



Strong Advocates, Effective Solutions, Integrated Implementation

December 8, 2021

Ms. Megan Kuczka
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: **Verification Soil Sampling (VSS) Work Plan**
229 Homer Street (Site No. C905044)
Olean, New York

Dear Ms. Kuczka:

On behalf of Homer Street Properties, LLC (HSP), TurnKey Environmental Restoration, LLC (TurnKey) is requesting to decommission the soil vapor extraction (SVE) and air sparge (AS) systems at the 229 Homer Street Site in Olean, New York (see Figure 1) pending the results of the verification soil sampling described herein. This Work Plan addresses NYSDEC comments received October 25 and December 3, 2021.

BACKGROUND

HSP undertook the remediation and redevelopment of the property located at 229 Homer Street, Olean, New York under the New York Brownfield Cleanup Program (BCP). Benson Construction and Development, LLC executed a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in October 2015. The BCA was amended in October 2017 to add HSP as an additional Applicant (Volunteer). HSP completed remedial work at the Site between April and October 2018. A certificate of completion (COC) was issued for the Site in December 2018.

As part of the remedial program, an air sparge/soil vapor extraction (AS/SVE) system was installed and operated nearly continuously from September 2018 to present. The revised July 2021 Periodic Review Report (PRR) submitted for reporting period April 28, 2020 to April 28, 2021 displayed the asymptotic to low level volatile organic compound (VOC) removal by the SVE system over an extended period. This Verification Soil Sampling (VSS) Work Plan outlines a sampling plan to gather the data necessary to demonstrate the AS/SVE system has achieved the following remedial criteria outlined in Section 3.3.4.2 of the SMP:

- Conditions that may warrant discontinuing the AS/SVE system include:
 - 1) Contaminant concentrations in soil that reach levels that are consistently below the site SCGs, as appropriate,

- 2) The mass removal of VOCs with the SVE system has been asymptotic to a low level over an extended period, as acceptable by the NYSDEC, or
- 3) NYSDEC has determined that the AS/SVE system has reached the limit of its effectiveness.

SVE SYSTEMS OPERATIONAL DATA

As part of the remedy, the AS/SVE system was installed and has been operated nearly continuously since September 2018. The operation, maintenance, and monitoring (OM&M) of the system is part of the monitoring required by the SMP. The AS/SVE system has been successful in removing VOCs from the subsurface soil/fill. As shown on Table 1 in Attachment 1, the estimated mass of VOCs removed through November 2021 is 13,742 pounds.

SVE DISCONTINUATION EVALUATION

The purpose of the AS/SVE system is to reduce the mass of VOCs in the vadose and smear zones. Chart 1 in Attachment 1 shows the cumulative VOC mass removal over time. The rate of removal for the system was at its maximum of 340.6 lb/day in September 2018. From March 2020 to June 2020, while the AS system was off, VOC mass removal rate was less than 1.6 lb/day. The AS system was turned on in June 2020 and, after optimization of its operation time, VOC mass removal rates averaged approximately 19 lb/day between June 2020 and October 2020. While the AS system was turned off for two weeks in October 2020, VOC mass removal rates decreased to 3.4 lb/day. The AS system was turned back on in late October 2020 and VOC mass removal rates remained low for the remainder of 2020 and during system startup in 2021. Optimization of the AS/SVE system is believed to be complete and future increased VOC mass removal is not anticipated. The system has been operated in 2021 as it was in 2020 with no significant increase in VOC mass removal rates. The average VOC mass removal rate for 2021 was 0.15 lb/day with a maximum VOC mass removal rate for 2021 of 1.2 lb/day (4/29/21), and 0.0 lb/day since October 25, 2021. Chart 1 in Attachment 1 shows the asymptotic VOC mass removal rates starting in November 2020.

