ARCADIS
Infrastructure, environment, facilities

ARCADIS G&M, Inc.
Two Huntington Quadrangle
Suite 1S10
Melville
New York 11747
Tel 631 249 7600
Fax 631 249 7610
www.arcadis-us.com

ENVIRONMENT

Nathan Putnam
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7015

Subject:
September, 2006 System Status Report
Soil Vapor Recovery System
United Stellar Industries Property,
131 Sunnyside Boulevard Site, Plainview, New York.

Date:
17 October 2006

Contact:
Doug Smolensky

Phone:
(631) 391 5290

Email:
dsmolensky@arcadis-us.com

Our ref:
NY001422.0002.00002

Dear Mr. Putnam:

ARCADIS G&M, Inc. in conjunction with ARCADIS Engineers & Architects of New York, P.C. has prepared this system status report for the Vapor Recovery System (VRS), on behalf of 131 Sunnyside, LLC (Sunnyside) and Gertrude Discount (Discount), at the United Stellar Industries Property located at 131 Sunnyside Blvd. in Plainview, New York. A letter report, summarizing the results of the VRS pilot test was submitted to the NYSDEC by ARCADIS on May 11, 2005. The VRS was restarted and is being operated in accordance with the VRS pilot test extension letter originally submitted to the New York State Department of Environmental Protection (NYSDEC) on September 7, 2005, with NYSDEC comments, dated October 11, 2005, then revised and submitted by ARCADIS on November 18, 2005, with NYSDEC comments, dated February 2, 2006 and ARCADIS responses, dated May 15, 2006.

The following report provides documentation of all monitoring activities completed during the month of September, 2006. During this reporting period the system was operated and two performance monitoring events were performed (August 25, 2006 and September 8, 2006). Operational and volatile organic compound (VOC) data collected during the monitoring events are in Tables 1, 2, and 3. A brief analysis of performance monitoring data is provided below.

Vapor Recovery System Operation

The VRS consists of three vacuum extraction locations (SVE-1, SVE-2 and SVE-3), six induced vacuum/vapor monitoring points (MP-1 through MP-6), a 5-horsepower regenerative blower, a moisture separator and two 400-pound vapor phase granular activated carbon units (VPGACs). Control valves, monitoring gauges, and sample ports were installed as necessary to adjust system operation and provide a means for collecting the data provided within this report. All vapor samples were submitted to Air Toxics Laboratory in Folsom, CA for laboratory analysis via Method TO-14 (Direct Inject).

Results

Operational measurements including applied vacuum levels at each extraction point, extracted air flow rates, and Photo-ionization detector (PID) readings are summarized in Table 1. In summary, the VRS is operating as designed. Key observations are as follows:

- Air flow rates at the vacuum extraction points measured during the September, 2006 operational period ranged from 71 to 102 cubic feet per minute (cfm).

- VRS wellhead vacuum measurements during August, 2006 operation ranged from -34 inches water column (i.w.c.) to -36.1 i.w.c.

- PID measurements during August, 2006 operation were non-detect.

- Negative vacuum levels were measured in all of the monitoring points (MP-1 through MP-6) during each monitoring event. However, it should be noted that the MP-6 remote monitoring point was inoperable during the August 25, 2006 operation and maintenance and sampling event.

Vapor sample analytical results are summarized in Tables 2 and 3. During September, 2006 operation, the following VOCs were detected: trichloroethene (TCE), tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), cis-1,2-dichloroethene (1,2-DCE), Freon 12, Freon 113, toluene and 2-proponol. In all extraction points, VOC concentrations were less than levels observed during the last monitoring event of the pilot test (June 1, 2005). A summary of VOC analytical results is as follows:

- During the September, 2006 operational period, extraction point SVE-1 had TCE concentrations of 980 ug/m^3 and 1,700 ug/m^3, respectively. Total volatile organic compound (TVOC) concentrations for SVE-1 were 1,206 ug/m^3 and 2,100 ug/m^3, respectively. Under continued operation during September, 2006, TCE and TVOC concentrations decreased from the previous sampling round conducted in August, 2006 and are well below June, 2006 levels.

