433		X		4			4		
MW-44	10/12/94	1320		X		4			4		

RECEIVED BY LABORATORIES
1994 OCT 13 AM 9:45

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☒ N/A
COOLER TEMPERATURE [illegible] °C

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

26 VOA + 3 WA

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Kim Thomason	10/12/94	1625	Armin Wallace
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

General Remarks:
Voas preserved w/ HCL
500ml Plastic (Ni) preserved w/ HNO3

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR, Sacramento
Sample Id: GW-1 EFFLUENT
Lab Id: L9410105-1

Collected: 10-OCT-94
Received: 13-OCT-94
Reported: 24-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.0082	0.0050	mg/L	19-OCT-94	19-OCT-94
Comments:					
Gasoline					
Gasoline	ND <	0.050	mg/L	17-OCT-94	17-OCT-94
Surrogate					
4-Bromofluorobenzene	97.	-	%	17-OCT-94	17-OCT-94
Comments:	None				
8010/8020					
Benzene	0.60	0.50	ug/L	18-OCT-94	18-OCT-94
Bromodichloromethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Bromoform	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Bromomethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Carbon Tetrachloride	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Chlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Chloroethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Chloroform	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Chloromethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Dibromochloromethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloropropane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Ethyl Benzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Methylene Chloride	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Tetrachloroethene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Toluene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trichloroethene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trichlorofluoromethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Vinyl Chloride	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Xylenes (Total)	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Surrogate:					
4-Bromofluorobenzene (8010)	89.4	-	%	18-OCT-94	18-OCT-94
4-Bromofluorobenzene (8020)	107.	-	%	18-OCT-94	18-OCT-94
Comments:	None.				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR, Sacramento
Sample Id: MW-32
Lab Id: L9410105-2

Collected: 10-OCT-94
Received: 13-OCT-94
Reported: 24-OCT-94

Parameter		Value		Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521		0.018		0.0050	mg/L	19-OCT-94	19-OCT-94
-	-						
Comments:	-						
Gasoline							
Gasoline		ND	<	0.050	mg/L	17-OCT-94	17-OCT-94
-	-						
Surrogate	-						
4-Bromofluorobenzene		98.	-		%	17-OCT-94	17-OCT-94
-	-						
Comments:	None						
8010/8020							
Benzene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Bromodichloromethane		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Bromoform		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Bromomethane		ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Carbon Tetrachloride		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chlorobenzene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chloroethane		ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Chloroform		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chloromethane		ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Dibromochloromethane		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichlorobenzene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,3-Dichlorobenzene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,4-Dichlorobenzene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethane		2.0		0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethane		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethene		26.		0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethene (Total)		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloropropane		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Cis-1,3-Dichloropropene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Trans-1,3-Dichloropropene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Ethyl Benzene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Methylene Chloride		ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
1,1,2,2-Tetrachloroethane		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Tetrachloroethene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Toluene		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,1-Trichloroethane		0.86		0.50	ug/L	18-OCT-94	18-OCT-94
1,1,2-Trichloroethane		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Trichloroethene		6.3		0.50	ug/L	18-OCT-94	18-OCT-94
Trichlorofluoromethane		ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Vinyl Chloride		ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Xylenes (Total)		ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)		79.7	-		%	18-OCT-94	18-OCT-94
4-Bromofluorobenzene (8020)		102.	-		%	18-OCT-94	18-OCT-94
-	-						
Comments:	None.						
-	-						
-	-						
-	-						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR, Sacramento
Sample Id: MW-4
Lab Id: L9410105-3

Collected: 10-OCT-94
Received: 13-OCT-94
Reported: 24-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.025	0.0050	mg/L	19-OCT-94	19-OCT-94
Comments:					
Gasoline					
Gasoline	0.43	0.050	mg/L	17-OCT-94	17-OCT-94
Surrogate					
4-Bromofluorobenzene	99.	-	%	17-OCT-94	17-OCT-94
Comments:	None				
8010/8020					
Benzene	110	2.5	ug/L	18-OCT-94	18-OCT-94
Bromodichloromethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Bromoform	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Bromomethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Carbon Tetrachloride	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Chlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Chloroethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Chloroform	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Chloromethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Dibromochloromethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethane	2.4	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethane	2.5	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethene	39.	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloropropane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Ethyl Benzene	7.4	0.50	ug/L	18-OCT-94	18-OCT-94
Methylene Chloride	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Tetrachloroethene	1.2	0.50	ug/L	18-OCT-94	18-OCT-94
Toluene	12.	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,1-Trichloroethane	1.3	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trichloroethene	2.8	0.50	ug/L	18-OCT-94	18-OCT-94
Trichlorofluoromethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Vinyl Chloride	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Xylenes (Total)	15.	0.50	ug/L	18-OCT-94	18-OCT-94
Surrogate:					
4-Bromofluorobenzene (8010)	83.4	-	%	18-OCT-94	18-OCT-94
4-Bromofluorobenzene (8020)	96.6	-	%	18-OCT-94	18-OCT-94
Comments:	None.				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR, Sacramento
Sample Id: MW-44/ 1433
Lab Id: L9410105-4

Collected: 11-OCT-94
Received: 13-OCT-94
Reported: 19-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Bromoform	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Bromomethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Carbon Tetrachloride	5.9	0.50	ug/L	18-OCT-94	18-OCT-94
Chlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Chloroethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Chloroform	3.4	0.50	ug/L	18-OCT-94	18-OCT-94
Chloromethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Dibromochloromethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethane	2.2	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethene	1.5	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloropropane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Methylene Chloride	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Tetrachloroethene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trichloroethene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trichlorofluoromethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Vinyl Chloride	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene	84.7	-	%	18-OCT-94	18-OCT-94
-	-				
Comments:	None				
-	-				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044 UPRR, Sacramento
Sample Id: MW-44/ 1320
Lab Id: L9410105-5

Collected: 12-OCT-94
Received: 13-OCT-94
Reported: 19-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Bromoform	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Bromomethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Carbon Tetrachloride	6.1	0.50	ug/L	18-OCT-94	18-OCT-94
Chlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Chloroethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Chloroform	3.3	0.50	ug/L	18-OCT-94	18-OCT-94
Chloromethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Dibromochloromethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethane	2.1	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethene	1.3	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloropropane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Methylene Chloride	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Tetrachloroethene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trichloroethene	ND <	0.50	ug/L	18-OCT-94	18-OCT-94
Trichlorofluoromethane	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Vinyl Chloride	ND <	1.0	ug/L	18-OCT-94	18-OCT-94
Surrogate: 4-Bromofluorobenzene	88.9	-	%	18-OCT-94	18-OCT-94

Comments: None

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6013-4

Reported: 20-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	ND<	0.0050	mg/L	19-OCT-94	19-OCT-94
-	-				
Comments:	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6013-5

Reported: 20-OCT-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521	0.0580	mg/L	.05	mg/L	116%	19-OCT-94	19-OCT-94
-	-						
Comments:	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG6013-1

Reported: 20-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.00819	0.0050	mg/L	19-OCT-94	19-OCT-94
-	-				
Comments:	MX = L9410105-1				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG6013-2

Reported: 20-OCT-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521	0.0538	mg/L	.05	mg/L	91%	19-OCT-94	19-OCT-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG6013-3

Reported: 20-OCT-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA						
Nickel - EPA 7521	0.0568	mg/L	97%	5.4	19-OCT-94	19-OCT-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5995-4