Over the four years of operation, the SVE system has been effective in reducing VOC concentrations within the vadose zone based on influent photoionization detector (PID) readings. The SVE system had an average influent PID concentration of approximately 231 parts per million (ppm) over the first two days of operation (September 13 and 14, 2018) with a maximum PID of 575 ppm on September 20, 2018. The average influent PID concentration during November 2021 has been 0.37 ppm, which equates to a 99.9% reduction compared to the maximum recorded PID reading. An air sample was collected from the SVE blower intake on April 29, 2021 and analyzed for VOCs via Method TO-15 and air-phase petroleum hydrocarbons (APH). Cyclohexane was detected at a concentration of 70.6 ug/m³, which is a 99.9% reduction compared to the 2018 concentration. APH concentrations were reported at 29,000 ug/m³ for C5-C8 aliphatics (98.8% reduction) and 4,800 ug/m³ for C9-C12 aliphatics (98.5% reduction).

Optimization monitoring completed in August 2021 involved collecting PID readings from each well head and completing system checks to determine the efficiency of the system. Well head PID readings during the August 2021 monitoring for wells SVE-1 through SVE-14 were all 0.0 ppm. Monitoring of individual well head PID readings completed during system start-up in September 2018 ranged from 5 to 270 ppm. Table 1 presents historic well head PID readings and shows the reduction to 0.0 ppm over time at all well heads. Figure 1 shows PID readings and individual SVE well vacuum readings collected in August 2021.

As described in the SMP Section 3.3.4.2 AS/SVE System, once monitoring data indicates that the SVE system is no longer effective (i.e., when the mass removal of contaminants stabilizes to a diminished rate for several monitoring periods), a proposal to discontinue the SVE system will be submitted.

The SVE system has been very effective in removing organic vapors from the vadose zone and has reached an asymptotic removal rate. Over the 2020/2021 reporting period, the rates of organic vapor removal were less than 1.2 lb/day. The significant and prolonged reductions in mass removal meets the criterion for evaluation of SVE discontinuation. Continued SVE system operation would provide limited benefit.

SVE VERIFICATION SOIL SAMPLING PLAN

As stated in the SMP, discontinuation will also be based on data obtained from post-treated soil samples collected in accordance with a NYSDEC-approved soil/fill verification sampling plan identifying the location, depth, and number of soil/fill samples to be collected. Figure 1 shows the proposed sampling locations with justification as well as the August 2021 PID measurements at each well head while the system was operational. The proposed sample locations were positioned across the SVE system and include planned borings near well heads with historically high PID readings or near historic remaining contamination on-site.

TurnKey will subcontract to a drilling firm who will use a Geoprobe rig to sample at proposed boring locations VSS-1 thru VSS-6 to a depth of 13 feet below ground surface (fbgs), which is the depth of the SVE wells. The AS/SVE system will be turned off prior to the soil sampling. A CAMP station will be positioned downwind of the boring locations to monitor for dust and organic vapors. Soil samples will be collected continuously, field screened with a PID, and observed for evidence of grossly contaminated petroleum soils. The entire macro-core sleeve will be photographed and field-screened with a PID and evidence of visual and olfactory impact will be noted. One sample will be collected from the most visually and olfactory impacted soil/fill interval from each boring. Six soil samples will be tested at an analytical laboratory and analyzed for Target Compound List (TCL) and CP-51 List¹ VOCs plus tentatively identified compounds (TICs) using United States Environmental Protection Agency (USEPA) Method 8260 and TCL SVOCs plus TICs using USEPA Method 8270. The post-treatment soil sampling, handling, and testing will follow the procedures described in the SMP. TurnKey will submit the data for third-party data review by a qualified, independent data validation expert who will prepare a Data Usability Summary Report (DUSR).

TurnKey will prepare a summary report that will include the boring logs, soil descriptions, field observations, soil sample analytical data, DUSR, photographs of the entire boring core, and recommendation for SVE discontinuation, if warranted. In the interim, the SVE system will be operated in accordance with the SMP.

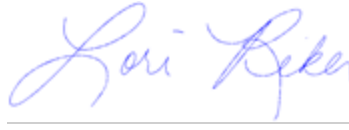
We are prepared to initiate the verification soil sampling upon NYSDEC approval. Please contact us with any questions or comments.

¹ Includes 1,2,4- and 1,3,5-trimethylbenzene, n-butylbenzene, and n-propylbenzene.

