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Infrastructure, environment, buildings

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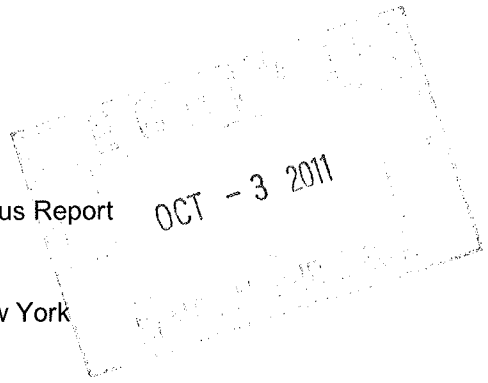

ENVIRONMENT

Subject:
October 2009 through June 2011 System Status Report
Soil Vapor Recovery System
United Stellar Industries Property
131 Sunnyside Boulevard Site, Plainview, New York

Date:
September 28, 2011

Contact:
Doug Smolensky

Phone:
(631) 391-5290

Email:
doug.smolensky@arcadis-us.com

Our ref:
NY001422.0004.00002

Dear Mr. Putnam:

ARCADIS of New York, Inc. (ARCADIS) has prepared this system status report for the Vapor Recovery System (VRS), on behalf of 131 Sunnyside, LLC (Sunnyside) and the Estate of 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 New York State Department of Environmental Conservation (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 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.

On September 22, 2009, the NYSDEC accepted the system modifications proposed in the August 20, 2009 submittal, "Air Emission Regulatory Review and Current Status, Related Calculations, and Proposed Modifications to Current System Configuration and Monitoring Procedures" (Regulatory Review). As recommended in the Regulatory Review, the vapor phase granular activated carbon (VPGAC) was taken off-line on December 3, 2009 and the frequency of performance and compliance monitoring was decreased from monthly to quarterly beginning with the fourth quarter 2009. No complications were encountered during the system modification. The following report provides documentation of all monitoring activities completed during the period beginning on October 1, 2009 and ending on June 30, 2011. During this reporting period (October 1, 2009 to June 30, 2011) the system was operated and the following seven performance monitoring events were performed:

- December 30, 2009
- March 25, 2010
- June 16, 2010
- September 28, 2010
- December 8, 2010
- March 22, 2011
- June 28, 2011

Operational and volatile organic compound (VOC) data collected during the monitoring events are summarized 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, and a moisture separator. The two 400 pound VPGACs were removed from system operation on December 3, 2009. 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, extraction 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 this reporting period ranged from approximately 27.1 to 90.7 cubic feet per minute (cfm).
- VRS wellhead vacuum measurements during this reporting period ranged from -36.0 inches water column (i.w.c.) to -43.0 i.w.c.

- PID measurements during this reporting period ranged from 0.0 parts per million (ppm) to 1.4 ppm.

- Induced vacuum levels measured at the monitoring point locations (MP-1 through MP-6) are summarized below:

    - Negative vacuum levels were measured in monitoring points MP-1, MP-2, and MP-6 during this reporting period.

    - Negative vacuum levels were measured in monitoring point MP-3 during the March to December 2010 monitoring events. There was no induced vacuum measured at monitoring point MP-3 during the December 30, 2009, March 22, 2011, and June 28, 2011 monitoring events.

    - Negative vacuum levels were measured in monitoring point MP-4 during the March 2010 to March 2011 monitoring events. There was no induced vacuum measured at monitoring point MP-4 during the December 30, 2009 and June 28, 2011 monitoring events.

    - Negative vacuum levels were measured in monitoring point MP-5 during the December 2009 to March 2010 and September 2010 to June 2011 monitoring events. There was no induced vacuum measured at monitoring point MP-5 during the June 16, 2010 monitoring event.

    - In all, 36 of the 42 measurements taken, showed negative vacuum levels.

Due to limited access to the monitoring point locations, monitoring points MP-3, MP-4 and MP-5 could not be examined to determine the cause of the lack of induced vacuum levels. However, the changes in induced vacuum measured at these monitoring points may be due to seasonal variations.

Vapor sample analytical results are summarized in Tables 2 and 3. In all extraction points, VOC concentrations were significantly 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 this reporting period, extraction point SVE-1 had Trichloroethene (TCE) concentrations ranging from not detected to 590.0 ug/m^3. Total volatile organic compounds (TVOC) concentrations for SVE-1 ranged from not detected to 684.0

ug/m^3. TCE and TVOC concentrations generally decreased from the previous sampling rounds conducted at the end of the March 2008 to September 2009 operational period for all sampling events completed during the reporting period. TCE and TVOC concentrations are well below the June 2006 levels for all sampling events completed during this reporting period.

- During this reporting period, extraction point SVE-2 had TCE concentrations ranging from not detected to 940 ug/m^3. TVOC concentrations for SVE-2 ranged from 160 ug/m^3 to 1,234 ug/m^3. TCE and TVOC concentrations generally decreased from the previous sampling rounds conducted during the March 2008 to September 2009 operational period for all sampling events completed during the reporting period. TCE and TVOC concentrations are well below the June 2006 levels for all sampling events completed during this reporting period.

- During this reporting period, extraction point SVE-3 had TCE concentrations ranging from not detected to 93.0 ug/m^3. TVOC concentrations for SVE-3 generally decreased from the previous sampling rounds conducted during the March 2008 to September 2009 operational period for all sampling events completed during the reporting period. TCE and TVOC concentrations are well below the June 2006 levels for all sampling events completed during this reporting period.

- In addition to the field and laboratory analytical results provided herein, ARCADIS calculated and is providing air modeling results for the seven monitoring events completed during the current reporting period. Air modeling calculations were performed using both the influent and effluent concentrations, and the NYSDEC DAR-1 Annual Guidance Concentration (AGC) model. Modeling results are provided in Tables A1 through A7. As shown on the Tables A1 through A7, modeling results indicate that both the influent (i.e., untreated) and effluent (i.e., treated) vapor stream have been below NYSDEC AGCs during the last seven monitoring events.

Conclusions

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

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

- TCE and TVOC concentrations have decreased significantly (from 2006 levels) 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; and,

- NYSDEC DAR-1 AGC emissions calculations indicate that the effluent vapor stream has been below the NYSDEC AGC limits for the last seven monitoring events. Additional NYSDEC DAR-1 AGC emissions calculations indicate that the influent vapor stream has also been below NYSDEC AGC limits for the last seven monitoring events.

ARCADIS of New York, Inc. recommends the following based on the results provided herein:

- Continued operation of the VRS; and

Please call if you have questions or require additional information.

Sincerely,

ARCADIS of New York, Inc.