Reported: 18-OCT-94

Parameter	Value		Limit	Units	Extracted	Analyzed
GAS/BTEX						
Benzene	ND	<	0.50	ug/L	13-OCT-94	13-OCT-94
Ethyl Benzene	ND	<	0.50	ug/L	13-OCT-94	13-OCT-94
Toluene	ND	<	0.50	ug/L	13-OCT-94	13-OCT-94
Xylene	ND	<	0.50	ug/L	13-OCT-94	13-OCT-94
Gasoline	ND	<	0.050	mg/L	13-OCT-94	13-OCT-94
-	-					
Surrogate:	-					
Bromofluorobenzene	98.6	-		%	13-OCT-94	13-OCT-94
-	-					
Comments:	None					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5995-5

Reported: 18-OCT-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	23.	ug/L	25	ug/L	91.4%	13-OCT-94	13-OCT-94
Ethyl Benzene	24.	ug/L	25	ug/L	94.8%	13-OCT-94	13-OCT-94
Toluene	23.	ug/L	25	ug/L	92.9%	13-OCT-94	13-OCT-94
Xylene	74.	ug/L	75	ug/L	98%	13-OCT-94	13-OCT-94
Gasoline	0.99	mg/L	1	mg/L	98.5%	13-OCT-94	13-OCT-94
-	-						
Surrogate:	-						
Bromofluorobenzene	103.	%	25	ug/L	103%	13-OCT-94	13-OCT-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5995-6

Reported: 18-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX					
Benzene	ND <	0.50	ug/L	14-OCT-94	14-OCT-94
Ethyl Benzene	ND <	0.50	ug/L	14-OCT-94	14-OCT-94
Toluene	ND <	0.50	ug/L	14-OCT-94	14-OCT-94
Xylene	ND <	0.50	ug/L	14-OCT-94	14-OCT-94
Gasoline	ND <	0.050	mg/L	14-OCT-94	14-OCT-94
-	-				
Surrogate:	-				
Bromofluorobenzene	75.9	-	%	14-OCT-94	14-OCT-94
-	-				
Comments:	None				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5995-7

Reported: 18-OCT-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	25.	ug/L	25	ug/L	99.3%		
Ethyl Benzene	25.	ug/L	25	ug/L	101%		
Toluene	25.	ug/L	25	ug/L	99.6%		
Xylene	78.	ug/L	75	ug/L	104%		
Gasoline	0.93	mg/L	1	mg/L	93.1%		
-	-						
Surrogate:	-						
Bromofluorobenzene	84.4	%	25	ug/L	84.4%		
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5995-8

Reported: 18-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX					
Benzene	ND <	0.50	ug/L	17-OCT-94	17-OCT-94
Ethyl Benzene	ND <	0.50	ug/L	17-OCT-94	17-OCT-94
Toluene	ND <	0.50	ug/L	17-OCT-94	17-OCT-94
Xylene	ND <	0.50	ug/L	17-OCT-94	17-OCT-94
Gasoline	ND <	0.050	mg/L	17-OCT-94	17-OCT-94
-	-				
Surrogate:	-				
Bromofluorobenzene	101.	-	%	17-OCT-94	17-OCT-94
-	-				
Comments:	None				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5995-9

Reported: 18-OCT-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	24.	ug/L	25	ug/L	94%	17-OCT-94	17-OCT-94
Ethyl Benzene	24.	ug/L	25	ug/L	95.8%	17-OCT-94	17-OCT-94
Toluene	24.	ug/L	25	ug/L	95.6%	17-OCT-94	17-OCT-94
Xylene	74.	ug/L	75	ug/L	99%	17-OCT-94	17-OCT-94
Gasoline	1.0	mg/L	1	mg/L	100%	17-OCT-94	17-OCT-94
-	-						
Surrogate:							
Bromofluorobenzene	104.	%	25	ug/L	104%	17-OCT-94	17-OCT-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG5995-1

Reported: 18-OCT-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX					
Benzene	ND <	0.50	ug/L	13-OCT-94	13-OCT-94
Ethyl Benzene	ND <	0.50	ug/L	13-OCT-94	13-OCT-94
Toluene	ND <	0.50	ug/L	13-OCT-94	13-OCT-94
Xylene	ND <	0.50	ug/L	13-OCT-94	13-OCT-94
Gasoline	ND <	0.050	mg/L	13-OCT-94	13-OCT-94
-	-				
Surrogate:	-				
Bromofluorobenzene	100.	-	%	13-OCT-94	13-OCT-94
-	-				
Comments:	None				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG5995-2

Reported: 18-OCT-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	25.	ug/L	25	ug/L	99.4%	14-OCT-94	14-OCT-94
Ethyl Benzene	24.	ug/L	25	ug/L	93.5%	14-OCT-94	14-OCT-94
Toluene	24.	ug/L	25	ug/L	94.2%	14-OCT-94	14-OCT-94
Xylene	69.	ug/L	75	ug/L	92%	14-OCT-94	14-OCT-94
Gasoline	0.98	mg/L	1	mg/L	98%	14-OCT-94	14-OCT-94
-	-						
Surrogate:	-						
Bromofluorobenzene	105.	%	25	ug/L	105%	14-OCT-94	14-OCT-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG5995-3

Reported: 18-OCT-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX						
Benzene	25.	ug/L	100%	0.40	14-OCT-94	14-OCT-94
Ethyl Benzene	23.	ug/L	93.5%	0.40	14-OCT-94	14-OCT-94
Toluene	24.	ug/L	94.2%	0.0	14-OCT-94	14-OCT-94
Xylene	68.	ug/L	90.4%	1.8	14-OCT-94	14-OCT-94
Gasoline	0.97	mg/L	96.6%	1.4	14-OCT-94	14-OCT-94
-	-					
Surrogate:	-					
Bromofluorobenzene	106.	%	106%		14-OCT-94	14-OCT-94
-	-					
Comments:	None					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG5987-4

Reported: 19-OCT-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020						
Benzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Bromodichloromethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Bromoform	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Bromomethane	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Carbon Tetrachloride	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chlorobenzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chloroethane	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Chloroform	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chloromethane	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Dibromochloromethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloropropane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Ethyl Benzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Methylene Chloride	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Tetrachloroethene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Toluene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Trichloroethene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Trichlorofluoromethane	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Vinyl Chloride	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Xylenes (Total)	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	98.8	-		%	18-OCT-94	18-OCT-94
4-Bromofluorobenzene (8020)	100.	-		%	18-OCT-94	18-OCT-94
-	-					
Comments:	None.					
-	-					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG5987-5

Reported: 19-OCT-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	19.7	ug/L	20	ug/L	98.7%	18-OCT-94	18-OCT-94
Trichloroethene	18.3	ug/L	20	ug/L	91.7%	18-OCT-94	18-OCT-94
Chlorobenzene-601	19.5	ug/L	20	ug/L	97.7%	18-OCT-94	18-OCT-94
Benzene	18.8	ug/L	20	ug/L	94.1%	18-OCT-94	18-OCT-94
Toluene	19.3	ug/L	20	ug/L	96.7%	18-OCT-94	18-OCT-94
Chlorobenzene-602	19.3	ug/L	20	ug/L	96.5%	18-OCT-94	18-OCT-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	98.8	%				18-OCT-94	18-OCT-94
4-Bromofluorobenzene (8020)	100.	%				18-OCT-94	18-OCT-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG5987-1

Reported: 19-OCT-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020						
Benzene	0.60		0.50	ug/L	18-OCT-94	18-OCT-94
Bromodichloromethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Bromoform	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Bromomethane	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Carbon Tetrachloride	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chlorobenzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chloroethane	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Chloroform	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Chloromethane	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Dibromochloromethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1-Dichloroethene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,2-Dichloropropane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Ethyl Benzene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Methylene Chloride	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Tetrachloroethene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Toluene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Trichloroethene	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
Trichlorofluoromethane	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Vinyl Chloride	ND	<	1.0	ug/L	18-OCT-94	18-OCT-94
Xylenes (Total)	ND	<	0.50	ug/L	18-OCT-94	18-OCT-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	89.4		-	%	18-OCT-94	18-OCT-94
4-Bromofluorobenzene (8020)	107.		-	%	18-OCT-94	18-OCT-94
-	-					
Comments:	MX = L9410105-1 (GW-1 EFFLUENT)					
-	-					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG5987-2