- During the September, 2006 operational period, extraction point SVE-2 had TCE concentrations of 3,400 ug/m^3 and 6,700 ug/m^3, respectively. Total volatile organic compound (TVOC) concentrations for SVE-1 were 3,709 ug/m^3 and 7,399 ug/m^3, respectively. Under continued operation during September, 2006, TCE and TVOC concentrations decreased from the previous sampling round conducted in August, 2006 and are below June, 2006 levels.

- During the September, 2006 operational period, extraction point SVE-3 had TCE concentrations of 270 ug/m^3 and 480 ug/m^3, respectively. Total volatile organic compound (TVOC) concentrations for SVE-1 were 439 ug/m^3 and 836 ug/m^3, respectively. Under continued operation during September, 2006, TCE and TVOC concentrations increased from the previous sampling round conducted in August, 2006 but are below June, 2006 levels.

- During the September, 2006 reporting period, the lead VPGAC vessel had an effluent TVOC concentration of 110 ug/m^3 and 259 ug/m^3, respectively. The stack had a total effluent TVOC concentration of 13 ug/m^3 and 140 ug/m^3, respectively. Methyl tert-butyl ether (MTBE) and 1,1 Dichloroethene (1,1 DCE) were not detected in the lead VPGAC vessel or the stack during this reporting period. There was no apparent reason for the occurrence of these compounds in the stack during the previous reporting period.

Conclusions & Recommendations

ARCADIS G&M has drawn the following conclusions based on the results provided herein:

- The VRS operated as intended (i.e., a negative vacuum was maintained throughout the entire building footprint and contaminant mass was removed).

- An overall declining trend in TCE and TVOC concentrations was observed in each of the three VRS extraction points.

- The highest VOC concentrations were observed in SVE-2 with lower concentrations present at SVE-1 and SVE-3.

- The emissions from the stack during the pilot test were below New York State Department of Conservation Annual Guideline Concentrations (AGCs).

Based on the conclusions above, ARCADIS recommends continued operation of the VRS. Please call if you have questions or require additional information.

Sincerely,

ARCADIS G&M, Inc.,

Douglas A. Smolensky
Associate Vice President

ARCADIS Engineers & Architects of New York, P.C.

Christina Berardi Tuohy

Christina Berardi Tuohy, P.E.
Vice President
New York Professional Engineer
License Number NY-078743-1

Copies:
Fred Werfel
Mike Tone
File

Table 1. System Operational Data, Vapor Recovery System, United Stellar Industris, Plainview, New York.