Douglas A. Smolensky
Associate Vice President

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

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Fred Werfel
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File

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Table 1. System Operational Data, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Date	SVE - 1 Extraction Well Parameters				SVE - 2 Extraction Well Parameters				SVE - 3 Extraction Well Parameters			
	Wellhead Vacuum (in.W.C.)	Air Velocity (fpm)	Air Flow Rate[2] (cfm)	PID Measured Concentration (ppmv)	Wellhead Vacuum (in.W.C.)	Air Velocity (fpm)	Air Flow Rate[2] (cfm)	PID Measured Concentration (ppmv)	Wellhead Vacuum (in.W.C.)	Air Velocity (fpm)	Air Flow Rate[2] (cfm)	PID Measured Concentration (ppmv)
12/30/09[3]	-39.0	2,867	65.6	0.0	-42.0	1,311	30.0	0.0	-43.0	2,730	62.5	0.0
03/25/10	-39.5	3,302	75.6	0.0	-40.0	1,826	41.8	0.0	-40.0	2,498	57.2	0.0
06/16/10	-36.0	3,961	90.7	0.0	-38.0	2,484	56.9	0.0	-36.0	3,271	74.9	0.0
09/28/10[5]	-36.0	3,386	77.5	--	-38.0	2,123	48.6	--	-36.0	3,332	76.3	--
12/08/10	-38.0	3,101	71.0	0.2	-40.0	1,495	34.2	0.0	-38.0	2,565	58.7	0.0
03/22/11[6]	-40.0	2,678	61.3	0.2	-42.0	1,182	27.1	0.1	-40.0	2,346	53.7	0.1
06/28/11	-38.0	2,930	67.1	1.4	-39.0	1,860	42.6	0.5	-36.0	2,580	59.1	0.0

See notes on last page.

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Table 1. System Operational Data, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

	Blower Parameters		GAC 500 Parameters					Discharge Parameters				
Date	Influent Vacuum (in.W.C.)	Effluent Pressure (in.W.C.)	Influent Pressure (in.W.C.)	Influent Temperature (Degrees F)	Air Velocity (fpm)	Air Flow Rate [2] (cfm)	PID Measured Concentration (ppmv)	Discharge Pressure (in.W.C.)	Discharge Temperature (Degrees F)	Air Velocity (fpm)	Air Flow Rate [2] (cfm)	PID Measured Concentration (ppmv)
12/30/09 [3]	-55.0	0.0	NA	NA	NA	NA	NA	0.0	93.0	2,473	221.1	0.0
03/25/10	-56.0	2.0 [4]	NA	NA	NA	NA	NA	0.0	101.8	2,945	263.3	0.0
06/16/10	-53.0	0.0	NA	NA	NA	NA	NA	0.0	109.2	2,932	262.2	0.0
09/28/10 [5]	-52.0	0.0	NA	NA	NA	NA	NA	0.0	109.5	2,226	199.0	--
12/08/10	-54.0	0.0	NA	NA	NA	NA	NA	0.0	85.1	1,866	166.8	0.0
03/22/11 [6]	-62.0	0.0	NA	NA	NA	NA	NA	0.0	84.0	2,180	194.9	0.0
06/28/11	-54.0	0.0	NA	NA	NA	NA	NA	0.0	113.6	1,730	154.7	0.4

See notes on last page.

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Table 1. System Operational Data, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Date	Induced Vacuum Measurements					
	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.)
12/30/09 [3]	-0.02	-0.04	0.01	0.00	-0.03	-0.04
03/25/10	-0.04	-0.05	-0.03	-0.01	-0.06	-0.07
06/16/10	-0.03	-0.05	-0.01	-0.01	0.00	-0.04
09/28/10 [5]	-0.05	-0.11	-0.02	-0.01	-0.06	-0.07
12/08/10	-0.12	-0.12	-0.02	-0.01	-0.11	-0.07
03/22/11 [6]	-0.06	-0.07	0.01	-0.01	-0.06	-0.03
06/28/11	-0.02	-0.07	0.06	0.00	-0.05	-0.04

See notes on last page.

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Table 1. System Operational Data, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Notes:

1. Data in this table corresponds to the current reporting period (October 1, 2009 to June 30, 2011).
2. The air flow rate was calculated by multiplying the measured air velocity in feet per minute by the cross sectional area of the pipe.
3. With prior approval, the compliance monitoring frequency was decreased from monthly to quarterly, beginning with the fourth quarter of 2009. Additionally, with prior approval, vapor phase granular activated carbon air treatment was removed from system operation on December 3, 2009.
4. Pressure gauge replaced during the March 25, 2010 monitoring event.
5. PID measurements were not collected during the September 28, 2010 monitoring event because of a faulty PID.
6. Air flow rate and temperature measurements were collected on March 04, 2011.

cfm	Cubic feet per minute
Degree F	Degrees Fahrenheit
fpm	Feet per minute
in. W.C.	Inches of water column
NA	Not applicable
PID	Photoionization detector
ppmv	Parts per million by volume
--	Not measured