Reported: 19-OCT-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	22.6	ug/L	20	ug/L	113%	18-OCT-94	18-OCT-94
Trichloroethene	20.3	ug/L	20	ug/L	101%	18-OCT-94	18-OCT-94
Chlorobenzene-601	22.2	ug/L	20	ug/L	111%	18-OCT-94	18-OCT-94
Benzene	21.2	ug/L	20	ug/L	103%	18-OCT-94	18-OCT-94
Toluene	21.3	ug/L	20	ug/L	106%	18-OCT-94	18-OCT-94
Chlorobenzene-602	21.4	ug/L	20	ug/L	107%	18-OCT-94	18-OCT-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	97.4	%				18-OCT-94	18-OCT-94
4-Bromofluorobenzene (8020)	97.5	%				18-OCT-94	18-OCT-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG5987-3

Reported: 19-OCT-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010/8020-QC						
1,1-Dichloroethene	22.1	ug/L	110%	2.5	18-OCT-94	18-OCT-94
Trichloroethene	19.6	ug/L	98%	3.3	18-OCT-94	18-OCT-94
Chlorobenzene-601	22.0	ug/L	110%	1.2	18-OCT-94	18-OCT-94
Benzene	23.2	ug/L	113%	8.8	18-OCT-94	18-OCT-94
Toluene	23.0	ug/L	115%	7.9	18-OCT-94	18-OCT-94
Chlorobenzene-602	23.1	ug/L	115%	7.5	18-OCT-94	18-OCT-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	109.	%			18-OCT-94	18-OCT-94
4-Bromofluorobenzene (8020)	116.	%			18-OCT-94	18-OCT-94
-	-					
Comments:	None					
-	None					

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

L9410105

ACCULAB ENVIRONMENTAL SERVICES
3700 Lakeville Highway, Petaluma, CA 94952
P.O. Box 808024, Petaluma, CA, 94975-8024
Telephone: (707)763-8245 FAX: (707)763-4065

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name DAMES & MOORE Phone (916) 387-8800
Address 8801 FOLSOM BLVD. SUITE 200
City, State, Zip SACRAMENTO, CA 95826
Client's or Representative's Signature Kim Thomason
(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pick up samples.

PROJ. NO. 00173-080-044 | PROJECT NAME UPRR-SAC.
SAMPLERS (Signature) Kim Thomason

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA-8010/BTEX/THMs	POLY-Ni	VOA-8010	REMARKS	LAB USE ONLY LAB #
[illegible]											
GW-1 EFFLUENT	10/10/94	1820		X		7	6	1			
MW-32	10/10/94	1835		X		7	6	1			
MW-4	10/10/94	1840		X		7	6	1			
MW-44	10/11/94	1433		X		4			4		
MW-44	10/12/94	1320		X		4			4		

RECEIVED D&M LABORATORIES 1994 OCT 13 AM 9:45

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☑ N/A
COOLER TEMPERATURE 4.0 °C

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

26 VOA + 3 WA

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Kim Thomason	10/12/94	1625	Jeanni Wallace
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

General Remarks:
VOAs preserved w/ HCL
500ml Plastic (Ni) preserved w/ HNO3

CLIENT COPY

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-3343-044 Sacto
Sample Id: EW-1
Lab Id: L9411076-1

Collected: 08-NOV-94
Received: 09-NOV-94
Reported: 21-NOV-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	ND<	0.0050	mg/L	14-NOV-94	15-NOV-94
Comments:	-				
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Bromoform	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Bromomethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Carbon Tetrachloride	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Chlorobenzene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Chloroethane	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
Chloroform	1.3	0.50	ug/L	14-NOV-94	14-NOV-94
Chloromethane	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
Dibromochloromethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethane	7.8	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethene	13.	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloropropane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Methylene Chloride	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Tetrachloroethene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Trichloroethene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Trichlorofluoromethane	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
Vinyl Chloride	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
Surrogate:					
4-Bromofluorobenzene	109.	-	%	14-NOV-94	14-NOV-94
Comments:	None				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-3343-044 Sacto
Sample Id: MW-32
Lab Id: L9411076-2

Collected: 08-NOV-94
Received: 09-NOV-94
Reported: 21-NOV-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.014	0.0050	mg/L	14-NOV-94	15-NOV-94
-	-				
Comments:	-				
GAS/BTEX					
Benzene	ND <	0.50	ug/L	10-NOV-94	10-NOV-94
Ethyl Benzene	ND <	0.50	ug/L	10-NOV-94	10-NOV-94
Toluene	ND <	0.50	ug/L	10-NOV-94	10-NOV-94
Xylene	ND <	0.50	ug/L	10-NOV-94	10-NOV-94
Gasoline	ND <	0.050	mg/L	10-NOV-94	10-NOV-94
-	-				
Surrogate:	-				
Bromofluorobenzene	78.7	-	%	10-NOV-94	10-NOV-94
-	-				
Comments:	None				
-	-				
-	-				
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Bromoform	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Bromomethane	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Carbon Tetrachloride	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Chlorobenzene	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Chloroethane	ND <	1.0	ug/L	17-NOV-94	17-NOV-94
Chloroform	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Chloromethane	ND <	1.0	ug/L	17-NOV-94	17-NOV-94
Dibromochloromethane	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
1,1-Dichloroethane	1.4	0.50	ug/L	17-NOV-94	17-NOV-94
1,2-Dichloroethane	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
1,1-Dichloroethene	25.	0.50	ug/L	17-NOV-94	17-NOV-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
1,2-Dichloropropane	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Methylene Chloride	ND <	1.0	ug/L	17-NOV-94	17-NOV-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Tetrachloroethene	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	17-NOV-94	17-NOV-94
Trichloroethene	5.4	0.50	ug/L	17-NOV-94	17-NOV-94
Trichlorofluoromethane	ND <	1.0	ug/L	17-NOV-94	17-NOV-94
Vinyl Chloride	ND <	1.0	ug/L	17-NOV-94	17-NOV-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene	99.3	-	%	17-NOV-94	17-NOV-94
-	-				
Comments:	None				
-	-				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-3343-044 Sacto
Sample Id: MW-4
Lab Id: L9411076-3

Collected: 08-NOV-94
Received: 09-NOV-94
Reported: 21-NOV-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.022	0.0050	mg/L	14-NOV-94	15-NOV-94
Comments:	-				
GAS/BTEX					
Benzene	96.	0.50	ug/L	10-NOV-94	10-NOV-94
Ethyl Benzene	4.5	0.50	ug/L	10-NOV-94	10-NOV-94
Toluene	13.	0.50	ug/L	10-NOV-94	10-NOV-94
Xylene	17.	0.50	ug/L	10-NOV-94	10-NOV-94
Gasoline	0.47	0.050	mg/L	10-NOV-94	10-NOV-94
Surrogate:					
Bromofluorobenzene	87.1	-	%	10-NOV-94	10-NOV-94
Comments:	None				
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Bromoform	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Bromomethane	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Carbon Tetrachloride	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Chlorobenzene	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Chloroethane	ND <	1.0	ug/L	15-NOV-94	15-NOV-94
Chloroform	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Chloromethane	ND <	1.0	ug/L	15-NOV-94	15-NOV-94
Dibromochloromethane	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
1,1-Dichloroethane	3.8	0.50	ug/L	15-NOV-94	15-NOV-94
1,2-Dichloroethane	3.3	0.50	ug/L	15-NOV-94	15-NOV-94
1,1-Dichloroethene	33.	2.5	ug/L	15-NOV-94	15-NOV-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
1,2-Dichloropropane	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Methylene Chloride	ND <	1.0	ug/L	15-NOV-94	15-NOV-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Tetrachloroethene	1.1	0.50	ug/L	15-NOV-94	15-NOV-94
1,1,1-Trichloroethane	0.62	0.50	ug/L	15-NOV-94	15-NOV-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	15-NOV-94	15-NOV-94
Trichloroethene	2.6	0.50	ug/L	15-NOV-94	15-NOV-94
Trichlorofluoromethane	ND <	1.0	ug/L	15-NOV-94	15-NOV-94
Vinyl Chloride	ND <	1.0	ug/L	15-NOV-94	15-NOV-94
Surrogate:					
4-Bromofluorobenzene	117.	-	%	15-NOV-94	15-NOV-94
Comments:	None				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-3343-044 Sacto
Sample Id: GW-1-EFF
Lab Id: L9411076-4

