



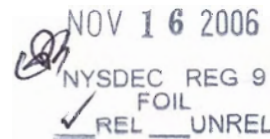
November 10, 2006

Mr. Glenn May, C.P.G.
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203

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www.retec.com

**RE: Semiannual Monitoring Report, October 2006 -
Scajaquada Creek Site (#915141B), Buffalo, NY**

RECEIVED



Dear Mr. May:

As required by the Operation and Maintenance (O&M) Plan, dated February 8, 2005, this report provides a semiannual summary of operations, maintenance, and field observations made by The RETEC Group, Inc. (RETEC) and National Fuel Gas (NFG) at the Scajaquada Creek site. The period discussed herein is from March 2006 through October 2006.

Constructed Sediment Cap Observations

During this reporting period, NYSDOT contractors continued to perform repairs to the overhead Scajaquada Expressway. A site visit was conducted on October 24th by representatives of NFG, RETEC, and NYSDEC. NYSDOT's contractor (L. C. Whitford) stated that their work will continue until at least May 2007, though they will temporarily shut down operations over the winter, starting just before Thanksgiving.

In general, the NYSDOT work appeared to be protective of the cap and the DNAPL vaults. The work has, however, included some excavation around the base of several piers and the removal of some of the armored drainage channels installed by NFG. L. C. Whitford was, at the time of the site visit, preparing to perform necessary repairs and erosion protection, including the work suggested in RETEC's previous semiannual report dated March 29, 2006.

In addition to the March observations, several square feet of white geofabric has become exposed at the toe of the north bank near the North DNAPL System and Pier 23 (see attached photographs). L. C. Whitford was informed of the fabric during the site visit and they agreed to include re-armoring of that location with their other erosion control work. The re-armoring at that location should consist of NYSDOT "medium stone fill" strategically placed, not dumped, beginning at an elevation below the exposed fabric up to an elevation of at least 574'. NYSDOT "light stone fill" may be used as necessary above elevation 574'. A rough indication of elevation 574' is marked and plainly visible on the eastern column of Pier 23.

Separately, NYSDEC has informed NYSDOT that erosion control measures need improvement to reduce the flow of silt from some of their work areas to the creek.

Previous Period's DNAPL Systems Operations

DNAPL recovery has continued uninterrupted during the reporting period.

During this period, the South System total flow rate was increased to 2.7 gallons per day from approximately half a gallon per day. This increase generated a substantial quantity of water and a

reduced concentration of DNAPL, but total DNAPL recovery per day also increased slightly. Similarly, the total flow rate at the North System was increased, with a corresponding decrease in the concentration of DNAPL and a slight increase in total DNAPL recovery per day. The volumes of DNAPL recovered this period are visual estimates only because the oil/water interface probe readings taken during the site visit were inconclusive.

Generally, pump speed and duration adjustments (to increase the average daily flow) have resulted only in additional water collection. Both systems will continue to be operated to maximize DNAPL recovery without the expense of recovering excessive water.

The volumes of DNAPL recovered to date appear to be approximately 1183 gallons by the South System and 312 gallons by the North System.

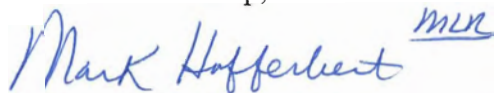
Conclusions

The constructed sediment cap appears intact, though earthmoving by NYSDOT has created erosional areas and minor geofabric exposure. NYSDOT's contractor informed us of their intentions to repair these areas before the Thanksgiving holiday.

The DNAPL recovery program continues as before. It is likely that both tanks will require to be emptied at some point in 2007.

Please call me at (607) 277-5716 if you have any questions or comments.

Sincerely,
The RETEC Group, Inc.



