

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES INC



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September 30, 1996

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**HAZARDOUS WASTE
REMEDICATION**

Richard H. Mohlenhoff, P.E.
Environmental Compliance Engineer
National Railroad Passenger Corporation
400 W. 31st Street
New York, New York 10001

Re: Progress Report Interim Remedial Measures System in Area 1
Sunnyside Yard, Queens, New York

Dear Mr. Mohlenhoff:

As you are aware, Roux Associates, Inc. (Roux Associates) has been retained by the National Railroad Passenger Corporation (AMTRAK) to perform regular system maintenance and performance monitoring of the Interim Remedial Measures (IRM) system in Area 1 at the Sunnyside Yard, Queens, New York (Yard) and to present the data collected in bi-annual IRM progress reports. This report presents a summary of the system O&M and performance monitoring data for the period November 13, 1995 through September 6, 1996.

On February 26, 1996 Roux Associates was notified that the Metro Shop wall adjacent to the IRM system recovery tank had partially collapsed overnight covering the tank with debris (i.e., pieces of concrete and wood). The IRM system was shut down and inspected for damage. No damage was noted to the IRM system; however, to allow for the clean-up of the collapsed building, the recovery tank and associated equipment were relocated to a secure area. Following the removal of the debris, on May 15, 1996, the recovery tank and associated equipment were re-installed at a new location and the system was activated.

While the IRM system was not in operation, O&M and performance monitoring was not conducted; however, on March 21, 1996 the Area 1 monitoring wells were gauged for water-level and separate-phase petroleum thickness measurements. During periods of operation, system O&M and performance monitoring consisted of the following:

- system inspection and maintenance including the large diameter filter scavenger (LDFS) and small diameter filter scavenger (SDFS) pumps;
- gauging of the recovery tank and Area 1 monitoring wells (i.e., collection of water-level and separate-phase petroleum thickness measurements); and
- sampling of recovery tank.

System Maintenance

The system maintenance consisted of the following:

- visual inspection of all equipment and the recovery tank for fitness;
- removal of the SDFS and LDFS pumps to perform routine maintenance including cleaning the filters, and reinstallation of the pumps;
- adjustments to the SDFS pump levels, based upon water-level and petroleum thickness fluctuations; and
- testing and resetting the system control boards.

The SDFS pump levels were adjusted several times during this reporting period to accommodate fluctuating water levels at the Yard.

Gauging

Gauging of the recovery tank and Area 1 monitoring wells has continued through the period of this report. Gauging during this reporting period indicates a fluctuating water table; also, variations in petroleum thickness measurements were noted which, as stated in previous reports, may be attributable to the following:

- response of the remaining petroleum accumulation to IRM system petroleum withdrawal;
- response of the petroleum accumulation to fluctuating water levels;
- variable specific gravity and viscosity of petroleum within the accumulation; and
- variable subsurface conditions (i.e., buried conduits and/or obstructions) within the areal extent of the accumulation.

Water-level and petroleum thickness measurements collected during this reporting period are presented in Tables 1 and 2.

Richard H. Mohlenhoff, P.E.
September 30, 1996
Page 3

Recovery Tank Monitoring and Sampling

Recovery tank petroleum thickness measurements collected on September 6, 1996 indicated approximately 240 gallons of petroleum has been recovered during this period. On September 6, 1996 the contents of the recovery tank was sampled and subsequently analyzed by IEA Laboratories, Monroe, Connecticut for polychlorinated biphenyls (PCB's) using United States Environmental Protection Agency (USEPA) Method 8080. The analytical results indicated a total PCB concentration of 61.7 parts per million (ppm).

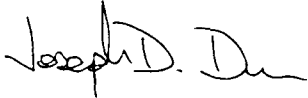
If you have any questions or require additional information, please do not hesitate to call.

Sincerely,

ROUX ASSOCIATES, INC.