Collected: 08-NOV-94
Received: 09-NOV-94
Reported: 21-NOV-94

Parameter		Value		Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521		ND<		0.0050	mg/L	14-NOV-94	15-NOV-94
-	-						
Comments:	-						
GAS/BTEX							
Benzene		ND <		0.50	ug/L	10-NOV-94	10-NOV-94
Ethyl Benzene		ND <		0.50	ug/L	10-NOV-94	10-NOV-94
Toluene		ND <		0.50	ug/L	10-NOV-94	10-NOV-94
Xylene		ND <		0.50	ug/L	10-NOV-94	10-NOV-94
Gasoline		ND <		0.050	mg/L	10-NOV-94	10-NOV-94
-	-						
Surrogate:	-						
Bromofluorobenzene		90.1	-		%	10-NOV-94	10-NOV-94
-	-						
Comments:	None						
-	-						
-	-						
Volatile Halogenated Hydrocarbons							
Bromodichloromethane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Bromoform		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Bromomethane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Carbon Tetrachloride		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Chlorobenzene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Chloroethane		ND <		1.0	ug/L	14-NOV-94	14-NOV-94
Chloroform		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Chloromethane		ND <		1.0	ug/L	14-NOV-94	14-NOV-94
Dibromochloromethane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichlorobenzene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,3-Dichlorobenzene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,4-Dichlorobenzene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethene (Total)		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloropropane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Cis-1,3-Dichloropropene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Trans-1,3-Dichloropropene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Methylene Chloride		ND <		1.0	ug/L	14-NOV-94	14-NOV-94
1,1,2,2-Tetrachloroethane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Tetrachloroethene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,1,1-Trichloroethane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
1,1,2-Trichloroethane		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Trichloroethene		ND <		0.50	ug/L	14-NOV-94	14-NOV-94
Trichlorofluoromethane		ND <		1.0	ug/L	14-NOV-94	14-NOV-94
Vinyl Chloride		ND <		1.0	ug/L	14-NOV-94	14-NOV-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene		117.	-		%	14-NOV-94	14-NOV-94
-	-						
Comments:	None						
-	-						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-3343-044 Sacto
Sample Id: TRIP BLANK
Lab Id: L9411076-5

Collected: 08-NOV-94
Received: 09-NOV-94
Reported: 21-NOV-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Volatile Halogenated Hydrocarbons					
Bromodichloromethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Bromoform	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Bromomethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Carbon Tetrachloride	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Chlorobenzene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Chloroethane	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
Chloroform	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Chloromethane	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
Dibromochloromethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloropropane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Methylene Chloride	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Tetrachloroethene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Trichloroethene	ND <	0.50	ug/L	14-NOV-94	14-NOV-94
Trichlorofluoromethane	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
Vinyl Chloride	ND <	1.0	ug/L	14-NOV-94	14-NOV-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene	84.2	-	%	14-NOV-94	14-NOV-94
-	-				
Comments:	None				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6300-9

Reported: 16-NOV-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	ND<	0.0050	mg/L	14-NOV-94	15-NOV-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6300-10

Reported: 16-NOV-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521	0.0488	mg/L	.05	mg/L	98%	14-NOV-94	15-NOV-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG6300-6

Reported: 16-NOV-94

Parameter	Value	Limit	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	ND<	0.0050	mg/L	14-NOV-94	15-NOV-94
Comments:	MX = L9411050-1				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG6300-7

Reported: 16-NOV-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521	0.0464	mg/L	.05	mg/L	93%	14-NOV-94	15-NOV-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG6300-8

Reported: 16-NOV-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA						
Nickel - EPA 7521	0.0469	mg/L	94%	11.	14-NOV-94	15-NOV-94

Comments:

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6288-4

Reported: 15-NOV-94

Parameter	Value		Limit	Units	Extracted	Analyzed
GAS/BTEX						
Benzene	ND	<	0.50	ug/L	09-NOV-94	09-NOV-94
Ethyl Benzene	ND	<	0.50	ug/L	09-NOV-94	09-NOV-94
Toluene	ND	<	0.50	ug/L	09-NOV-94	09-NOV-94
Xylene	ND	<	0.50	ug/L	09-NOV-94	09-NOV-94
Gasoline	ND	<	0.050	mg/L	09-NOV-94	09-NOV-94
-	-					
Surrogate:	-					
Bromofluorobenzene	90.6		-	%	09-NOV-94	09-NOV-94
-	-					
Comments:	None					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6288-7

Reported: 15-NOV-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	22.	ug/L	25	ug/L	86.4%	10-NOV-94	10-NOV-94
Ethyl Benzene	23.	ug/L	25	ug/L	90.3%	10-NOV-94	10-NOV-94
Toluene	23.	ug/L	25	ug/L	90.3%	10-NOV-94	10-NOV-94
Xylene	68.	ug/L	75	ug/L	90.2%	10-NOV-94	10-NOV-94
Gasoline	1.1	mg/L	1	mg/L	108%	10-NOV-94	10-NOV-94
-	-						
Surrogate:	-						
Bromofluorobenzene	92.8	%	25	ug/L	92.8%	10-NOV-94	10-NOV-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG6288-1

Reported: 21-NOV-94

Parameter	Value	Limit	Units	Extracted	Analyzed
GAS/BTEX					
Benzene	ND <	0.50	ug/L	10-NOV-94	10-NOV-94
Ethyl Benzene	ND <	0.50	ug/L	10-NOV-94	10-NOV-94
Toluene	ND <	0.50	ug/L	10-NOV-94	10-NOV-94
Xylene	ND <	0.50	ug/L	10-NOV-94	10-NOV-94
Gasoline	ND <	0.050	mg/L	10-NOV-94	10-NOV-94
Surrogate: Bromofluorobenzene	91.6	-	%	10-NOV-94	10-NOV-94
Comments:	MX=Laboratory Water				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG6288-2

Reported: 15-NOV-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	21.	ug/L	25	ug/L	83.9%	10-NOV-94	10-NOV-94
Ethyl Benzene	22.	ug/L	25	ug/L	87.1%	10-NOV-94	10-NOV-94
Toluene	22.	ug/L	25	ug/L	87.5%	10-NOV-94	10-NOV-94
Xylene	66.	ug/L	75	ug/L	87.8%	10-NOV-94	10-NOV-94
Gasoline	1.1	mg/L	1	mg/L	107%	10-NOV-94	10-NOV-94
-	-						
Surrogate:	-						
Bromofluorobenzene	92.2	%	25	ug/L	92.2%	10-NOV-94	10-NOV-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG6288-3