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Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-1 [3] 6/16/2006	SVE-1 6/30/2006	SVE-1 7/14/2006	SVE-1 7/28/2006	SVE-1 8/11/2006	SVE-1 8/25/2006	SVE-1 9/8/2006	SVE-1 10/5/2006	SVE-1 11/3/2006
Freon 12		ND J	ND	ND	ND	29	ND	ND	25	29
Freon 113		280 J	410	61	70	100	44	52	67	51
Chloroform		51 J	160	ND	ND	33	ND	ND	ND	ND
1,1,1-Trichloroethane		150 J	1,100	220	210	340	87	98	110	76
Trichloroethene		5,200 J	5,900	840	1,400	3,200	980	1,700	3,000	2,300
Tetrachloroethene		210 J	220	ND	46	140	ND	60	130	110
cis-1,2-Dichloroethene		140 J	160	42	80	180	71	90	130	110
1,1-Dichloroethane		ND J	ND	ND	20	32	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		32 J	ND	ND	ND	ND	24	ND	ND	ND
2-Propanol		200 J	130	ND	ND	14	ND	100	45	16
Methylene Chloride		ND J	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND J	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**6263 J**	**8,080**	**1,163**	**1,826**	**4,068**	**1,206**	**2,100**	**3,507**	**2,692**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-1 12/5/2006	SVE-1 4/26/2007	SVE-1 5/29/2007	SVE-1 6/27/2007	SVE-1 7/26/2007	SVE-1 [4] 9/6/2007	SVE-1 9/28/2007	SVE-1 10/25/2007	SVE-1 [5] 12/13/2007
Freon 12		28	ND	ND	ND	ND	ND	ND	ND	33
Freon 113		45	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		53	27	34	34	48	28	ND	ND	42
Trichloroethene		1,400	650	1,300	1,300	1,700	900	1,300	1,200	1,200
Tetrachloroethene		ND	ND	38	51	68	ND	ND	ND	36
cis-1,2-Dichloroethene		97	42	71	70	86	52	51	59	76
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	30	ND	ND	30
2-Propanol		12	ND	ND	36	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	28	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**1,635**	**719**	**1,443**	**1,491**	**1,902**	**1,038**	**1,351**	**1,259**	**1,417**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-1 12/27/2007	SVE-1 [6] 2/5/2008	SVE-1 2/26/2008	SVE-1 [7] 4/3/2008	SVE-1 4/30/2008	SVE-1 5/27/2008	SVE-1 6/26/2008	SVE-1 7/23/2008	SVE-1 8/28/2008
Freon 12		53	33	28	ND	35	43	40	36	58
Freon 113		ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		59	45	29	ND	36	42	29	33	44
Trichloroethene		2,500	2,000	1,400	700	2,000	2,600	2,200	1,900	2,500
Tetrachloroethene		100	75	59	ND	66	100	98	91	120
cis-1,2-Dichloroethene		120	110	84	45	120	140	110	100	140
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		71	ND	40	230	ND	ND	ND	ND	ND
2-Propanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride		34	ND	ND	17	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	16	ND	19	ND
Hexane		ND	ND	ND	64	ND	ND	ND	ND	ND
2-Butanone		30	ND	ND	22	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	62	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	60	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	25	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**2,967**	**2,263**	**1,640**	**1,225**	**2,257**	**2,941**	**2,477**	**2,179**	**2,862**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-1 9/30/2008	SVE-1 10/30/2008	SVE-1 [8] 11/25/2008	SVE-1 [9] 1/14/2009	SVE-1 2/25/2009	SVE-1 3/31/2009	SVE-1 [10] 5/12/2009	SVE-1 5/28/2009	SVE-1 6/30/2009
Freon 12		40	28	--	ND	ND	ND	ND	29	36
Freon 113		ND	ND	--	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	--	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		28	ND	--	ND	ND	ND	ND	ND	ND
Trichloroethene		1,600	840	--	880	500	740	720	1,500	1,100
Tetrachloroethene		72	ND	--	36	ND	38	ND	70	36
cis-1,2-Dichloroethene		87	56	--	48	31	44	46	92	70
1,1-Dichloroethane		ND	ND	--	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	--	ND	ND	ND	ND	ND	ND
Toluene		ND	58	--	ND	ND	ND	ND	ND	68
2-Propanol		ND	ND	--	ND	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	--	ND	ND	ND	ND	23	ND
Carbon Disulfide		ND	ND	--	ND	ND	ND	ND	ND	23
Hexane		ND	ND	--	ND	ND	ND	ND	ND	ND
2-Butanone		ND	16	--	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	--	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	--	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	--	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	--	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	63	--	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	94	--	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	32	--	ND	ND	ND	ND	ND	42
m,p-Xylene		ND	140	--	ND	ND	ND	ND	ND	180
o-Xylene		ND	78	--	ND	ND	ND	ND	ND	69
4-Ethyltoluene		ND	79	--	ND	ND	ND	ND	ND	74
1,3,5-Trimethylbenzene		ND	57	--	ND	ND	ND	ND	ND	26
1,2,4-Trimethylbenzene		ND	94	--	ND	ND	ND	ND	ND	74
Heptane		ND	ND	--	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	--	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**1,827**	**1,635**	**--**	**964**	**531**	**822**	**766**	**1,714**	**1,798**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-1 [11] 8/3/2009	SVE-1 8/31/2009	SVE-1 [12] 9/30/2009	SVE-1 12/30/2009	SVE-1 3/25/2010	SVE-1 6/16/2010	SVE-1 9/28/2010	SVE-1 12/8/2010	SVE-1 3/22/2011
Freon 12		ND	ND	ND	ND	ND	ND	25	ND	ND
Freon 113		ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		310	150	130	83	81	ND	590	240	270
Tetrachloroethene		ND	ND	ND	ND	ND	ND	38	ND	ND
cis-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	31	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	47	ND
2-Propanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		30	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**340**	**150**	**130**	**83**	**81**	**ND**	**684**	**287**	**270**

See notes on last page.

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Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID:	SVE-1
	Date:	6/28/2011
Freon 12		ND
Freon 113		ND
Chloroform		ND
1,1,1-Trichloroethane		ND
Trichloroethene		270
Tetrachloroethene		ND
cis-1,2-Dichloroethene		ND
1,1-Dichloroethane		ND
1,1-Dichloroethene		ND
Toluene		26
2-Propanol		ND
Methylene Chloride		ND
Carbon Disulfide		ND
Hexane		ND
2-Butanone		ND
Ethanol		ND
Acetone		69
Benzene		ND
1,2-Dichloropropane		ND
Tetrahydrofuran		ND
2,2,4-Trimethylpentane		ND
Ethyl Benzene		ND
m,p-Xylene		ND
o-Xylene		ND
4-Ethyltoluene		ND
1,3,5-Trimethylbenzene		ND
1,2,4-Trimethylbenzene		ND
Heptane		ND
MTBE		ND
Total VOCs [2]		**365**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-2 [3] 6/16/2006	SVE-2 6/30/2006	SVE-2 7/14/2006	SVE-2 7/28/2006	SVE-2 8/11/2006	SVE-2 8/25/2006	SVE-2 9/8/2006	SVE-2 10/5/2006	SVE-2 11/3/2006
Freon 12		ND J	ND	ND	ND	ND	170	280	ND	ND
Freon 113		580 J	580	190	180	310	ND	ND	250	240
Chloroform		ND J	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		64 J	52	ND	ND	46	ND	39	35	36
Trichloroethene		12,000 J	16,000	3,300	3,200	8,100	3,400	6,700	5,500	4,200
Tetrachloroethene		180 J	190	46	39	140	45	120	130	130
cis-1,2-Dichloroethene		320 J	290	88	84	160	82	140	100	89
1,1-Dichloroethane		ND J	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		30 J	ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol		150 J	130	ND	ND	27	12	120	41	16
Methylene Chloride		ND J	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND J	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND J	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND J	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**13,324 J**	**17,242**	**3,624**	**3,503**	**8,783**	**3,709**	**7,399**	**6,056**	**4,711**

See notes on last page.