		SVE - 1 Extraction Well Parameters					SVE - 2 Extraction Well Parameters					SVE - 3 Extraction Well Parameters				
Date	Time	Wellhead Vacuum (in.W.C.)	Wellhead Temperature (Degrees F)	Air Velocity (fpm)	Air Flow Rate (1) (cfm)	PID Measured Concentration (ppmv)	Wellhead Vacuum (in.W.C.)	Wellhead Temperature (Degrees F)	Air Velocity (fpm)	Air Flow Rate (1) (cfm)	PID Measured Concentration (ppmv)	Wellhead Vacuum (in.W.C.)	Wellhead Temperature (Degrees F)	Air Velocity (fpm)	Air Flow Rate (1) (cfm)	PID Measured Concentration (ppmv)
6/8/06	1:40 PM [2]	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2:45PM[3]	-40.0	--	--	--	0.0	-39.0	--	--	--	0.0	-41.0	--	--	--	0.0
	4:45 PM	-40.0	--	--	--	0.0	-39.0	--	--	--	0.0	-42.0	--	--	--	0.0
	6:10 PM	-40.0	--	3,600.0	82.4	0.0	-39.0	--	2600	59.5	0.0	-42.0	--	3400	77.9	0.0
6/9/06	11:30:00 AM[4]	-56.0	--	--	--	--	-56.0	--	--	--	--	0.0	--	--	--	--
6/12/06	10:00 AM	-56.00	--	--	--	--	-56.0	--	--	--	--	0.0	--	--	--	--
6/16/06	2:30 PM	-39.0	70.0	4,400.0	100.8	0.0	-38.0	72.0	3800	87.0	0.0	40.0[7]	69.0	3200	73.3	0.0
6/30/06	12:10PM	-38.0	70.0	4,650.0	106.5	0.0	-38.0	78.0	4520	103.5	0.0	-40.0	75.0	4,800.0	109.9	0.0
7/14/06	2:14PM	-42.0	--	2,517.0	57.6	0.0	-42.5	--	2730	62.5	0.0	-51.0	--	1882	43.1	0.0
7/28/06	11:57 AM	-36.0	--	2,637.0	60.4	0.0	-35.8	--	1950	44.7	0.0	-37.9	--	2678	61.3	0.0
8/11/06	4:00 PM	-36.0	76.6	--	--	0.0	-37.0	78.9	--	--	0.0	-37.0	79.8	--	--	0.0
8/25/06	1:35 PM	-34.5	71.3	4,441.0	101.7	--	-34.0	75.0	3081	70.5	--	-36.1	75.5	3521	80.6	--
9/8/06	12:00AM	-34.0	72.8	3,756.0	86.0	0.0	-34.0	74.8	3467	79.4	0.0	-36.0	72.5	4232	96.9	0.0

1. Air flow rate was calculated by multiplying measured air velocity by cross sectional area of the pipe.
2. The Soil Vapor Extraction System baseline reading was taken @ 1:45PM June 8, 2006.
3. The system was started at 2:30 PM. First reading was taken at 15 minutes after start-up.
4. SVE-3 was valved off after leak was discovered in well head.
5. Temperature taken with handheld infra red thermometer
6. GAC 500 was temporarily removed until replacement vessel arrived
7. SVE-3 Well sealed and well brought on line
8. The MP-6 remote monitoring location was inoperational during the 8/25/06 O&M site visit.

Table 1. System Operational Data, Vapor Recovery System, United Stellar Industris, Plainview, New York.