Mark Hofferbert, P.E.
Project Engineer

Attachments: South DNAPL System Monitoring Log
North DNAPL System Monitoring Log

cc: B. Sadowski, K. Roblee – NYSDEC, Buffalo
C. Dowd – NYSDEC, Albany
P. McCarthy, Esq. – NYSOAG Environmental Crimes Unit
G. Litwin – NYSDOH Bureau of Environmental Exposure Investigation
J. Clark, T. Alexander – NFG
R. Glanville, K. Hogan – PLHB&B
J. Finn – RETEC
File: NFGD1-02111-750

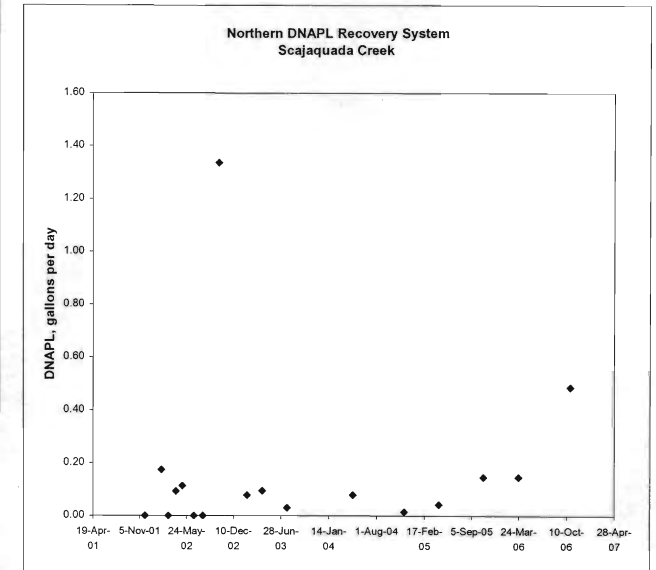


NORTHERN SYSTEM

Date	Initials	Field Measurements (by OWI probe)				Calculations (total tank contents) *				Calculations (this period recovery)				Operator's Notes	Transporter	Disposal Facility	
		Manhole rim to top of LNAPL (ft)	Manhole rim to top of Water (ft) (estimated)	Manhole rim to top of DNAPL (ft)	Manhole rim to bottom of Tank (ft)	LNAPL (gal)	Water (gal)	DNAPL (gal)	Total (gal)	Water Increase (gal)	NAPL Increase (gal)	% NAPL	NAPL (gpd)				Total Flow (gpd)
28-Nov-01	mrh/cd	8.89	8.89	8.89	8.89	0	0	0	0	0	0	0%	0.00	0.0	Develop well with hand operated diaphragm pump. Measurements are approximate.	---	---
7-Feb-02	hs/jc	8.62	8.62	8.85	8.89	0	71	12	83	71	12	15%	0.17	1.2	Pump well by hand.	---	---
8-Mar-02	hs/jc	8.61	8.61	8.85	8.89	0	74	12	86	3	0	0%	0.00	0.1	Pump well by hand.	---	---
10-Apr-02	mrh	8.59	8.59	8.84	8.89	0	77	15	93	3	3	50%	0.09	0.2	Pump well by hand.	---	---
7-May-02	hs/jc	8.51	8.51	8.83	8.89	0	99	19	117	22	3	12%	0.11	0.9	Hand pump not working well.	---	---
25-Jun-02	cd	8.51	8.51	8.83	8.89	0	99	19	117	0	0	0%	0.00	0.0	Hand pump not working. Discarded.	---	---
2-Aug-02	mrh/jc	8.51	8.51	8.83	8.89	0	99	19	117	0	0	0%	0.00	0.0	Begin peristaltic startup. Setting #6.5, 2hr 15 min per day	---	---