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Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-2 12/5/2006	SVE-2 4/26/2007	SVE-2 5/29/2007	SVE-2 6/27/2007	SVE-2 7/26/2007	SVE-2 [4] 9/6/2007	SVE-2 9/28/2007	SVE-2 10/25/2007	SVE-2 [5] 12/13/2007
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		210	110	190	ND	210	170	ND	ND	76
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	29	ND	40	29	ND	ND	ND
Trichloroethene		2,300	1,400	4,300	240	3,700	2,600	3,400	2,100	1,600
Tetrachloroethene		53	ND	110	ND	130	58	ND	ND	73
cis-1,2-Dichloroethene		65	38	300	ND	84	63	ND	ND	39
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		21	ND	ND	95	ND	ND	ND	ND	ND
2-Propanol		13	ND	ND	170	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	50	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**2,662**	**1,548**	**4,929**	**555**	**4,164**	**2,920**	**3,400**	**2,100**	**1,788**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID:	SVE-2	SVE-2 [6]	SVE-2	SVE-2 [7]	SVE-2	SVE-2	SVE-2	SVE-2	SVE-2
	Date:	12/27/2007	2/5/2008	2/26/2008	4/3/2008	4/30/2008	5/27/2008	6/26/2008	7/23/2008	8/28/2008
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		92	94	97	ND	100	100	73	80	95
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		29	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		3,400	2,100	2,000	780	2,500	3,300	2,600	2,400	2,900
Tetrachloroethene		210	120	110	ND	89	110	110	100	130
cis-1,2-Dichloroethene		54	43	38	ND	53	60	51	48	63
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	24	ND	210	ND	ND	ND	ND	ND
2-Propanol		ND	ND	ND	51	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	18	28	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	18	ND	20	ND
Hexane		ND	ND	ND	82	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	18	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	59	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	60	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	24	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**3,785**	**2,381**	**2,245**	**1,302**	**2,770**	**3,588**	**2,834**	**2,648**	**3,188**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-2 9/30/2008	SVE-2 10/30/2008	SVE-2 11/25/2008	SVE-2 [9] 1/14/2009	SVE-2 2/25/2009	SVE-2 3/31/2009	SVE-2 [10] 5/12/2009	SVE-2 5/28/2009	SVE-2 6/30/2009	SVE-2 [11] 8/3/2009
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		63	ND	ND	ND	ND	ND	ND	59	68	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		1,800	310	840	1,200	1,200	1,600	1,800	2,700	1,700	480
Tetrachloroethene		93	ND	45	66	51	58	59	100	49	ND
cis-1,2-Dichloroethene		42	ND	ND	25	21	32	35	59	41	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	370	ND	ND	ND	ND	ND	ND	20	ND
2-Propanol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride		ND	23	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	ND	22	28
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		66	ND	68	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	61	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	23	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	32	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	32	ND
Heptane		ND	27	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**2,064**	**730**	**953**	**1,291**	**1,272**	**1,690**	**1,894**	**2,918**	**2,048**	**508**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID:	SVE-2	SVE-2 [12]	SVE-2	SVE-2	SVE-2	SVE-2	SVE-2	SVE-2
	Date:	8/31/2009	9/30/2009	12/30/2009	3/25/2010	6/16/2010	9/28/2010	12/8/2010	3/22/2011
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		240	200	160	160	200	840	940	ND
Tetrachloroethene		ND	ND	ND	ND	ND	64	66	ND
cis-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	20	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol		ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	19	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	330	ND	460 J
Acetone		ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**240**	**200**	**160**	**160**	**200**	**1,234**	**1,045**	**460 J**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID:	SVE-2
	Date:	6/28/2011
Freon 12		ND
Freon 113		ND
Chloroform		ND
1,1,1-Trichloroethane		ND
Trichloroethene		650
Tetrachloroethene		ND
cis-1,2-Dichloroethene		ND
1,1-Dichloroethane		ND
1,1-Dichloroethene		ND
Toluene		ND
2-Propanol		ND
Methylene Chloride		ND
Carbon Disulfide		18
Hexane		ND
2-Butanone		ND
Ethanol		ND
Acetone		ND
Benzene		ND
1,2-Dichloropropane		ND
Tetrahydrofuran		ND
2,2,4-Trimethylpentane		ND
Ethyl Benzene		ND
m,p-Xylene		ND
o-Xylene		ND
4-Ethyltoluene		ND
1,3,5-Trimethylbenzene		ND
1,2,4-Trimethylbenzene		ND
Heptane		ND
MTBE		ND
Total VOCs [2]		**668**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-3 12/27/2007	SVE-3 [6] 2/5/2008	SVE-3 2/26/2008	SVE-3 [7] 4/3/2008	SVE-3 4/30/2008	SVE-3 5/27/2008	SVE-3 6/26/2008	SVE-3 7/23/2008	SVE-3 8/28/2008
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		48	44	ND	ND	ND	ND	ND	ND	50
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		170	92	71	55	88	110	100	120	160
Tetrachloroethene		39	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		170	110	92	73	93	140	130	140	330
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	27	96	ND	ND	ND	96	ND
2-Propanol		ND	ND	ND	49	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	16	ND	26	ND
Hexane		ND	ND	ND	41	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	44	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	38	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**427**	**246**	**190**	**358**	**181**	**266**	**230**	**420**	**540**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-3 9/30/2008	SVE-3 10/30/2008	SVE-3 11/25/2008	SVE-3 [9] 1/14/2009	SVE-3 2/25/2009	SVE-3 3/31/2009	SVE-3 [10] 5/12/2009	SVE-3 5/28/2009	SVE-3 6/30/2009
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		160	100	71	100	39	63	56	35	76
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		300	110	190	150	93	110	110	78	140
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	210	ND	ND	ND	ND	ND	120	19
2-Propanol		ND	ND	ND	ND	ND	ND	ND	90	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	23	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	ND	29
Hexane		ND	ND	ND	ND	ND	ND	ND	75	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	21	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	49	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	130 J	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	24	52
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	26
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**460**	**420**	**261**	**250**	**132**	**173**	**166**	**691**	**342**

See notes on last page.

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Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	SVE-3 [11] 8/3/2009	SVE-3 8/31/2009	SVE-3 [12] 9/30/2009	SVE-3 12/30/2009	SVE-3 3/25/2010	SVE-3 6/16/2010	SVE-3 9/28/2010	SVE-3 12/8/2010	SVE-3 3/22/2011
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		28	ND	ND	ND	ND	ND	93	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		40	ND	28	27	21	ND	210	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	29	ND
2-Propanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		37	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	20	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	220	74	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**105**	**ND**	**28**	**27**	**21**	**ND**	**523**	**123**	**ND**

See notes on last page.

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Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: SVE-3 Date: 6/28/2011
Freon 12	ND
Freon 113	ND
Chloroform	ND
1,1,1-Trichloroethane	ND
Trichloroethene	34
Tetrachloroethene	ND
cis-1,2-Dichloroethene	100
1,1-Dichloroethane	ND
1,1-Dichloroethene	ND
Toluene	35
2-Propanol	ND
Methylene Chloride	ND
Carbon Disulfide	22
Hexane	ND
2-Butanone	ND
Ethanol	180
Acetone	ND
Benzene	ND
1,2-Dichloropropane	ND
Tetrahydrofuran	ND
2,2,4-Trimethylpentane	ND
Ethyl Benzene	ND
m,p-Xylene	ND
o-Xylene	ND
4-Ethyltoluene	ND
1,3,5-Trimethylbenzene	ND
1,2,4-Trimethylbenzene	ND
Heptane	ND
MTBE	ND
Total VOCs [2]	**371**

See notes on last page.

Table 2. Summary of Extraction Well Vapor Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Notes:

1. Samples collected by ARCADIS personnel on the dates shown and submitted to Air Toxics Laboratories in Folsom, CA for VOC analyses using Direct Inject Method TO-14. Only VOCs detected at or above their respective laboratory quantification limits at any sample location during the project are presented in this table.
2. "Total VOCs" represents the sum of individual concentrations of compounds listed in this table.
3. Due to laboratory error, samples SVE-1, SVE-2, 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.
4. The August, 2007 monthly compliance sampling event was completed on September 6, 2007.
5. Sample SVE-1 collected on November 29, 2007 arrived at the laboratory flat. All monthly compliance samples were re-collected on December 13, 2007.
6. Samples collected on January 31, 2008 were delivered to the laboratory outside of the recommended holding time. January monthly compliance sampling was re-conducted on February 5, 2008.
7. Sample SVE-2 collected on March 26, 2008 arrived at the laboratory flat. All monthly compliance samples were re-collected on April 3, 2008.
8. Sample SVE-1 was not collected during the November 2008 operational period due to a lack of a sufficient quantity of sample bags.
9. Samples were not collected during the December 2008 operational period as a result of the system being intermittently offline due to water accumulation in the system knock-out tank.
10. April monthly compliance sampling was completed on May 12, 2009.
11. July monthly compliance sampling was completed on August 3, 2009.
12. With prior approval, the frequency of compliance monitoring was decreased from monthly to quarterly beginning with the fourth quarter 2009.