Reported: 15-NOV-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX						
Benzene	21.	ug/L	84.5%	0.50	10-NOV-94	10-NOV-94
Ethyl Benzene	22.	ug/L	97.6%	0.50	10-NOV-94	10-NOV-94
Toluene	22.	ug/L	87.9%	0.40	10-NOV-94	10-NOV-94
Xylene	66.	ug/L	88.1%	1.1	10-NOV-94	10-NOV-94
Gasoline	1.1	mg/L	107%	0.0	10-NOV-94	10-NOV-94
-	-					
Surrogate:						
Bromofluorobenzene	93.2	%	93.2%		10-NOV-94	10-NOV-94
-	-					
Comments:	None					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6280-4

Reported: 17-NOV-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020						
Benzene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Bromodichloromethane	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Bromoform	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Bromomethane	ND	<	1.0	ug/L	15-NOV-94	15-NOV-94
Carbon Tetrachloride	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Chlorobenzene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Chloroethane	ND	<	1.0	ug/L	15-NOV-94	15-NOV-94
Chloroform	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Chloromethane	ND	<	1.0	ug/L	15-NOV-94	15-NOV-94
Dibromochloromethane	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,1-Dichloroethane	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,2-Dichloroethane	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,1-Dichloroethene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,2-Dichloropropane	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Ethyl Benzene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Methylene Chloride	ND	<	1.0	ug/L	15-NOV-94	15-NOV-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Tetrachloroethene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Toluene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Trichloroethene	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
Trichlorofluoromethane	ND	<	1.0	ug/L	15-NOV-94	15-NOV-94
Vinyl Chloride	ND	<	1.0	ug/L	15-NOV-94	15-NOV-94
Xylenes (Total)	ND	<	0.50	ug/L	15-NOV-94	15-NOV-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	84.1		-	%	15-NOV-94	15-NOV-94
4-Bromofluorobenzene (8020)	99.5		-	%	15-NOV-94	15-NOV-94
-	-					
Comments:	None.					
-	-					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6280-5

Reported: 17-NOV-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	21.4	ug/L	20	ug/L	107%	15-NOV-94	15-NOV-94
Trichloroethene	21.2	ug/L	20	ug/L	106%	15-NOV-94	15-NOV-94
Chlorobenzene-601	21.3	ug/L	20	ug/L	106%	15-NOV-94	15-NOV-94
Benzene	21.8	ug/L	20	ug/L	109%	15-NOV-94	15-NOV-94
Toluene	21.7	ug/L	20	ug/L	108%	15-NOV-94	15-NOV-94
Chlorobenzene-602	21.7	ug/L	20	ug/L	108%	15-NOV-94	15-NOV-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	102.	%				15-NOV-94	15-NOV-94
4-Bromofluorobenzene (8020)	107.	%				15-NOV-94	15-NOV-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6280-6

Reported: 17-NOV-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020						
Benzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Bromodichloromethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Bromoform	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Bromomethane	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Carbon Tetrachloride	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Chlorobenzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Chloroethane	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Chloroform	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Chloromethane	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Dibromochloromethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloropropane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Ethyl Benzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Methylene Chloride	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Tetrachloroethene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Toluene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Trichloroethene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Trichlorofluoromethane	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Vinyl Chloride	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Xylenes (Total)	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	81.1		-	%	14-NOV-94	14-NOV-94
4-Bromofluorobenzene (8020)	101.		-	%	14-NOV-94	14-NOV-94
-	-					
Comments:	None.					
-	-					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6280-7

Reported: 17-NOV-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	21.8	ug/L	20	ug/L	109%	14-NOV-94	14-NOV-94
Trichloroethene	21.3	ug/L	20	ug/L	106%	14-NOV-94	14-NOV-94
Chlorobenzene-601	23.9	ug/L	20	ug/L	119%	14-NOV-94	14-NOV-94
Benzene	18.3	ug/L	20	ug/L	91.6%	14-NOV-94	14-NOV-94
Toluene	18.6	ug/L	20	ug/L	92.8%	14-NOV-94	14-NOV-94
Chlorobenzene-602	18.9	ug/L	20	ug/L	94.4%	14-NOV-94	14-NOV-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	100.	%				14-NOV-94	14-NOV-94
4-Bromofluorobenzene (8020)	95.9	%				14-NOV-94	14-NOV-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6280-8

Reported: 18-NOV-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020						
Benzene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Bromodichloromethane	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Bromoform	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Bromomethane	ND	<	1.0	ug/L	17-NOV-94	17-NOV-94
Carbon Tetrachloride	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Chlorobenzene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Chloroethane	ND	<	1.0	ug/L	17-NOV-94	17-NOV-94
Chloroform	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Chloromethane	ND	<	1.0	ug/L	17-NOV-94	17-NOV-94
Dibromochloromethane	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,1-Dichloroethane	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,2-Dichloroethane	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,1-Dichloroethene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,2-Dichloropropane	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Ethyl Benzene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Methylene Chloride	ND	<	1.0	ug/L	17-NOV-94	17-NOV-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Tetrachloroethene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Toluene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Trichloroethene	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
Trichlorofluoromethane	ND	<	1.0	ug/L	17-NOV-94	17-NOV-94
Vinyl Chloride	ND	<	1.0	ug/L	17-NOV-94	17-NOV-94
Xylenes (Total)	ND	<	0.50	ug/L	17-NOV-94	17-NOV-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	82.3		-	%	17-NOV-94	17-NOV-94
4-Bromofluorobenzene (8020)	106.		-	%	17-NOV-94	17-NOV-94
-	-					
Comments:	None.					
-	-					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6280-9

Reported: 18-NOV-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	19.4	ug/L	20	ug/L	96.8%	17-NOV-94	17-NOV-94
Trichloroethene	18.5	ug/L	20	ug/L	92.6%	17-NOV-94	17-NOV-94
Chlorobenzene-601	18.5	ug/L	20	ug/L	92.6%	17-NOV-94	17-NOV-94
Benzene	21.6	ug/L	20	ug/L	108%	17-NOV-94	17-NOV-94
Toluene	21.6	ug/L	20	ug/L	108%	17-NOV-94	17-NOV-94
Chlorobenzene-602	21.6	ug/L	20	ug/L	108%	17-NOV-94	17-NOV-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	94.2	%				17-NOV-94	17-NOV-94
4-Bromofluorobenzene (8020)	112.	%				17-NOV-94	17-NOV-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG6280-1

Reported: 17-NOV-94

Parameter	Value		Limit	Units	Extracted	Analyzed
8010/8020						
Benzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Bromodichloromethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Bromoform	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Bromomethane	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Carbon Tetrachloride	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Chlorobenzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Chloroethane	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Chloroform	1.3		0.50	ug/L	14-NOV-94	14-NOV-94
Chloromethane	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Dibromochloromethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethane	7.8		0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,1-Dichloroethene	13.		0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,2-Dichloropropane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Ethyl Benzene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Methylene Chloride	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Tetrachloroethene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Toluene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Trichloroethene	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
Trichlorofluoromethane	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Vinyl Chloride	ND	<	1.0	ug/L	14-NOV-94	14-NOV-94
Xylenes (Total)	ND	<	0.50	ug/L	14-NOV-94	14-NOV-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	109.		-	%	14-NOV-94	14-NOV-94
4-Bromofluorobenzene (8020)	95.0		-	%	14-NOV-94	14-NOV-94
-	-					
Comments:	MX = L9411076-1 (EW-1)					
-	-					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG6280-2

Reported: 17-NOV-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	30.9	ug/L	20	ug/L	90%	15-NOV-94	15-NOV-94
Trichloroethene	18.8	ug/L	20	ug/L	94.2%	15-NOV-94	15-NOV-94
Chlorobenzene-601	16.7	ug/L	20	ug/L	83.4%	15-NOV-94	15-NOV-94
Benzene	21.5	ug/L	20	ug/L	108%	15-NOV-94	15-NOV-94
Toluene	21.1	ug/L	20	ug/L	106%	15-NOV-94	15-NOV-94
Chlorobenzene-602	21.5	ug/L	20	ug/L	107%	15-NOV-94	15-NOV-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	106.	%				15-NOV-94	15-NOV-94
4-Bromofluorobenzene (8020)	106.	%				15-NOV-94	15-NOV-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG6280-3