		Blower Parameters			GAC 500 Parameters					GAC 600 Parameters					Induced Vacuum Measurements					
Date	Time	Influent Vacuum (in.W.C.)	Discharge Temperature (Degrees F)	Effluent Pressure (in.W.C.)	Discharge Pressure (in.W.C.)	Discharge Temperature (Degrees F)	Air Velocity (fpm)	Air Flow Rate (1) (cfm)	PID Measured Concentration (ppmv)	Discharge Pressure (in.W.C.)	Discharge Temperature (Degrees F)	Air Velocity (fpm)	Air Flow Rate (1) (cfm)	PID Measured Concentration (ppmv)	MP-1 (in.W.C.)	MP-2 (in.W.C.)	MP-3 (in.W.C.)	MP-4 (in.W.C.)	MP-5 (in.W.C.)	MP-6 (in.W.C.)
6/8/06	1:40:00 PM [2]	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.00	0.00	0.00
	2:45:00 PM[3]	-52.0	--	5.0	2.0	--	--	--	14.0	--	--	--	--	0.0	-0.14	-0.11	-0.08	-0.16	-0.09	-0.13
	4:45 PM	-51.0	--	6.0	2.0	--	--	--	10.5	--	--	--	--	--	-0.11	-0.09	-0.07	-0.16	-0.07	-0.11
	6:10 PM	-51.0	--	6.0	2.0	--	--	--	4.4	--	--	3000	68.7	--	-0.13	-0.09	-0.07	-0.16	-0.07	-0.11
6/9/06	11:30 AM	-64.0	130.0	4.0	1.0	115.0[5]	--	--	--	--	100.0(5)	0	--	--	-0.14	-0.12	-0.08	0.00	-0.01	-0.13
6/12/2006	10:00 AM	-65.0	--	4.0	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6/16/2006	2:30 PM	-50.0	--	4.0	--[6]	--	--	--	--	--	120.0	3800	87.0	0.0	-0.09	-0.09	-0.08	-0.17	-0.05	-0.10
6/30/06	12:10PM	-50.0	141.0[5]	8.0	--	--	--	--	--	0.0	100.0	4250	97.3	0.0	--	--	--	--	--	--
7/14/06	2:14PM	-51.0	133.2	8.0	7.0	--	--	--	0.0	0.0	108.8	1883	43.1	0.0	-0.10	-0.10	-0.15	-0.18	-0.08	-0.12
7/28/06	11:57 AM	-49.8	126 [5]	8.5	7.0	115 [5]	--	--	0.0	0.0	107 [5]	1530	35.0	0.0	-0.07	-0.10	-0.09	-0.16	-0.07	-0.01
8/11/06	4:00 PM	-49.0	--	9.0	--	--	--	--	--	--	--	--	--	--	-0.045	-0.045	-0.04	-0.075	-0.042	-0.08
8/25/06	1:35 PM	-48.5	127.8	9.0	7.5	--	--	--	--	0.0	98.6	5204	119.2	--	-0.03	-0.037	-0.03	-0.065	-0.025	0.00[8]
9/8/06	12:00AM	-48.0	--	9.5		--	--	--	--	0.0	107.7	3130	71.7	0.0	-0.04	-0.04	-0.04	-0.08	-0.05	-0.07

1. Air flow rate was calculated by multiplying measured air velocity by cross sectional area of the pipe.
2. The Soil Vapor Extraction System baseline reading was taken @ 1:45PM June 8, 2006.
3. The system was started at 2:30 PM. First reading was taken at 15 minutes after start-up.
4. SVE-3 was valved off after leak was discovered in well head.
5. Temperature taken with handheld infra red thermometer
6. GAC 500 was temporarily removed until replacement vessel arrived
7. SVE-3 Well sealed and well brought on line
8. The MP-6 remote monitoring location was inoperational during the 8/25/06 O&M site visit.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.

Compound	SVE-1 (1)							SVE-2 (1)							SVE-3 (1)						
	6/16/2006 (3) 3:00 PM (ug/m^3)	6/30/2006 12:00 PM (ug/m^3)	7/14/2006 3:50 PM (ug/m^3)	7/28/2006 1:35 PM (ug/m^3)	8/11/2006 4:45 PM (ug/m^3)	8/25/2006 3:30 PM (ug/m^3)	9/8/2006 12:00 PM (ug/m^3)	6/16/2006 (3) 3:00 PM (ug/m^3)	6/30/2006 12:00 PM (ug/m^3)	7/14/2006 3:50 PM (ug/m^3)	7/28/2006 1:35 PM (ug/m^3)	8/11/2006 4:45 PM (ug/m^3)	8/25/2006 3:30 PM (ug/m^3)	9/8/2006 12:00 PM (ug/m^3)	6/16/2006 (3) 3:00 PM (ug/m^3)	6/30/2006 12:00 PM (ug/m^3)	7/14/2006 3:50 PM (ug/m^3)	7/28/2006 1:35 PM (ug/m^3)	8/11/2006 4:45 PM (ug/m^3)	8/25/2006 3:30 PM (ug/m^3)	9/8/2006 12:00 PM (ug/m^3)
Freon 12	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	170	280	ND	ND	ND	ND	ND	ND	ND
Freon 113	280J	410	61	70	100	44	52	580J	580	190	180	310	ND	ND	130J	320	110	73	79	93	110
Chloroform	51J	160	ND	ND	33	ND	ND	NDJ	ND	ND	ND	ND	ND	ND	NDJ	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	150J	1100	220	210	340	87	98	64J	52	ND	ND	46	ND	39	NDJ	ND	ND	ND	ND	ND	ND
Trichloroethene	5200J	5900	840	1400	3200	980	1700	12000J	16000	3300	3200	8100	3400	6700	600J	1000	290	180	310	270	480
Tetrachloroethene	210J	220	ND	46	140	ND	60	180J	190	46	39	140	45	120	NDJ	49	ND	ND	ND	ND	34
trans-1,2-Dichloroethene	NDJ	ND	ND	ND	ND	ND	ND	NDJ	ND	ND	ND	ND	ND	ND	NDJ	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	140J	160	42	80	180	71	90	320J	290	88	84	160	82	140	27J	150	71	38	60	76	140
1,1-Dichloroethane	NDJ	ND	ND	20	32	ND	ND	NDJ	ND	ND	ND	ND	ND	ND	NDJ	ND	ND	ND	ND	ND	ND
Toluene	32J	ND	ND	ND	ND	24	ND	30J	ND	ND	ND	ND	ND	ND	NDJ	ND	ND	ND	ND	ND	ND
2-Propanol	200J	130	ND	ND	14	ND	100	150J	130	ND	ND	27	12	120	160J	150	ND	26	ND	ND	72
Total VOCs (2)	**6,263**	**8080**	**1163**	**1826**	**4068**	**1206**	**2100**	**13,324**	**17242**	**3624**	**3503**	**8783**	**3709**	**7399**	**917**	**1669**	**471**	**317**	**449**	**439**	**836**