J	Estimated value
ND	Analyte not detected at, or above its laboratory quantification limit
ug/m^3	Micrograms per cubic meter
VOC	Volatile organic compound
--	Not analyzed

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Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	EFF-1 6/30/2006	EFF-1 7/28/2006	EFF-1 8/11/2006	EFF-1 8/25/2006	EFF-1 9/8/2006	EFF-1 10/5/2006	EFF-1 11/3/2006	EFF-1 12/5/2006	EFF-1 4/26/2007
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	ND	ND	49	72	61	64	74
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	28	ND	ND
Trichloroethene		140	54	ND	ND	ND	120	82	160	200
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		ND	21	79	110	140	140	98	93	68
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol		170	58	27	ND	70	46	12	20	61
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		18	ND	ND	ND	ND	ND	ND	ND	54
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**328**	**133**	**106**	**110**	**259**	**378**	**281**	**337**	**457**

See notes on last page.

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Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	EFF-1 5/29/2007	EFF-1 6/27/2007	EFF-1 7/26/2007	EFF-1 [3] 9/6/2007	EFF-1 9/28/2007	EFF-1 10/25/2007	EFF-1 [4] 12/13/2007	EFF-1 12/27/2007	EFF-1 [5] 2/5/2008
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	340	220	160	97	53	ND	49
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	120	74	ND	ND	ND	ND	ND
Trichloroethene		390	130	2,800	2,100	2,600	1,100	700	680	590
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		84	26	440	220	210	160	130	96	92
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		77	60	ND	ND	ND	ND	ND	63	84
2-Propanol		39	81	ND	ND	ND	ND	ND	ND	64
Methylene Chloride		18	85	ND	ND	ND	ND	ND	32	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	17	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	38	42
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**608**	**382**	**3,700**	**2,614**	**2,970**	**1,357**	**883**	**926**	**921**

See notes on last page.

Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	EFF-1 2/26/2008	EFF-1 [6] 4/3/2008	EFF-1 4/30/2008	EFF-1 5/27/2008	EFF-1 6/26/2008	EFF-1 7/23/2008	EFF-1 8/28/2008	EFF-1 9/30/2008	EFF-1 10/30/2008
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		60	58	76	87	76	55	65	42	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	30	58	36	32	39	ND	ND
Trichloroethene		820	820	1,200	2,500	2,300	1900	2,900	2,000	350
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		120	120	97	140	96	81	170	140	45
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		22	ND	ND	ND	ND	210	ND	ND	45
2-Propanol		ND	ND	ND	52	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	21	ND	22	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	21	ND	ND	ND
Ethanol		ND	ND	53	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	83	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	50
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	66
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	23
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	110
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	60
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	60
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	45
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	80
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**1,022**	**998**	**1,456**	**2,858**	**2,508**	**2,404**	**3,174**	**2,182**	**934**

See notes on last page.

Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID:	EFF-1	EFF-1 [7]	EFF-1	EFF-1	EFF-1 [8]	EFF-1	EFF-1	EFF-1 [9]	EFF-1
	Date:	11/25/2008	1/14/2009	2/25/2009	3/31/2009	5/12/2009	5/28/2009	6/30/2009	8/3/2009	8/31/2009
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	ND	ND	ND	ND	53	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		56	490	330	580	680	1,600	2,300	520	260
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		ND	83	25	62	79	140	120	24	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	25	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	21	19	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	33	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**56**	**573**	**355**	**642**	**759**	**1,765**	**2,527**	**563**	**260**

See notes on last page.

Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID:	EFF-1 [10]	EFF-1 [10]
	Date:	9/30/2009	--
Freon 12		ND	--
Freon 113		ND	--
Chloroform		ND	--
1,1,1-Trichloroethane		ND	--
Trichloroethene		150	--
Tetrachloroethene		ND	--
cis-1,2-Dichloroethene		ND	--
1,1-Dichloroethane		ND	--
1,1-Dichloroethene		ND	--
Toluene		ND	--
2-Propanol		ND	--
Methylene Chloride		ND	--
Carbon Disulfide		ND	--
Hexane		ND	--
2-Butanone		ND	--
Ethanol		ND	--
Acetone		ND	--
Benzene		ND	--
1,2-Dichloropropane		ND	--
Tetrahydrofuran		ND	--
2,2,4-Trimethylpentane		ND	--
Ethyl Benzene		ND	--
m,p-Xylene		ND	--
o-Xylene		ND	--
4-Ethyltoluene		ND	--
1,3,5-Trimethylbenzene		ND	--
1,2,4-Trimethylbenzene		ND	--
Heptane		ND	--
MTBE		ND	--
Total VOCs [2]		**150**	--

See notes on last page.

Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	EFF-2 6/30/2006	EFF-2 7/28/2006	EFF-2 8/11/2006	EFF-2 8/25/2006	EFF-2 9/8/2006	EFF-2 10/5/2006	EFF-2 11/3/2006	EFF-2 12/5/2006	EFF-2 4/26/2007
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		340	51	ND	ND	ND	29	ND	94	ND
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	22	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	29	ND	ND	ND	ND	ND	ND	ND
Toluene		48	ND	ND	ND	ND	ND	ND	19	ND
2-Propanol		51	32	29	13	140	65	34	21	52
Methylene Chloride		ND	24	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	53	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**439**	**189**	**29**	**13**	**140**	**94**	**34**	**156**	**52**

See notes on last page.

Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	EFF-2 5/29/2007	EFF-2 6/27/2007	EFF-2 7/26/2007	EFF-2 [3] 9/6/2007	EFF-2 9/28/2007	EFF-2 10/25/2007	EFF-2 [4] 12/13/2007	EFF-2 12/27/2007	EFF-2 [5] 2/5/2008
Freon 12		ND	ND	ND	ND	ND	ND	ND	33	ND
Freon 113		ND	110	280	280	240	210	110	76	110
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	55	63	ND	60	55	59
Trichloroethene		ND	ND	ND	ND	34	110	150	190	270
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		310	360	540	320	270	190	140	130	150
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol		ND	38	ND	ND	75	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	130	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**310**	**508**	**820**	**655**	**682**	**510**	**460**	**614**	**589**

See notes on last page.

Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID:	EFF-2	EFF-2 [7]	EFF-2	EFF-2	EFF-2 [8]	EFF-2	EFF-2	EFF-2 [9]	EFF-2
	Date:	11/25/2008	1/14/2009	2/25/2009	3/31/2009	5/12/2009	5/28/2009	6/30/2009	8/3/2009	8/31/2009
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	ND	ND	ND	53	54	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	30	ND	ND
Trichloroethene		420	700	510	820	740	1,700	2,500	590	300
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		35	73	68	92	66	160	120	29	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		32	ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	21	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	20	30	ND
Hexane		ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**487**	**773**	**578**	**912**	**806**	**1,934**	**2,724**	**649**	**300**

See notes on last page.

Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Constituents (units in ug/m^3)	Sample ID: / Date:	EFF-2 [10] 9/30/2009	EFF-2 12/30/2009	EFF-2 3/25/2010	EFF-2 6/16/2010	EFF-2 9/28/2010	EFF-2 12/8/2010	EFF-2 3/22/2011	EFF-2 6/28/2011
Freon 12		ND	ND	ND	ND	ND	ND	ND	ND
Freon 113		ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		170	81	68	88	580	460	350	ND
Tetrachloroethene		ND	ND	ND	ND	43	ND	ND	ND
cis-1,2-Dichloroethene		ND	ND	ND	ND	110	100	63	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND	ND	ND	ND
2-Propanol		ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	ND	ND	17
Hexane		ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone		ND	ND	ND	ND	ND	ND	ND	ND
Ethanol		ND	ND	ND	ND	ND	64	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran		ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane		ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene		ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND
Heptane		ND	ND	ND	ND	ND	ND	ND	ND
MTBE		ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs [2]		**170**	**81**	**68**	**88**	**733**	**624**	**413**	**17**

See notes on last page.