Reported: 17-NOV-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010/8020-QC						
1,1-Dichloroethene	28.2	ug/L	76.5%	9.2	15-NOV-94	15-NOV-94
Trichloroethene	17.0	ug/L	85.2%	10.	15-NOV-94	15-NOV-94
Chlorobenzene-601	17.5	ug/L	87.7%	5.1	15-NOV-94	15-NOV-94
Benzene	19.2	ug/L	96%	11.	15-NOV-94	15-NOV-94
Toluene	19.4	ug/L	96.9%	8.7	15-NOV-94	15-NOV-94
Chlorobenzene-602	19.4	ug/L	97.1%	10.	15-NOV-94	15-NOV-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	106.	%			15-NOV-94	15-NOV-94
4-Bromofluorobenzene (8020)	106.	%			15-NOV-94	15-NOV-94
-	-					
Comments:	None					
-	None					

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (MS) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

L 94 110 16

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

11/9 kb

Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020	VOA 624/8240	Semi Vol 625/8270	PEST/PCB 8080	PNA 610/8310	DIESEL 8015M	TPHID/Q 8015M	GAS/BTEX (8020) 8010	TPH 418.1	PH	RCRA METALS (8)	PP METALS (13)	TTLC METALS (17)	Asbestos	Ni	FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
EW-1		1430	H_2O	4 VOA's									X									4	
EW-1		1430		1 POLY															X			1	
MW-32		1435		4 VOA's									X									4	
MW-32		1435		1 POLY															X			1	
MW-4		1447		4 VOA's									X									4	
MW-4		1447		1 POLY															X			1	
GW-1-EFF		1455		4 VOA's									X									4	
GW-1-EFF		1455	↓	1 POLY															X			1	

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☑ NA

COOLER TEMPERATURE 2 °C

RECEIVED
NOV - 9 AM 8:21
1994
DEPT. OF ENVIRONMENTAL REGULATORY AGENCIES

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	
Kim Thomason	11/8/94 1630	GL	11/9/94 9:30
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	

LABORATORY NOTES:

QUOT # 7602

11/9/94 Analysis above clarified per phone msg from Kim Thomason DS

Clients Name: DAMES & MOORE
Address: 8801 FOLSOM BLVD., SUITE #200
City, State, Zip: SACRAMENTO, CA 95826
Phone: (916) 387-8800 Fax: (916) 387-0802
Laboratory Contact: DONNA DENNEY

DCM LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES
3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245
FAX: (707) 763-4065

JOB NO.: 00173-080-3343-044 SHEET 1 OF 1

PROJECT UP SAC

LOCATION SACTO

COLLECTOR KIM THOMASON DATE OF COLLECTION 11/8/94

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG6362-1

Reported: 12-DEC-94

Parameter	Value	RDL	Units	Extracted	Analyzed
GAS/BTEX					
Benzene	ND <	0.50	ug/L	21-NOV-94	21-NOV-94
Ethyl Benzene	ND <	0.50	ug/L	21-NOV-94	21-NOV-94
Toluene	ND <	0.50	ug/L	21-NOV-94	21-NOV-94
Xylene	ND <	0.50	ug/L	21-NOV-94	21-NOV-94
Gasoline	ND <	0.050	mg/L	21-NOV-94	21-NOV-94
-	-				
Surrogate:	-				
Bromofluorobenzene	113.	-	%	21-NOV-94	21-NOV-94
-	-				
Comments:	MX= Laboratory Water				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6362-9

Reported: 12-DEC-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	26.	ug/L	25	ug/L	102.%	09-DEC-94	09-DEC-94
Ethyl Benzene	27.	ug/L	25	ug/L	108.%	09-DEC-94	09-DEC-94
Toluene	26.	ug/L	25	ug/L	104.%	09-DEC-94	09-DEC-94
Xylene	82.	ug/L	75	ug/L	109.%	09-DEC-94	09-DEC-94
Gasoline	1.0	mg/L	1	mg/L	104.%	09-DEC-94	09-DEC-94
-	-						
Surrogate:	-						
Bromofluorobenzene	115.	%				09-DEC-94	09-DEC-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6362-8

Reported: 12-DEC-94

Parameter	Value		RDL	Units	Extracted	Analyzed
GAS/BTEX						
Benzene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Ethyl Benzene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Toluene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Xylene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Gasoline	ND	<	0.050	mg/L	09-DEC-94	09-DEC-94
-	-					
Surrogate:	-					
Bromofluorobenzene	105.		-	%	09-DEC-94	09-DEC-94
-	-					
Comments:	None					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG6362-2

Reported: 12-DEC-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
GAS/BTEX							
Benzene	28.	ug/L	25	ug/L	110.%	22-NOV-94	22-NOV-94
Ethyl Benzene	28.	ug/L	25	ug/L	110.%	22-NOV-94	22-NOV-94
Toluene	28.	ug/L	25	ug/L	110.%	22-NOV-94	22-NOV-94
Xylene	83.	ug/L	75	ug/L	111.%	22-NOV-94	22-NOV-94
Gasoline	1.1	mg/L	1	mg/L	109.%	22-NOV-94	22-NOV-94
-	-						
Surrogate:	-						
Bromofluorobenzene	118.	%				22-NOV-94	22-NOV-94
-	-						
Comments:	None						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG6362-3

Reported: 12-DEC-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
GAS/BTEX						
Benzene	29.	ug/L	115.%	3.2	22-NOV-94	22-NOV-94
Ethyl Benzene	28.	ug/L	112.%	2.2	22-NOV-94	22-NOV-94
Toluene	28.	ug/L	111.%	0.72	22-NOV-94	22-NOV-94
Xylene	85.	ug/L	113.%	2.0	22-NOV-94	22-NOV-94
Gasoline	1.1	mg/L	108.%	0.92	22-NOV-94	22-NOV-94
-	-					
Surrogate:	-					
Bromofluorobenzene	119.	%			22-NOV-94	22-NOV-94
-	-					
Comments:	None					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6511-4

Reported: 15-DEC-94

Parameter	Value	RDL	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	ND<	0.0050	mg/L	09-DEC-94	15-DEC-94
-	-				
Comments:	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6511-5

Reported: 15-DEC-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521	0.0569	mg/L	.05	mg/L	114.%	09-DEC-94	15-DEC-94
-	-						
Comments:	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG6511-1

Reported: 15-DEC-94

Parameter	Value	RDL	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.0089	0.0050	mg/L	09-DEC-94	15-DEC-94
Comments:	MX = L9412041-1.				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG6511-2

Reported: 15-DEC-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521	0.0692	mg/L	.05	mg/L	121.%	09-DEC-94	15-DEC-94
-	-						
Comments:	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG6511-3

Reported: 15-DEC-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA						
Nickel - EPA 7521	0.0688	mg/L	120.%	0.58	09-DEC-94	15-DEC-94
-	-					
Comments:	-					

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-3343
Sample Id: MW-4
Lab Id: L9412076-1