8-Oct-02	mrh/jc	7.43	7.44	8.55	8.89	3	343	105	451	244	90	27%	1.34	5.0	Additional system checks/adjustments made by J Clark on 8/15, 8/21, 8/27, 9/09, and 9/12.	---	---
4-Feb-03	mrh/jc	7.36	7.37	8.52	8.89	3	355	114	472	12	9	43%	0.08	0.2	Numbers approximate. Surface of contents frozen. Turn on heat.	---	---
10-Apr-03	mrh/jc	7.28	7.29	8.50	8.89	3	374	120	497	19	6	25%	0.10	0.4	Pumping mostly water, changed timer to 30 min/week.	---	---
23-Jul-03	mrh	7.05	7.06	8.49	8.89	3	442	124	568	68	3	4%	0.03	0.7	Additional system checks/adjustments made by J Clark on 5/5, 5/20, 6/12, and 6/24.	---	---
23-Apr-04	mrh	6.90	6.91	8.42	8.89	3	466	145	614	25	22	47%	0.08	0.2	Additional system checks/adjustments made by NFG on 8/01, 8/06, 9/05, 9/08, 9/11, 9/17, 9/25, 10/30, 11/18.	---	---
24-Nov-04	jl, jc	6.66	6.67	8.41	8.89	3	537	148	689	71	3	4%	0.01	0.3	O/W interface probe not working accurately, depth of DNAPL is estimated.	---	---
19-Apr-05	mh, jc, jl, sh	6.45	6.46	8.39	8.89	3	596	154	753	59	6	10%	0.04	0.4	Additional system checks/adjustments made by J Clark on 11/24, 1/20/2005, 3/7, 3/11, 4/12, 4/18.	---	---
26-Oct-05	mrh, jc	6.33	6.34	8.30	8.89	3	605	182	790	9	28	75%	0.15	0.2	New OWI probe, but readings inconsistent with previous readings. System checks by NFG 5/11, 6/24, 7/28, 8/25, 10/06.	---	---
22-Mar-06	mrh, jc	6.20	6.21	8.23	8.89	3	624	204	831	19	22	54%	0.15	0.3	Additional system checks by NFG 10/26/05, 12/14/05, 1/6/06, 2/24/06.	---	---
24-Oct-06	mrh, jc	5.20	5.21	7.89	8.89	3	828	309	1139	204	105	34%	0.49	1.4	Depth to NAPL reading is approximate. Additional system checks by NFG 5/11, 6/29, 7/26, 9/07.	---	---
Input values										Cumulative gallons :		828	312				
												Water	NAPL				