Table 3. Summary of Carbon Effluent Sample Analytical Results, Vapor Recovery System, United Stellar Industries, Plainview, New York.[1]

Notes:

1. Samples collected by ARCADIS personnel on the dates shown and submitted to Air Toxics Laboratories in Folsom, CA for VOC analyses using Direct Inject Method TO-14. Only VOCs detected at or above their respective laboratory quantification limits at any sample location during the project are presented in this table.
2. "Total VOCs" represents the sum of individual concentrations of compounds listed in this table.
3. The August monthly compliance sampling event was completed on September 6, 2007.
4. Sample EFF-1 collected on November 29, 2007 arrived at the laboratory flat. All monthly compliance samples were re-collected on December 13, 2007.
5. Samples collected on January 31, 2008 were delivered to the laboratory outside of the recommended holding time. January monthly compliance sampling was re-conducted on February 5, 2008.
6. Sample SVE-2 collected on March 26, 2008 arrived at the laboratory flat. All monthly compliance samples were re-collectedo n April 3, 2008.
7. Samples were not collected during the December 2008 operational period as a result of the system being intermittently offline due to water accumulation in the system knock-out tank.
8. The April 2009 sampling event was completed on May 12, 2009.
9. The July 2009 sampling event was completed on August 3, 2009.
10. With prior New York State Department of Environmental Conservation approval, carbon treatment was removed from system operation on December 3, 2009. Therefore, sample location EFF-1 was subsequently removed from system operation.
11. With prior approval, the frequency of compliance monitoring was decreased from monthly to quarterly beginning with the fourth quarter 2009.

ND Analyte not detected at, or above its laboratory quantification limit
VOC Volatile organic compound
ug/m^3 Micrograms per cubic meter
-- Not analyzed

Table A1. NYSDEC DAR-1 December 30, 2009, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Mass Balance

Measured Effluent Flowrate =	215.8	ACFM
		% of Total Flow
SVE-1 Measured Flowrate (ACFM) =	65.6	0.41
SVE-2 Measured Flowrate (ACFM) =	30.0	0.19
SVE-3 Measured Flowrate (ACFM) =	62.5	0.40
Sum of Individual Flows (ACFM) =	158.1	

	Lab Data (ug/m^3)			Mass Balance Concentration [1] (ug/m^3)	Actual Effluent Concentration (ug/m^3)
	SVE-1	SVE-2	SVE-3		
Trichloroethene	83	160	0	65	81
cis-1,2-Dichloroethene	0	0	27	11	0

Notes/Assumptions:

1. Mass balance concentration = Lab Data Concentration SVE-1 x SVE-1 % of Total Flow + Lab Data Concentration SVE-2 x SVE-2 % of Total Flow + Lab Data Concentration SVE-3 x SVE-3 % of Total Flow.

Parameters for 12/30/2009 Sampling Event

Discharge Temperature [1]	T	553	°R

Table A1. NYSDEC DAR-1 December 30, 2009, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Ambient Temperature [2]	Ta	503	°R
Stack Diameter	D	4	in
Stack Radius	R	0.167	ft
Stack Area	A	0.09	ft^2
Exit Velocity	V	41.2	fps
Exit Flow	Q	216	acfm
Exit Flow	Q	206	scfm
Stack Height	h_s	12	ft
Building Height	h_b	10	ft
Ratio of Heights	h_s/h_b	1.20	
Plume rise credit? $h_s/h_b > 1.5$?	(If no, $h_e=h_s$)	No	
Momentum Flux	Fm = Ta/T * V2 * R2	n/a	ft^4/s^2
Effective Stack Height	h_e	12	ft
Reduction Factor? $2.5 > h_s/h_b > 1.5$?		No, do not reduce impact	
Actual Annual Impact	C_a	$RF*6*Q_a/h_e^{2.25}$	
Mass Flow	Q_a	S lbs emitted for last 12 months	

Abbreviations:

°R: Degrees Rankine
in: Inches
ft: Feet
fps: Feet per second
acfm: Actual cubic feet per minute
scfm: Standard cubic feet per minute
s: Second
lbs: Pounds

Notes/Assumptions:

1. The stack discharge temperature is based on recorded parameters.
2. The ambient temperature based on www.weather.com historic temperatures.

Table A1. NYSDEC DAR-1 December 30, 2009, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Calculation of AGC Based on Actual Effluent Results From 12/30/2009 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC^2) ug/m^3	Maximum Mass Flow Q_a lb/yr	Actual Effluent Emissions C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Trichloroethene	0.5	22.33	81.00	6.25E-05	0.54763	**2.45**
cis-1,2-Dichloroethene	63	2,814.15	0.00	0.00E+00	0.00000	**0.00**

Calculation of AGC Based on Influent Results From 12/30/2009 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC^2) ug/m^3	Maximum Mass Flow Q_a lb/yr	Influent Concentrations C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Trichloroethene	0.5	22.33	64.80	5.00E-05	0.43810	**1.96**
cis-1,2-Dichloroethene	63	2,814.15	10.67	8.24E-06	0.07216	**0.00**

Notes/Assumptions:

1. Calculations assume that the system will run with the maximum allowable concentrations between quarterly readings.
2. AGC refers to the Annual Guideline Concentration outlined in the DAR-1 AGC/SGC Tables dated September 10, 2007.

Abbreviations:

ug/m^3: micrograms per cubic meter
lb/yr: pounds per year
lb/hr: pounds per hour

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Table A2. NYSDEC DAR-1 March 25, 2010, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Mass Balance

Measured Effluent Flowrate =	257.0	ACFM
		% of Total Flow
SVE-1 Measured Flowrate (ACFM) =	75.6	0.43
SVE-2 Measured Flowrate (ACFM) =	41.8	0.24
SVE-3 Measured Flowrate (ACFM) =	57.2	0.33
Sum of Individual Flows (ACFM) =	174.6	

	Lab Data (ug/m^3)			Mass Balance Concentration [1] (ug/m^3)	Actual Effluent Concentration (ug/m^3)
	SVE-1	SVE-2	SVE-3		
Trichloroethene	81	160	0	73	68
cis-1,2-Dichloroethene	0	0	21	7	0

Notes/Assumptions:

1. Mass balance concentration = Lab Data Concentration SVE-1 x SVE-1 % of Total Flow + Lab Data Concentration SVE-2 x SVE-2 % of Total Flow + Lab Data Concentration SVE-3 x SVE-3 % of Total Flow.