Sincerely,
TurnKey Environmental Restoration, LLC



Michael Lesakowski
President



Lori E. Riker, P.E.
Sr. Project Manager

Att.
cc: Andrea Caprio (NYSDEC)
Renata Ockerby (NYSDOH)
Charlotte Bethoney (NYSDOH)
Don Benson (Homer Street Properties)

File: T0311-018-001

TABLE

FIGURE

LEGEND:

- SITE BOUNDARY
- SVE

SVE WELL (14)
- AS

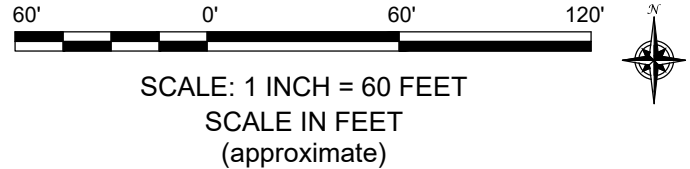
AIR SPARGE (AS) WELL (53)
- MW-1

EXISTING MONITORING WELL (7)
- HISTORIC REMEDIAL EXCAVATIONS
- SVE CONDENSATE LINE TO SANITARY SEWER
- SVE AND AS PIPELINES
- SVE TRAILER
- AIR SPARGE TRAILER
- VSS-1

PLANNED VERIFICATION SOIL SAMPLING LOCATION
- (2.0)

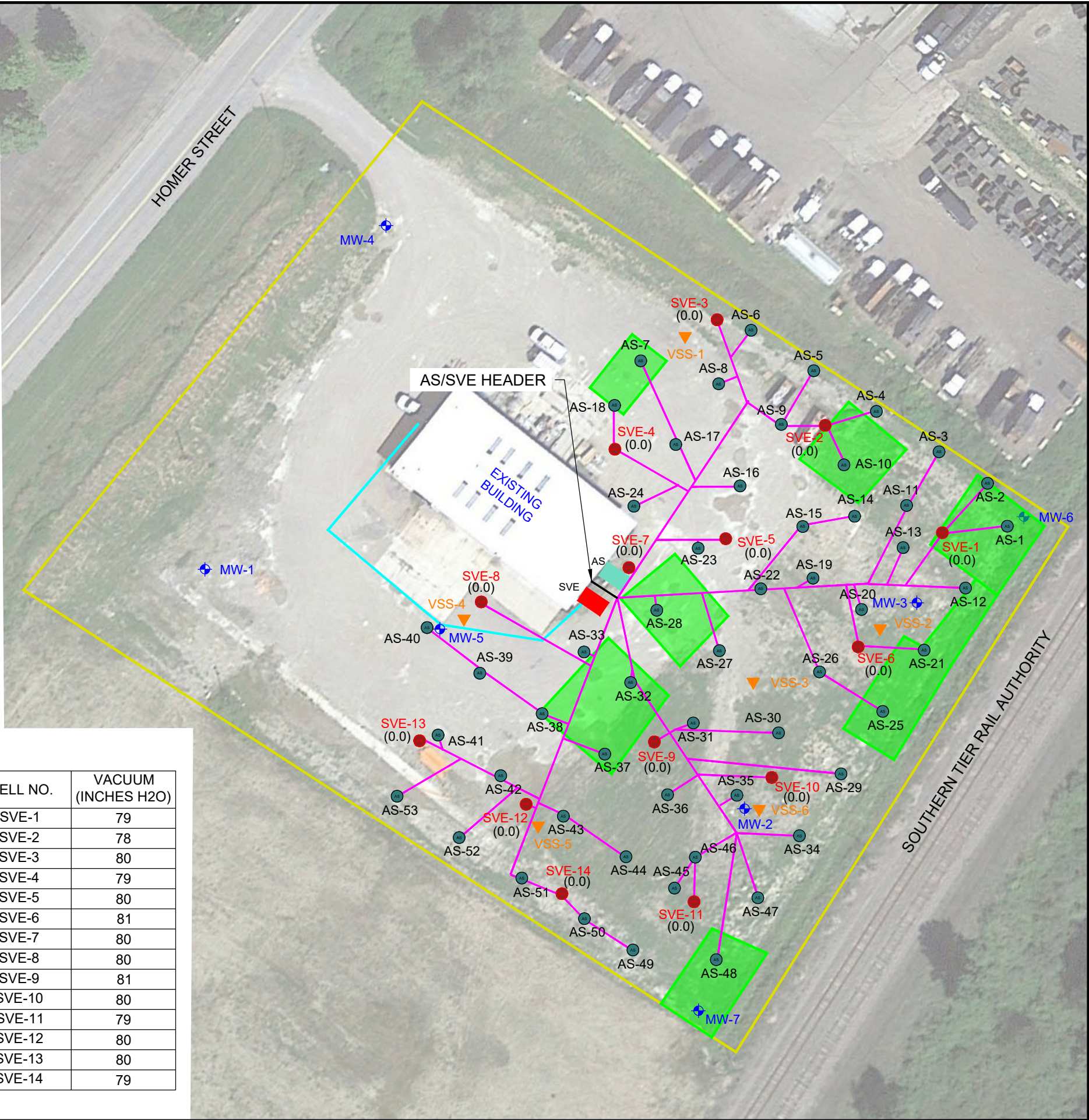
WELL HEAD PID READING (PPM)