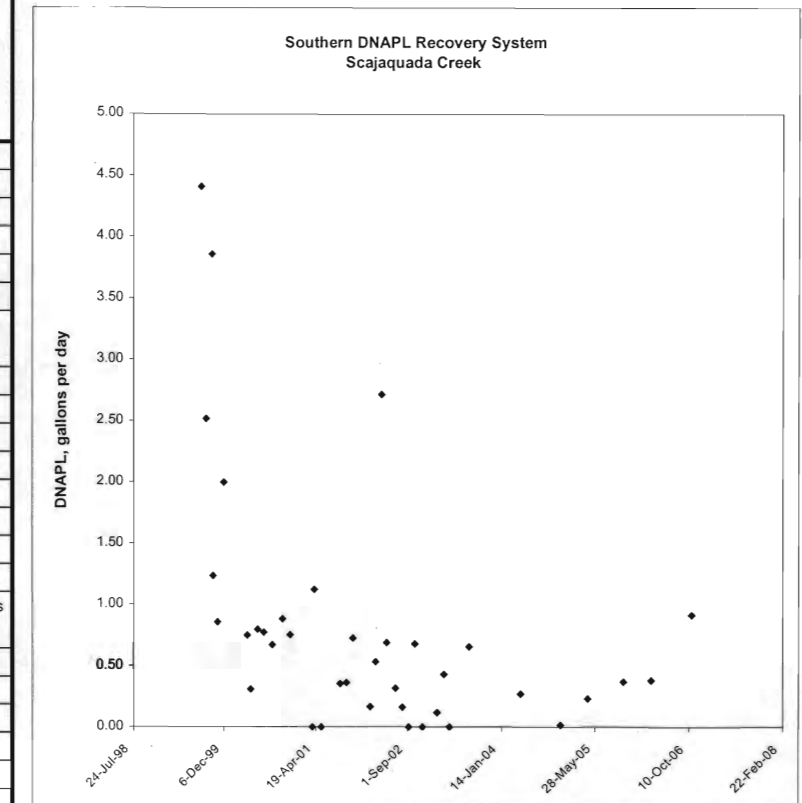
* 309 gallons per foot of tank height

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SOUTHERN SYSTEM

Date	Initials	Field Measurements (by OWI probe)				Calculations (total tank contents) *				Calculations (this period recovery)					Operator's Notes	Transporter	Disposal Facility
		Manhole rim to top of LNAPL (ft)	Manhole rim to top of Water (ft) (estimated)	Manhole rim to top of DNAPL (ft)	Manhole rim to bottom of Tank (ft)	LNAPL (gal)	Water (gal)	DNAPL (gal)	Total (gal)	Water Increase (gal)	NAPL Increase (gal)	% NAPL	NAPL (gpd)	Total Flow (gpd)			
24-Jun-99	mrh	9.05	9.05	9.05	9.05	0	0	0	0	0	0	0%		0	90% construction complete, begin initial testing	---	---
29-Jun-99	mrh/day	6.80	6.80	9.05	9.05	0	695	0	695	695	0	0%		139	Complete initial system test, PW2003 has silt damage	---	---
23-Jul-99	mrh/day	6.80	6.80	9.05	9.05	0	695	0	695	0	0	0%		0	Recommence shakedown with peristaltic pump	---	---
30-Jul-99	day	6.34	6.34	8.95	9.05	0	806	31	837	111	31	22%	4.41	20	Shakedown, flow adjustment	---	---
26-Aug-99	jhe	5.90	5.90	8.73	9.05	0	874	99	973	68	68	50%	2.52	5	Routine system check, slow drip from tank bung noted (0.5 gpd?)	---	---
16-Sep-99	mrh/bdc	5.79	5.80	8.75	9.05	3	911	93	1007	37	-3	---		2	Significant (2 gpd?) DNAPL loss through bung drip, PW2003 reinstalled	---	---
28-Sep-99	mrh/cc	3.30	3.32	8.61	9.05	6	1633	136	1775	723	46	6%	3.86	64	Tank emptied (was full, pump off), bung replaced, vault cleaned, flow setting reduced to 4.5	IWR / BFC	Research Oil
28-Sep-99	mrh/cc	9.05	9.05	9.05	9.05	0	0	0	0	0	0	0%		0		---	---
3-Oct-99	mrh	8.75	8.75	9.03	9.05	0	86	6	93	86	6	7%	1.24	19	Measurements are visual estimates only, flow setting reduced to 3.5	---	---
11-Oct-99	cc	8.75	8.75	9.03	9.05	0	86	6	93	0	0	0%		0	No flow observed, flow setting increased to 5.0	---	---
29-Oct-99	cc	6.81	6.81	8.98	9.05	0	670	22	692	584	15	3%	0.86	33	Flow setting decreased to 4.0	---	---
2-Dec-99	mrh/day	6.09	6.10	8.77	9.05	3	824	86	914	154	68	31%	2.00	7	Flow setting increased to 4.7 (24 gpd), timer installed/set for 1pm to 2pm operation	---	---
16-Dec-99	cc	---	---	---	---	---	---	---	---	---	---	---		---	Pump running but no flow, Timer reset for 3 hr per day operation	---	---
9-Mar-00	mrh/day	6.09	6.10	8.89	9.05	3	861	49	914	37	-37	---		0	PW2000 running but no flow, Peristaltic installed (2 hr/day), DNAPL thickened over time	---	---
11-Apr-00	mrh/day	4.71	4.73	8.82	9.05	6	1263	71	1340	401	25	6%	0.75	13	New peristaltic purchased/installed. Flow setting #7 (for 2 hr/day).	---	---
1-May-00	mrh/dms	4.62	4.64	8.80	9.05	6	1284	77	1368	22	6	22%	0.31	1	No flow (tubing collapsed). Repaired.	---	---