Harry Gregory
Project Hydrogeologist/
Project Manager



Joseph D. Duminuco
Principal Hydrogeologist

Attachment

cc: R. Gardineer, P.E., NYSDEC
H. Agrawal, P.E., NYSDEC
A. Sigona, NYSDEC
R. Noonan, AMTRAK
P. Gerbasi, P.E., Roux Associates, Inc.

Table 1. Summary of Water-Level Elevations and Separate-Phase Petroleum Thickness Measurements, Sunnyside Yard, Queens, New York.

March 21, 1996					
Well Designation	Measuring Point Elevation (ft above NAVD 1988 mean sea level)	Depth to Product (ft below measuring point)	Depth to Water (ft below measuring point)	Product Thickness (ft)	Water-Level Elevation (ft relative to mean sea level)
MW-13	17.30	--	2.86	--	14.44
MW-17	19.51	3.95	7.14	3.19	15.16 *
MW-19	20.13	--	6.64	--	13.49
MW-20	19.09	3.89	4.19	0.30	15.16 *
MW-21	19.60	--	4.14	--	15.46
MW-22	18.20	2.97	3.07	0.10	15.22 *
MW-23D	19.19	--	4.42	--	14.77
MW-25A	25.28	--	9.26	--	16.02
MW-27	21.50	--	10.34	--	11.16
MW-28	18.22	--	NM	--	--
MW-29	12.29	--	3.69	--	8.60
MW-30	16.39	--	7.11	--	9.28
MW-31	14.35	--	4.09	--	10.26
MW-34	28.96	--	14.32	--	14.64
MW-35	18.68	--	5.04	--	13.64
MW-36	20.01	5.92	8.18	2.26	13.81 *
MW-37	17.87	--	4.82	--	13.05
MW-38D	20.27	--	5.80	--	14.47
MW-39D	20.12	--	6.37	--	13.75
MW-40D	21.59	--	6.35	--	15.24
MW-41	14.98	--	3.33	--	11.65
MW-42	15.71	--	5.87	--	9.84
MW-43	15.14	--	5.58	--	9.56
MW-44D	14.27	--	4.90	--	9.37
MW-45	22.64	--	NM	--	--
MW-46	26.51	--	11.15	--	15.36
MW-47	27.78	--	7.37	--	20.41
MW-48D	28.97	--	10.95	--	18.02
MW-49	19.17	--	5.10	--	14.07
MW-50	19.00	4.08	7.45	3.37	14.50 *
MW-51	19.23	--	4.12	--	15.11
MW-52	18.02	3.17	3.72	0.55	14.78 *
MW-53	20.16	4.86	6.60	1.74	15.08 *
MW-54	19.35	3.89	6.09	2.20	15.18 *
MW-55	19.27	--	3.98	--	15.29
MW-56	21.62	--	6.38	--	15.24
MW-57	21.98	--	6.80	--	15.18
MW-58	18.37	--	3.15	--	15.22

Table 1. Summary of Water-Level Elevations and Separate-Phase Petroleum Thickness Measurements, Sunnyside Yard, Queens, New York.

March 21, 1996					
Well Designation	Measuring Point Elevation (ft above NAVD 1988 mean sea level)	Depth to Product (ft below measuring point)	Depth to Water (ft below measuring point)	Product Thickness (ft)	Water-Level Elevation (ft relative to mean sea level)
MW-59	21.36	--	6.12	--	15.24
MW-60	23.31	8.01	8.96	0.95	15.18 *
MW-61	30.95	--	15.09	--	15.86
MW-62D	30.61	--	14.79	--	15.82
MW-63	20.92	--	5.72	--	15.20
MW-64	21.55	--	NM	--	--
MW-65	21.02	--	NM	--	--
MW-66	22.30	--	NM	--	--
MW-67	22.46	--	NM	--	--
MW-68	25.38	--	NM	--	--
RW-2	19.69	--	3.60	--	16.09
TP-6	18.92	--	NM	--	--
TP-7	20.96	--	NM	--	--

-- - No measurable product

NM - Not measured

* - Water-Level elevations corrected for presence of separate-phase petroleum. Correction assumes density of 0.874 (average specific gravity of petroleum samples collected at the Yard).