NOTE:
1. BASE MAP FROM GOOGLE IMAGE DATED AUGUST 2016.
2. PID = PHOTOIONIZATION DETECTOR READING IN PARTS PER MILLION. MEASUREMENTS MADE IN AUGUST 2021.



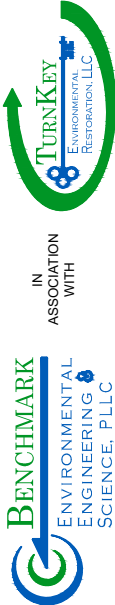
VERIFICATION SOIL SAMPLE	REASON
VSS-1	PROXIMATE TO SVE-3 (HISTORIC ELEVATED PID VALUES) AND LOCATED ON LIMITS OF SVE TREATMENT AREA.
VSS-2	PROXIMATE TO SVE-6 (HISTORIC ELEVATED PID VALUES)
VSS-3	CENTRALLY LOCATED WITHIN SVE TREATMENT AREA
VSS-4	PROXIMATE MW-5 (HISTORIC REMAINING SOIL CONTAMINATION ABOVE USCOs) AND SVE-8 (HISTORIC ELEVATED PID VALUES)
VSS-5	PROXIMATE TO SVE-12 (HISTORIC ELEVATED PID VALUES)
VSS-6	PROXIMATE MW-2 (HISTORIC REMAINING SOIL CONTAMINATION ABOVE USCOs)

WELL NO.	VACUUM (INCHES H2O)
SVE-1	79
SVE-2	78
SVE-3	80
SVE-4	79
SVE-5	80
SVE-6	81
SVE-7	80
SVE-8	80
SVE-9	81
SVE-10	80
SVE-11	79
SVE-12	80
SVE-13	80
SVE-14	79



PROPOSED SOIL VERIFICATION SAMPLE LOCATIONS

AIR SPARGE/SOIL VAPOR VERIFICATION SOIL SAMPLING WORK PLAN
229 HOMER STREET SITE
BCP SITE NO. C905044
OLEAN, NEW YORK
PREPARED FOR
HOMER STREET PROPERTIES, LLC