4-May-00	day/jc	4.62	4.64	8.80	9.05	6	1284	77	1368	0	0	0%		0	No flow (tubing leak). Tank emptied. System turned off.	IWR / BFC	Puretech Systems
8-May-00	mrh/jf	9.05	9.05	9.05	9.05	0	0	0	0	0	0	0%		0	Original tubing replaced with silicon. System restarted at flow setting #3 (for 2 hr/day).	---	---
8-Jun-00	mrh/day	8.55	8.56	8.98	9.05	3	130	22	154	130	25	16%	0.80	5	Backfill settled around vault. Total depth shallow; measurements estimated. Tubing adjusted.	---	---
10-Jul-00	mrh/dms	8.10	8.11	8.90	9.05	3	244	46	293	114	25	18%	0.77	4	Tubing was worn; adjusted.	---	---
25-Aug-00	day	7.30	7.31	8.80	9.05	3	460	77	540	216	31	12%	0.67	5	Tubing adjusted.	---	---
20-Oct-00	mrh	6.25	6.26	8.64	9.05	3	735	127	865	275	49	15%	0.88	6	Tubing worn; adjusted.	---	---
30-Nov-00	mrh	5.75	5.77	8.55	9.05	6	858	154	1019	124	31	20%	0.75	4	Tubing worn; adjusted. Flow rate setting reduced from 3.0 to 1.5; timer not changed.	---	---
18-Jan-01	mrh	5.75	5.77	8.55	9.05	6	858	154	1019	0	0	---		0	Pump starts rough and sounds bad. Pump removed and sent in for repairs.	---	---
7-Feb-01	mrh/hs	5.75	5.77	8.55	9.05	6	858	154	1019	0	0	0%		0	Temporary FloJet pump installed but insufficient NPSH due to low creek elevation.	---	---
30-Mar-01	mrh	5.75	5.77	8.55	9.05	6	858	154	1019	0	0	0%		0	Peristaltic (geopump) installed, full speed, 600 rpm, system OK. NAPL is hi viscosity/settled.	---	---
10-Apr-01	mrh	5.70	5.72	8.51	9.05	6	861	167	1034	3	12	80%	1.12	1.4	3/16" id tubing replaced with 3/8" id tubing. Float switch replaced (plus relay).	---	---
18-May-01	dms/jc	5.65	5.68	8.52	9.05	9	877	164	1050	15	0	0%	0.00	0.4	Tubing worn and soft; adjusted.	---	---
30-Aug-01	mrh/hs	5.53	5.55	8.39	9.05	6	877	204	1087	0	37	100%	0.36	0.4	NAPL appears to be accumulated in well. Timer set to 3 hrs/day. Original peristaltic re-installed.	---	---
3-Oct-01	hs/jc	5.46	5.48	8.35	9.05	6	886	216	1108	9	12	57%	0.36	0.6	NAPL may still be accumulated in well. Timer increased to 4 hrs/day.	---	---
6-Nov-01	hs/jc	5.30	5.32	8.27	9.05	6	911	241	1158	25	25	50%	0.73	1.5	Additional NAPL purged from well after readings taken. Timer decreased to 3 hrs/day.	---	---
7-Feb-02	hs/jc	3.89	3.91	8.22	9.05	6	1331	256	1593	420	15	4%	0.17	4.7	Adjusted peristaltic tubing.	---	---
8-Mar-02	hs/jc	3.81	3.83	8.17	9.05	6	1340	272	1618	9	15	62%	0.53	0.9	Adjusted peristaltic tubing.	---	---
10-Apr-02	mrh	3.43	3.45	7.88	9.05	6	1368	361	1735	28	90	76%	2.71	3.6	Adjusted tubing. Installed piston pump for one day test (then removed). Timer increased to 4 hrs.	---	---