Table A3. NYSDEC DAR-1 June 16, 2010, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Parameters for 06/16/2010 Sampling Event

Discharge Temperature [1]	T	569	°R
Ambient Temperature [2]	Ta	534	°R
Stack Diameter	D	4	in
Stack Radius	R	0.167	ft
Stack Area	A	0.09	ft^2
Exit Velocity	V	48.9	fps
Exit Flow	Q	256	acfm
Exit Flow	Q	237	scfm
Stack Height	h_s	12	ft
Building Height	h_b	10	ft
Ratio of Heights	h_s/h_b	1.20	
Plume rise credit? $h_s/h_b > 1.5$?	(If no, $h_e=h_s$)	No	
Momentum Flux	Fm = Ta/T * V2 * R2	n/a	ft^4/s^2
Effective Stack Height	h_e	12	ft
Reduction Factor? $2.5 > h_s/h_b > 1.5$?		No, do not reduce impact	
Actual Annual Impact	C_a	$RF*6*Q_a/h_e^{2.25}$	
Mass Flow	Q_a	S lbs emitted for last 12 months	

Abbreviations:

°R: Degrees Rankine
in: Inches
ft: Feet
fps: Feet per second
acfm: Actual cubic feet per minute
scfm: Standard cubic feet per minute
s: Second
lbs: Pounds

Notes/Assumptions:

1. The stack discharge temperature is based on recorded parameters.
2. The ambient temperature based on www.weather.com historic temperatures.

Table A3. NYSDEC DAR-1 June 16, 2010, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Calculation of AGC Based on Actual Effluent Results From 06/16/2010 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC^2) ug/m^3	Maximum Mass Flow Q_a lb/yr	Actual Effluent Emissions C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Trichloroethene	0.5	22.33	88.00	7.82E-05	0.68529	**3.07**

Calculation of AGC Based on Influent Results From 06/16/2010 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC^2) ug/m^3	Maximum Mass Flow Q_a lb/yr	Influent Concentrations C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Trichloroethene	0.5	22.33	51.15	4.55E-05	0.39830	**1.78**

Notes/Assumptions:

1. Calculations assume that the system will run with the maximum allowable concentrations between quarterly readings.
2. AGC refers to the Annual Guideline Concentration outlined in the DAR-1 AGC/SGC Tables dated September 10, 2007.

Abbreviations:

ug/m^3: micrograms per cubic meter
lb/yr: pounds per year
lb/hr: pounds per hour

Table A4. NYSDEC DAR-1 September 28, 2010, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Calculation of AGC Based on Actual Effluent Results From 09/28/2010 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC[2]) ug/m^3	Maximum Mass Flow Q_a lb/yr	Actual Effluent Emissions C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Freon 12	12,000	536,028.40	0.00	0.00E+00	0.00000	**0.00**
Ethanol	45,000	2,010,106.50	0.00	0.00E+00	0.00000	**0.00**
Trichloroethene	0.5	22.33	580.00	3.91E-04	3.42732	**15.35**
Tetrachloroethene	1	44.67	43.00	2.90E-05	0.25409	**0.57**
cis-1,2-Dichloroethene	63	2,814.15	110.00	7.42E-05	0.65001	**0.02**

Calculation of AGC Based on Influent Results From 09/28/2010 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC[2]) ug/m^3	Maximum Mass Flow Q_a lb/yr	Influent Concentrations C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Freon 12	12,000	536,028.40	9.57	6.46E-06	0.05657	**0.00**
Ethanol	45,000	2,010,106.50	162.17	1.09E-04	0.95831	**0.00**
Trichloroethene	0.5	22.33	462.67	3.12E-04	2.73401	**12.24**
Tetrachloroethene	1	44.67	29.92	2.02E-05	0.17679	**0.40**
cis-1,2-Dichloroethene	63	2,814.15	91.04	6.14E-05	0.53794	**0.02**

Notes/Assumptions:

1. Calculations assume that the system will run with the maximum allowable concentrations between quarterly readings.
2. AGC refers to the Annual Guideline Concentration as determined using the hand calculations in the DAR-1 AGC/SGC Tables dated September 10, 2007.

Abbreviations:

ug/m^3: micrograms per cubic meter
lb/yr: pounds per year
lb/hr: pounds per hour

Table A5. NYSDEC DAR-1 December 8, 2010, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Calculation of AGC Based on Actual Effluent Results From 12/08/2010 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC[2]) ug/m^3	Maximum Mass Flow Q_a lb/yr	Actual Effluent Emissions C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Ethanol	45,000	2,010,106.50	64.00	3.78E-05	0.33122	**0.00**
Trichloroethene	0.5	22.33	460.00	2.72E-04	2.38067	**10.66**
Tetrachloroethene	1	44.67	0.00	0.00E+00	0.00000	**0.00**
cis-1,2-Dichloroethene	63	2,814.15	100.00	5.91E-05	0.51754	**0.02**
Toluene	5,000	223,345.17	0.00	0.00E+00	0.00000	**0.00**
Hexane	700	31,268.32	0.00	0.00E+00	0.00000	**0.00**

Calculation of AGC Based on Influent Results From 12/08/2010 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC[2]) ug/m^3	Maximum Mass Flow Q_a lb/yr	Influent Concentrations C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Ethanol	45,000	2,010,106.50	26.50	1.57E-05	0.13716	**0.00**
Trichloroethene	0.5	22.33	300.11	1.77E-04	1.55318	**6.95**
Tetrachloroethene	1	44.67	13.77	8.14E-06	0.07127	**0.16**
cis-1,2-Dichloroethene	63	2,814.15	4.17	2.47E-06	0.02160	**0.00**
Toluene	5,000	223,345.17	30.75	1.82E-05	0.15912	**0.00**
Hexane	700	31,268.32	11.13	6.57E-06	0.05759	**0.00**

Notes/Assumptions:

1. Calculations assume that the system will run with the maximum allowable concentrations between quarterly readings.
2. AGC refers to the Annual Guideline Concentration as determined using the hand calculations in the DAR-1 AGC/SGC Tables dated October 18, 2010.

Abbreviations:

ug/m^3: micrograms per cubic meter
lb/yr: pounds per year
lb/hr: pounds per hour

Table A6. NYSDEC DAR-1 March 22, 2011, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Mass Balance

Measured Effluent Flowrate =	190.2	ACFM
		% of Total Flow
SVE-1 Measured Flowrate (ACFM) =	61.3	0.43
SVE-2 Measured Flowrate (ACFM) =	27.1	0.19
SVE-3 Measured Flowrate (ACFM) =	53.7	0.38
Sum of Individual Flows (ACFM) =	142.1	

	Lab Data (ug/m^3)			Mass Balance Concentration [1] (ug/m^3)	Actual Effluent Concentration (ug/m^3)
	SVE-1	SVE-2	SVE-3		
Ethanol	0	460	0	88	0
Trichloroethene	270	0	0	116	350
cis-1,2-Dichloroethene	0	0	0	0	63

Notes/Assumptions:

1. Mass balance concentration = Lab Data Concentration SVE-1 x SVE-1 % of Total Flow + Lab Data Concentration SVE-2 x SVE-2 % of Total Flow + Lab Data Concentration SVE-3 x SVE-3 % of Total Flow.