ug/m^3 micrograms per cubic meter
ND analyte not detected at, or above its laboratory quantification limit

1. Samples collected by ARCADIS personnel during the periods shown and submitted to Air Toxics Laboratories., Folsom, CA. for volatile organic compound (VOC) analyses using Direct Inject Method TO-14. Only VOCs detected at any time during the pilot test at any location are presented on this table.
2. Total VOCs calculated by summing individual analytes.
3. Due to laboratory error, samples SVE-1, SVE-2, SVE-2 duplicate and SVE-3 were analyzed outside of the recommended hold time. Although subsequent laboratory testing indicating the results are representative, these results are nonetheless considered estimated and are noted with a J qualifier.

ARCADIS

Table 3. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.

	EFF-1[1]					EFF-2[1]				
Compound	6/30/2006 12:00 PM (ug/m^3)	7/28/2006 1:35 PM (ug/m^3)	8/11/2006 4:45 PM (ug/m^3)	8/25/2006 3:30 PM (ug/m^3)	9/8/2006 12:00 PM (ug/m^3)	6/30/2006 12:00 PM (ug/m^3)	7/28/2006 1:35 PM (ug/m^3)	8/11/2006 4:45 PM (ug/m^3)	8/25/2006 3:30 PM (ug/m^3)	9/8/2006 12:00 PM (ug/m^3)
Freon 113	ND	ND	ND	ND	49	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	140	54	ND	ND	ND	340	51	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	21	79	110	140	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	48	ND	ND	ND	ND
2-Propanol	170	58	27	ND	70	51	32	29	13	140
Benzene	18	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ND	ND	ND	ND	ND	ND	53	ND	ND	ND
1,1 DCE	ND	ND	ND	ND	ND	ND	29	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	24	ND	ND	ND
Total VOCs [2]	**328**	**133**	**106**	**110**	**259**	**439**	**189**	**29**	**13**	**140**

ug/m^3 micrograms per cubic meter

ND analyte not detected at, or above its laboratory quantification limit

(1) Samples collected by ARCADIS personnel during the periods shown and submitted to Air Toxics Laboratories., Folsom CA for volatile organic compound (VOC) analyses using Direct Inject Method TO-14.
Only VOCs detected at any time during the pilot test at any location are presented on this table.

Notes:

Total VOCs calculated by summing individual analytes.