Collected: 07-DEC-94
Received: 08-DEC-94
Reported: 16-DEC-94

Parameter		Value		RDL	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA							
Nickel - EPA 7521		0.030		0.0050	mg/L	09-DEC-94	15-DEC-94
-	-						
Comments:	-						
Gasoline							
Gasoline		0.43		0.050	mg/L	09-DEC-94	09-DEC-94
-	-						
Surrogate	-						
4-Bromofluorobenzene		97.4	-		%	09-DEC-94	09-DEC-94
-	-						
Comments:	None						
8010/8020							
Benzene		94.		2.5	ug/L	09-DEC-94	09-DEC-94
Bromodichloromethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Bromoform		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Bromomethane		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Carbon Tetrachloride		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Chlorobenzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Chloroethane		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Chloroform		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Chloromethane		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Dibromochloromethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichlorobenzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,3-Dichlorobenzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,4-Dichlorobenzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,1-Dichloroethane		3.4		0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloroethane		2.9		0.50	ug/L	10-DEC-94	10-DEC-94
1,1-Dichloroethene		33.		0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloroethene (Total)		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloropropane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Cis-1,3-Dichloropropene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Trans-1,3-Dichloropropene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Ethyl Benzene		4.5		0.50	ug/L	10-DEC-94	10-DEC-94
Methylene Chloride		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
1,1,2,2-Tetrachloroethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Tetrachloroethene		1.4		0.50	ug/L	10-DEC-94	10-DEC-94
Toluene		12.		0.50	ug/L	10-DEC-94	10-DEC-94
1,1,1-Trichloroethane		1.0		0.50	ug/L	10-DEC-94	10-DEC-94
1,1,2-Trichloroethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Trichloroethene		2.5		0.50	ug/L	10-DEC-94	10-DEC-94
Trichlorofluoromethane		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Vinyl Chloride		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Xylenes (Total)		16.		0.50	ug/L	10-DEC-94	10-DEC-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)		79.6	-		%	10-DEC-94	10-DEC-94
4-Bromofluorobenzene (8020)		93.4	-		%	10-DEC-94	10-DEC-94
-	-						
Comments:	None.						
-	-						
-	-						
-	-						

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-3343
Sample Id: EW-1
Lab Id: L9412076-2

Collected: 07-DEC-94
Received: 08-DEC-94
Reported: 16-DEC-94

Parameter	Value	RDL	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	ND<	0.0050	mg/L	09-DEC-94	15-DEC-94
-	-				
Comments:	-				
Gasoline					
Gasoline	ND <	0.050	mg/L	09-DEC-94	09-DEC-94
-	-				
Surrogate	-				
4-Bromofluorobenzene	109.	-	%	09-DEC-94	09-DEC-94
-	-				
Comments:	None				
8010/8020					
Benzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Bromodichloromethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Bromoform	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Bromomethane	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Carbon Tetrachloride	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Chlorobenzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Chloroethane	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Chloroform	1.5	0.50	ug/L	09-DEC-94	09-DEC-94
Chloromethane	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Dibromochloromethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,1-Dichloroethane	6.1	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,1-Dichloroethene	11.	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloropropane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Ethyl Benzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Methylene Chloride	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Tetrachloroethene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Toluene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Trichloroethene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Trichlorofluoromethane	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Vinyl Chloride	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Xylenes (Total)	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene (8010)	70.2	-	%	09-DEC-94	09-DEC-94
4-Bromofluorobenzene (8020)	83.4	-	%	09-DEC-94	09-DEC-94
-	-				
Comments:	None.				
-	-				
-	-				
-	-				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-3343
Sample Id: MW-32
Lab Id: L9412076-3

Collected: 07-DEC-94
Received: 08-DEC-94
Reported: 16-DEC-94

Parameter	Value	RDL	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.022	0.0050	mg/L	09-DEC-94	15-DEC-94
Comments:	-				
Gasoline					
Gasoline	ND <	0.050	mg/L	09-DEC-94	09-DEC-94
Surrogate					
4-Bromofluorobenzene	111.	-	%	09-DEC-94	09-DEC-94
Comments:	None				
8010/8020					
Benzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Bromodichloromethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Bromoform	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Bromomethane	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Carbon Tetrachloride	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Chlorobenzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Chloroethane	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Chloroform	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Chloromethane	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Dibromochloromethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,1-Dichloroethane	4.2	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloroethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,1-Dichloroethene	39.	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloropropane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Ethyl Benzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Methylene Chloride	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Tetrachloroethene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Toluene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,1,1-Trichloroethane	0.93	0.50	ug/L	10-DEC-94	10-DEC-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Trichloroethene	6.5	0.50	ug/L	10-DEC-94	10-DEC-94
Trichlorofluoromethane	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Vinyl Chloride	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Xylenes (Total)	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Surrogate:					
4-Bromofluorobenzene (8010)	71.6	-	%	10-DEC-94	10-DEC-94
4-Bromofluorobenzene (8020)	80.8	-	%	10-DEC-94	10-DEC-94
Comments:	None.				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-3343
Sample Id: GW1-EFF
Lab Id: L9412076-4

Collected: 07-DEC-94
Received: 08-DEC-94
Reported: 16-DEC-94

Parameter	Value	RDL	Units	Extracted	Analyzed
Metals by Graphite Furnace/Cold Vapor/Flame AA					
Nickel - EPA 7521	0.010	0.0050	mg/L	09-DEC-94	15-DEC-94
Comments:	-				
Gasoline					
Gasoline	ND <	0.050	mg/L	09-DEC-94	09-DEC-94
Surrogate					
4-Bromofluorobenzene	113.	-	%	09-DEC-94	09-DEC-94
Comments:	None				
8010/8020					
Benzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Bromodichloromethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Bromoform	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Bromomethane	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Carbon Tetrachloride	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Chlorobenzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Chloroethane	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Chloroform	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Chloromethane	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Dibromochloromethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,1-Dichloroethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloroethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,1-Dichloroethene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloropropane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Ethyl Benzene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Methylene Chloride	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Tetrachloroethene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Toluene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Trichloroethene	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Trichlorofluoromethane	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Vinyl Chloride	ND <	1.0	ug/L	10-DEC-94	10-DEC-94
Xylenes (Total)	ND <	0.50	ug/L	10-DEC-94	10-DEC-94
Surrogate:					
4-Bromofluorobenzene (8010)	77.3	-	%	10-DEC-94	10-DEC-94
4-Bromofluorobenzene (8020)	88.5	-	%	10-DEC-94	10-DEC-94
Comments:	None.				

D&M Laboratories

ANALYTICAL DATA REPORT

Prepared for: Dames & Moore-Sacramento
Project Id: 00173-080-044-3343
Sample Id: TRIP BLANK
Lab Id: L9412076-5

Collected: 07-DEC-94
Received: 08-DEC-94
Reported: 16-DEC-94

Parameter		Value		RDL	Units	Extracted	Analyzed
Gasoline							
Gasoline		ND	<	0.050	mg/L	09-DEC-94	09-DEC-94
-	-						
Surrogate	-						
4-Bromofluorobenzene		113.	-		%	09-DEC-94	09-DEC-94
-	-						
Comments:	None						
8010/8020							
Benzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Bromodichloromethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Bromoform		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Bromomethane		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Carbon Tetrachloride		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Chlorobenzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Chloroethane		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Chloroform		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Chloromethane		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Dibromochloromethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichlorobenzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,3-Dichlorobenzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,4-Dichlorobenzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,1-Dichloroethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloroethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,1-Dichloroethene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloroethene (Total)		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,2-Dichloropropane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Cis-1,3-Dichloropropene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Trans-1,3-Dichloropropene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Ethyl Benzene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Methylene Chloride		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
1,1,2,2-Tetrachloroethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Tetrachloroethene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Toluene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,1,1-Trichloroethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
1,1,2-Trichloroethane		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Trichloroethene		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
Trichlorofluoromethane		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Vinyl Chloride		ND	<	1.0	ug/L	10-DEC-94	10-DEC-94
Xylenes (Total)		ND	<	0.50	ug/L	10-DEC-94	10-DEC-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)		76.2	-		%	10-DEC-94	10-DEC-94
4-Bromofluorobenzene (8020)		89.6	-		%	10-DEC-94	10-DEC-94
-	-						
Comments:	None.						
-	-						
-	-						
-	-						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank
Lab Id: WG6481-4