Table A6. NYSDEC DAR-1 March 22, 2011, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Parameters for 03/22/2011 Sampling Event

Discharge Temperature [1]	T	544	°R
Ambient Temperature [2]	Ta	502	°R
Stack Diameter	D	4	in
Stack Radius	R	0.167	ft
Stack Area	A	0.09	ft^2
Exit Velocity	V	36.3	fps
Exit Flow	Q	190	acfm
Exit Flow	Q	185	scfm
Stack Height	h_s	12	ft
Building Height	h_b	10	ft
Ratio of Heights	h_s/h_b	1.20	
Plume rise credit? $h_s/h_b > 1.5$?	(If no, $h_e=h_s$)	No	
Momentum Flux	Fm = Ta/T * V2 * R2	n/a	ft^4/s^2
Effective Stack Height	h_e	12	ft
Reduction Factor? $2.5 > h_s/h_b > 1.5$?		No, do not reduce impact	
Actual Annual Impact	C_a	$RF*6*Q_a/h_e^{2.25}$	
Mass Flow	Q_a	S lbs emitted for last 12 months	

Abbreviations:

°R: Degrees Rankine
in: Inches
ft: Feet
fps: Feet per second
acfm: Actual cubic feet per minute
scfm: Standard cubic feet per minute
s: Second
lbs: Pounds

Notes/Assumptions:

1. The stack discharge temperature is based on recorded parameters.
2. The ambient temperature based on www.weather.newsday.com historic temperatures.

Table A6. NYSDEC DAR-1 March 22, 2011, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Calculation of AGC Based on Actual Effluent Results From 03/22/2011 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC[2]) ug/m^3	Maximum Mass Flow Q_a lb/yr	Actual Effluent Emissions C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Ethanol	45,000	2,010,106.50	0.00	0.00E+00	0.00000	**0.00**
Trichloroethene	0.5	22.33	350.00	2.42E-04	2.12047	**9.49**
cis-1,2-Dichloroethene	63	2,814.15	63.00	4.36E-05	0.38169	**0.01**

Calculation of AGC Based on Influent Results From 03/22/2011 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC[2]) ug/m^3	Maximum Mass Flow Q_a lb/yr	Influent Concentrations C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Ethanol	45,000	2,010,106.50	87.73	6.07E-05	0.53149	**0.00**
Trichloroethene	0.5	22.33	116.47	8.06E-05	0.70566	**3.16**
cis-1,2-Dichloroethene	63	2,814.15	0.00	0.00E+00	0.00000	**0.00**

Notes/Assumptions:

1. Calculations assume that the system will run with the maximum allowable concentrations between quarterly readings.
2. AGC refers to the Annual Guideline Concentration as determined using the hand calculations in the DAR-1 AGC/SGC Tables dated October 18, 2010.

Abbreviations:

ug/m^3: micrograms per cubic meter
lb/yr: pounds per year
lb/hr: pounds per hour

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Table A7. NYSDEC DAR-1 June 28, 2011, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Mass Balance

Measured Effluent Flowrate =	190.2	ACFM
		% of Total Flow
SVE-1 Measured Flowrate (ACFM) =	67.1	0.40
SVE-2 Measured Flowrate (ACFM) =	42.6	0.25
SVE-3 Measured Flowrate (ACFM) =	59.1	0.35
Sum of Individual Flows (ACFM) =	168.8	

	Lab Data (ug/m^3)			Mass Balance Concentration [1] (ug/m^3)	Actual Effluent Concentration (ug/m^3)
	SVE-1	SVE-2	SVE-3		
Ethanol	0	0	180	63	0
Trichloroethene	270	650	34	283	0
cis-1,2-Dichloroethene	0	0	100	35	0
Toluene	26	0	35	23	0
Carbon Disulfide	0	18	22	12	17
Acetone	69	0	0	27	0

Notes/Assumptions:

1. Mass balance concentration = Lab Data Concentration SVE-1 x SVE-1 % of Total Flow + Lab Data Concentration SVE-2 x SVE-2 % of Total Flow + Lab Data Concentration SVE-3 x SVE-3 % of Total Flow.

Table A7. NYSDEC DAR-1 June 28, 2011, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Parameters for 06/28/2011 Sampling Event

Discharge Temperature [1]	T	573	°R
Ambient Temperature [2]	Ta	538	°R
Stack Diameter	D	4	in
Stack Radius	R	0.167	ft
Stack Area	A	0.09	ft^2
Exit Velocity	V	36.3	fps
Exit Flow	Q	190	acfm
Exit Flow	Q	175	scfm
Stack Height	h_s	12	ft
Building Height	h_b	10	ft
Ratio of Heights	h_s/h_b	1.20	
Plume rise credit? $h_s/h_b > 1.5$?	(If no, $h_e=h_s$)	No	
Momentum Flux	Fm = Ta/T * V2 * R2	n/a	ft^4/s^2
Effective Stack Height	h_e	12	ft
Reduction Factor? $2.5 > h_s/h_b > 1.5$?		No, do not reduce impact	
Actual Annual Impact	C_a	$RF*6*Q_a/h_e^{2.25}$	
Mass Flow	Q_a	S lbs emitted for last 12 months	

Abbreviations:

°R: Degrees Rankine
in: Inches
ft: Feet
fps: Feet per second
acfm: Actual cubic feet per minute
scfm: Standard cubic feet per minute
s: Second
lbs: Pounds

Notes/Assumptions:

1. The stack discharge temperature is based on recorded parameters.
2. The ambient temperature based on www.weather.newsday.com historic temperatures.

Table A7. NYSDEC DAR-1 June 28, 2011, Air Modeling Estimate for Vapor Recovery System, United Stellar Industries, Plainview, NY.

Calculation of AGC Based on Actual Effluent Results From 06/28/2011 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC^2) ug/m^3	Maximum Mass Flow Q_a lb/yr	Actual Effluent Emissions C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Ethanol	45,000	2,010,106.50	0.00	0.00E+00	0.00000	**0.00**
Trichloroethene	0.5	22.33	0.00	0.00E+00	0.00000	**0.00**
cis-1,2-Dichloroethene	63	2,814.15	0.00	0.00E+00	0.00000	**0.00**
Toluene	5,000	223,345.17	0.00	0.00E+00	0.00000	**0.00**
Carbon Disulfide	700	31,268.32	17.00	1.12E-05	0.09768	**0.00**
Acetone	30,000	1,340,071.00	0.00	0.00E+00	0.00000	**0.00**

Calculation of AGC Based on Influent Results From 06/28/2011 Sampling Event [1]

Compounds	Maximum Limit on C_a (AGC^2) ug/m^3	Maximum Mass Flow Q_a lb/yr	Influent Concentrations C_a ug/m^3	Mass Flow per Hour lb/hr	Mass Flow per Year lb/yr	**Percent of Annual** %
Ethanol	45,000	2,010,106.50	63.02	4.13E-05	0.36210	**0.00**
Trichloroethene	0.5	22.33	283.27	1.86E-04	1.62759	**7.29**
cis-1,2-Dichloroethene	63	2,814.15	35.01	2.30E-05	0.20117	**0.01**
Toluene	5,000	223,345.17	22.59	1.48E-05	0.12979	**0.00**
Carbon Disulfide	700	31,268.32	12.25	8.03E-06	0.07036	**0.00**
Acetone	30,000	1,340,071.00	27.43	1.80E-05	0.15759	**0.00**

Notes/Assumptions:

1. Calculations assume that the system will run with the maximum allowable concentrations between quarterly readings.
2. AGC refers to the Annual Guideline Concentration as determined using the hand calculations in the DAR-1 AGC/SGC Tables dated October 18, 2010.

Abbreviations:

ug/$m^{3:}$ micrograms per cubic meter
lb/yr: pounds per year
lb/hr: pounds per hour