Table 2. Summary of Water-Level Elevations and Separate-Phase Petroleum Thickness Measurements, Sunnyside Yard, Queens, New York.

May 2 and 3, 1996					
Well Designation	Measuring Point Elevation (ft above NAVD 1988 mean sea level)	Depth to Product (ft below measuring point)	Depth to Water (ft below measuring point)	Product Thickness (ft)	Water-Level Elevation (ft relative to mean sea level)
MW-13	17.3	--	3.03	--	14.27
MW-17	19.51	4.14	6.83	2.69	15.03 *
MW-19	20.13	--	6.97	--	13.16
MW-20	19.09	4.06	4.36	0.30	14.99 *
MW-21	19.6	--	4.27	--	15.33
MW-22	18.2	3.14	3.22	0.08	15.05
MW-23D	19.19	--	4.53	--	14.66
MW-25A	25.28	--	9.40	--	15.88
MW-27	21.5	--	10.45	--	11.05
MW-28	18.22	--	8.09	--	10.13
MW-29	12.29	--	3.86	--	8.43
MW-30	16.39	--	7.17	--	9.22
MW-31	14.35	--	4.34	--	10.01
MW-34	28.96	--	13.98	--	14.98
MW-35	18.68	--	5.22	--	13.46
MW-36	20.01	6.09	7.7	1.61	13.72 *
MW-37	17.87	--	5.2	--	12.67
MW-38D	20.27	--	5.89	--	14.38
MW-39D	20.12	--	6.4	--	13.72
MW-40D	21.59	--	6.44	--	15.15
MW-41	14.98	--	3.89	--	11.09
MW-42	15.71	--	6.2	--	9.51
MW-43	15.14	--	5.72	--	9.42
MW-44D	14.27	--	5	--	9.27
MW-45	22.64	--	12.04	--	10.60
MW-46	26.51	--	11.28	--	15.23
MW-47	27.78	--	7.22	--	20.56
MW-48D	28.97	--	10.82	--	18.15
MW-49	19.17	--	5.29	--	13.88
MW-50	19	4.22	7.82	3.60	14.33 *
MW-51	19.23	4.21	4.22	0.01	15.02 *
MW-52	18.02	3.28	3.81	0.53	14.67 *
MW-53	20.16	4.87	7.16	2.29	15.00 *
MW-54	19.35	4.07	5.16	1.09	15.14 *
MW-55	19.27	--	4.15	--	15.12
MW-56	21.62	--	6.47	--	15.15
MW-57	21.98	--	6.9	--	15.08
MW-58	18.37	--	3.25	--	15.12

Table 2. Summary of Water-Level Elevations and Separate-Phase Petroleum Thickness Measurements, Sunnyside Yard, Queens, New York.

May 2 and 3, 1996					
Well Designation	Measuring Point Elevation (ft above NAVD 1988 mean sea level)	Depth to Product (ft below measuring point)	Depth to Water (ft below measuring point)	Product Thickness (ft)	Water-Level Elevation (ft relative to mean sea level)
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MW-60	23.31	8.14	8.82	0.68	15.08 *
MW-61	30.95	--	14.65	--	16.30
MW-62D	30.61	--	14.98	--	15.63
MW-63	20.92	--	5.87	--	15.05
MW-64	21.55	--	6.16	--	15.39
MW-65	21.02	--	5.35	--	15.67
MW-66	22.3	--	6.79	--	15.51
MW-67	22.46	--	7.57	--	14.89
MW-68	25.38	--	9.93	--	15.45
RW-2	19.69	--	NM	--	--
TP-6	18.92	--	NM	--	--
TP-7	20.96	--	NM	--	--

-- - No measurable product

NM - Not measured

* - Water-Level elevations corrected for presence of separate-phase petroleum. Correction assumes density of 0.874 (average specific gravity of petroleum samples collected at the Yard).