Reported: 16-DEC-94

Parameter	Value		RDL	Units	Extracted	Analyzed
8010/8020						
Benzene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Bromodichloromethane	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Bromoform	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Bromomethane	ND	<	1.0	ug/L	09-DEC-94	09-DEC-94
Carbon Tetrachloride	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Chlorobenzene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Chloroethane	ND	<	1.0	ug/L	09-DEC-94	09-DEC-94
Chloroform	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Chloromethane	ND	<	1.0	ug/L	09-DEC-94	09-DEC-94
Dibromochloromethane	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichlorobenzene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,3-Dichlorobenzene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,4-Dichlorobenzene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,1-Dichloroethane	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloroethane	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,1-Dichloroethene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloroethene (Total)	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloropropane	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Cis-1,3-Dichloropropene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Trans-1,3-Dichloropropene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Ethyl Benzene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Methylene Chloride	ND	<	1.0	ug/L	09-DEC-94	09-DEC-94
1,1,2,2-Tetrachloroethane	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Tetrachloroethene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Toluene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,1,1-Trichloroethane	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
1,1,2-Trichloroethane	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Trichloroethene	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
Trichlorofluoromethane	ND	<	1.0	ug/L	09-DEC-94	09-DEC-94
Vinyl Chloride	ND	<	1.0	ug/L	09-DEC-94	09-DEC-94
Xylenes (Total)	ND	<	0.50	ug/L	09-DEC-94	09-DEC-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	88.3	-		%	09-DEC-94	09-DEC-94
4-Bromofluorobenzene (8020)	98.4	-		%	09-DEC-94	09-DEC-94
-	-					
Comments:	None.					
-	-					
-	-					
-	-					

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Method Blank Spike
Lab Id: WG6481-5

Reported: 16-DEC-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	18.4	ug/L	20	ug/L	92.%	09-DEC-94	09-DEC-94
Trichloroethene	17.8	ug/L	20	ug/L	89.%	09-DEC-94	09-DEC-94
Chlorobenzene-601	19.4	ug/L	20	ug/L	97.%	09-DEC-94	09-DEC-94
Benzene	20.4	ug/L	20	ug/L	102.%	09-DEC-94	09-DEC-94
Toluene	20.6	ug/L	20	ug/L	103.%	09-DEC-94	09-DEC-94
Chlorobenzene-602	20.9	ug/L	20	ug/L	105.%	09-DEC-94	09-DEC-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	91.4	%				09-DEC-94	09-DEC-94
4-Bromofluorobenzene (8020)	102.	%				09-DEC-94	09-DEC-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: MX
Lab Id: WG6481-1

Reported: 16-DEC-94

Parameter	Value	RDL	Units	Extracted	Analyzed
8010/8020					
Benzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Bromodichloromethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Bromoform	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Bromomethane	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Carbon Tetrachloride	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Chlorobenzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Chloroethane	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Chloroform	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Chloromethane	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Dibromochloromethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichlorobenzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,3-Dichlorobenzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,4-Dichlorobenzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,1-Dichloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,1-Dichloroethene	0.76	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloroethene (Total)	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,2-Dichloropropane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Cis-1,3-Dichloropropene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Trans-1,3-Dichloropropene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Ethyl Benzene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Methylene Chloride	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
1,1,2,2-Tetrachloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Tetrachloroethene	2.6	0.50	ug/L	09-DEC-94	09-DEC-94
Toluene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,1,1-Trichloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
1,1,2-Trichloroethane	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Trichloroethene	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
Trichlorofluoromethane	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Vinyl Chloride	ND <	1.0	ug/L	09-DEC-94	09-DEC-94
Xylenes (Total)	ND <	0.50	ug/L	09-DEC-94	09-DEC-94
-	-				
Surrogate:	-				
4-Bromofluorobenzene (8010)	95.4	-	%	09-DEC-94	09-DEC-94
4-Bromofluorobenzene (8020)	99.5	-	%	09-DEC-94	09-DEC-94
-	-				
Comments:	MX = L9412050-2 (MW-3)				
-	-				
-	-				
-	-				

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike
Lab Id: WG6481-2

Reported: 16-DEC-94

Parameter	Value	Units	Spike	Units	% Rec	Extracted	Analyzed
8010/8020-QC							
1,1-Dichloroethene	20.5	ug/L	20	ug/L	99.%	09-DEC-94	09-DEC-94
Trichloroethene	21.4	ug/L	20	ug/L	107.%	09-DEC-94	09-DEC-94
Chlorobenzene-601	21.5	ug/L	20	ug/L	108.%	09-DEC-94	09-DEC-94
Benzene	20.5	ug/L	20	ug/L	102.%	09-DEC-94	09-DEC-94
Toluene	20.7	ug/L	20	ug/L	104.%	09-DEC-94	09-DEC-94
Chlorobenzene-602	21.2	ug/L	20	ug/L	106.%	09-DEC-94	09-DEC-94
-	-						
Surrogate:	-						
4-Bromofluorobenzene (8010)	109.	%				09-DEC-94	09-DEC-94
4-Bromofluorobenzene (8020)	111.	%				09-DEC-94	09-DEC-94
-	-						
Comments:	None						
-	None						

D&M Laboratories

QUALITY CONTROL REPORT

Prepared for:
Project Id:
Sample Id: Matrix Spike Dup
Lab Id: WG6481-3

Reported: 16-DEC-94

Parameter	Value	Units	% Rec	RPD	Extracted	Analyzed
8010/8020-QC						
1,1-Dichloroethene	19.4	ug/L	93.%	5.5	09-DEC-94	09-DEC-94
Trichloroethene	18.7	ug/L	94.%	13.	09-DEC-94	09-DEC-94
Chlorobenzene-601	21.0	ug/L	105.%	2.6	09-DEC-94	09-DEC-94
Benzene	19.9	ug/L	99.%	3.1	09-DEC-94	09-DEC-94
Toluene	20.0	ug/L	100%	3.7	09-DEC-94	09-DEC-94
Chlorobenzene-602	20.5	ug/L	102.%	3.6	09-DEC-94	09-DEC-94
-	-					
Surrogate:	-					
4-Bromofluorobenzene (8010)	96.3	%			09-DEC-94	09-DEC-94
4-Bromofluorobenzene (8020)	98.2	%			09-DEC-94	09-DEC-94
-	-					
Comments:	None					
-	None					

QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

L9412076

D&M LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES
3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 Fax: (707) 763-4065

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name DAMES & MOORE Phone (916) 387-8800
Address 8801 FOLSOM BLVD #200
City, State, Zip SACRAMENTO, CA 95826
Client's or Representative's Signature Kim Thomas
(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fa to pick up samples.

PROJ. NO. 00173-080-044-3343
PROJECT NAME UPSAC - MONTHLY H_2O SAMPLING
SAMPLERS (Signature) Kim Thomas

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	601-602-TPHgas-VOA's	Nickel-Poly	REMARKS / LAB USE ON LAB NO
MW-4	12/1/94	1119		X	MW-4	5	4	1	
EW-1	12/1/94	1210		X	EW-1	5	4	1	
MW-32	12/1/94	1245		X	MW-32	5	4	1	
GW1-EFF	12/1/94	1530		X	GW1-EFF	5	4	1	
TB-1	12/1/94			X	TRIP BLANKS	4	1		

RECEIVED DEC 6 11 9 22 '94

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐ NA
COOLER TEMPERATURE cold °C

4 - 500-1
+ 2C VOA's

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Kim Thomas	12/1/94	1630	0197-2128-187 UPS-Air Bill #
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

General Remarks:
ANALYZE 1 OF THE 4 TRIP BLANKS.

PART ONE - CLIENT COPY