7-May-02	hs/jc	3.15	3.17	7.82	9.05	6	1436	380	1822	68	19	21%	0.69	3.2	Tank full.	Frank's Vacuum	Chemtron
7-May-02		9.05	9.05	9.05	9.05	0	0	0	0	---	---	---		---	Tank pumped out.	---	---
25-Jun-02	cd	6.00	6.02	9.02	9.05	6	926	9	942	926	15	2%	0.32	19.2	Depth's estimated. Pump set at #4, 3 hrs/day	---	---
2-Aug-02	mrh/jc	3.15	3.17	9.00	9.05	6	1800	15	1822	874	6	1%	0.16	23.2	Tank full, mostly water.	---	---
6-Sep-02	jc	3.15	3.17	9.00	9.05	6	1800	15	1822	0	0	0%		0.0	Tank Emptied.	Frank's Vacuum	Clean Harbors, MD
6-Sep-02		9.05	9.05	9.05	9.05	0	0	0	0	---	---	---		---		---	---
8-Oct-02	mrh/jc	8.98	8.98	8.98	9.05	0	0	22	22	0	22	100%	0.68	0.7	Pump removed for repair	---	---
18-Nov-02	cd	8.98	8.98	8.98	9.05	0	0	22	22	0	0	0%		0.0	Pump reinstalled	---	---
4-Feb-03	mrh/jc	4.32	4.32	8.95	9.05	0	1430	31	1460	1430	9	1%	0.12	18.4	Tank again full of mostly water (timer was left on manual?). Tank emptied.	Frank's Vacuum	Clean Harbors, MD
4-Feb-03		9.05	9.05	9.05	9.05	0	0	0	0	---	---	---		---		---	---
12-Mar-03	jc	9.00	9.00	9.00	9.05	0	0	15	15	0	15	100%	0.43	0.4	Pump running fast, so removed for evaluation/repair.	---	---
10-Apr-03	mrh/jc	9.00	9.00	9.00	9.05	0	0	15	15	0	0	0%		0.0	Pump reinstalled: runs fast/variable with no load, runs OK with flow load. Timer set to 30 min/day, speed 8.	---	---
23-Jul-03	mrh/jc	8.78	8.78	8.78	9.05	0	0	83	83	0	68	100%	0.65	0.7	Additional system checks/adjustments made by J Clark on 5/5, 5/20, 6/12, and 6/24.	---	---
23-Apr-04	mrh	8.05	8.06	8.55	9.05	3	151	154	309	151	74	33%	0.27	0.8	Additional system checks/adjustments made by NFG on 8/01, 8/06, 9/05, 9/08, 9/11, 9/17, 9/25, 10/30, 11/18.	---	---
24-Nov-04	jl,jc	7.31	7.32	8.54	9.05	3	377	157	537	225	3	1%	0.01	1.1	O/W Interface probe not acting precisely, actual DNAPL volume probably greater.	---	---
19-Apr-05	mh,jc,jl,sh	7.19	7.20	8.43	9.05	3	380	191	574	3	34	92%	0.23	0.3	Additional system checks/adjustments made by J Clark on 11/24, 1/20/2005, 3/7, 3/11, 4/12, 4/18.	---	---
27-Oct-05	mrh, jc	6.96	6.97	8.20	9.05	3	380	262	645	0	71	100%	0.37	0.4	New OWI probe, but readings inconsistent with previous readings. System checks by NFG 5/11, 6/24, 7/28, 8/25, 10/06.	---	---
22-Mar-06	mrh, jc	6.78	6.79	8.02	9.05	3	380	318	701	0	56	100%	0.38	0.4	Additional system checks by NFG 10/26/05, 12/14/05, 1/6/06, 2/24/06.	---	---
24-Oct-06	mrh, jc	4.90	4.91	7.38	9.05	3	763	516	1281	383	198	34%	0.91	2.7	Depth to NAPL reading is approximate. Additional system checks by NFG 5/11, 6/29, 7/26, 9/07.	---	---



Input values Cumulative gallons : 8346 1183
Water NAPL

* 309 gallons per foot of tank height
f:\projects\NFGD102111\dnapl\system\monitoring\log.txt