2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0311-018-001

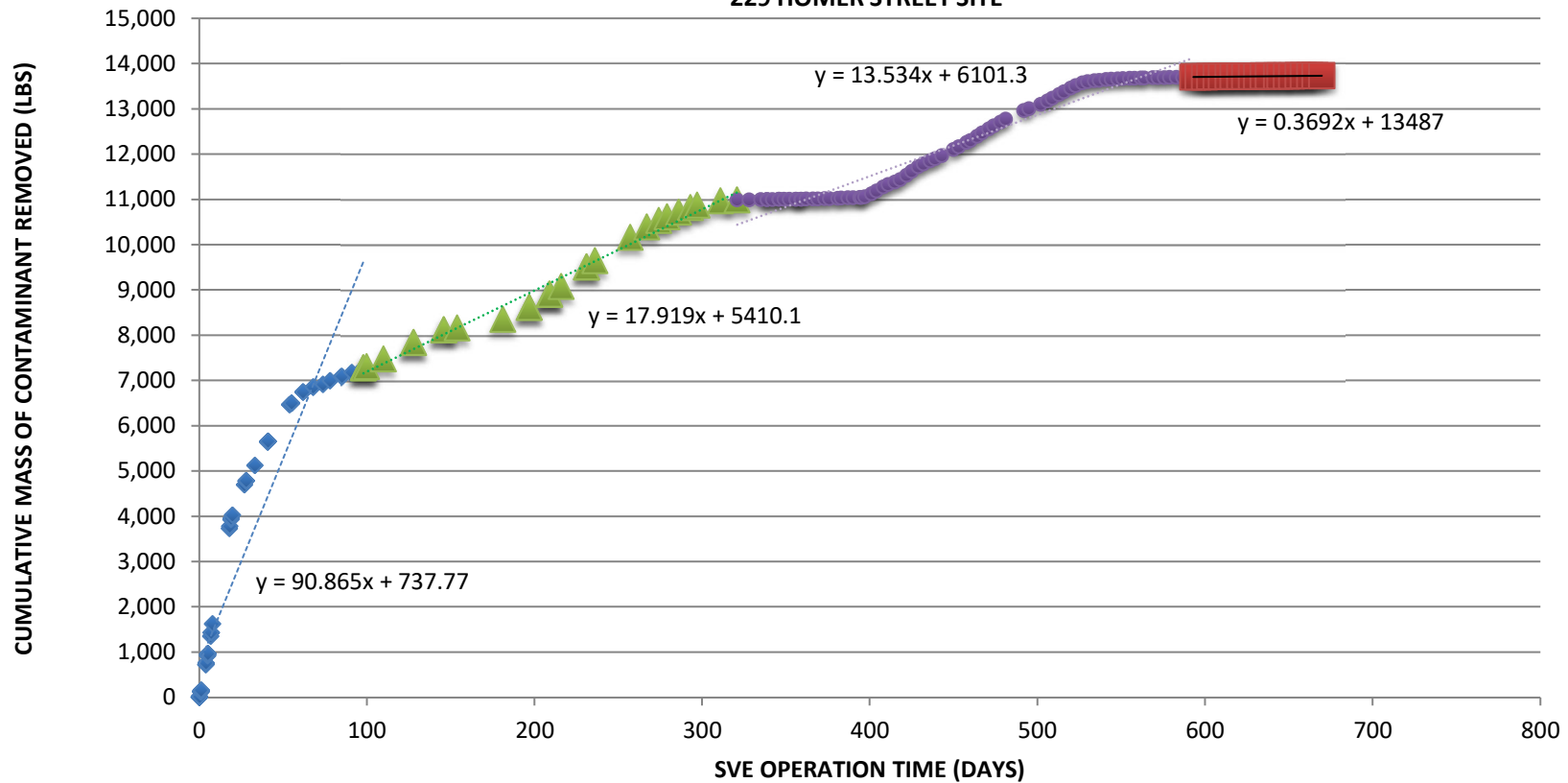
FIGURE 1

DISCLAIMER: PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC. IMPORTANT: THIS DRAWING PRINT IS LOANED FOR MUTUAL ASSISTANCE AND AS SUCH IS SUBJECT TO RECALL AT ANY TIME. INFORMATION CONTAINED HEREON IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY FORM FOR THE BENEFIT OF PARTIES OTHER THAN NECESSARY SUBCONTRACTORS & SUPPLIERS WITHOUT THE WRITTEN CONSENT OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC & TURNKEY ENVIRONMENTAL RESTORATION, LLC.

ATTACHMENT 1

AS/SVE SYSTEM OPERATING LOG AND CHART

CHART 1
CUMULATIVE MASS REMOVAL VERSUS TIME
SVE/AS SYSTEM
229 HOMER STREET SITE



Note: Mass removal is based on a correlation of PID readings and vapor sample analysis for petroleum hydrocarbons in influent air.

- ◆ 2018
- ▲ 2019
- 2020
- 2021
- Linear (2018)
- Linear (2019)
- Linear (2020)
- Linear (2021)

Table 1 - Summary of SVE System VOC Mass Removal
Site Management Plan
229 Homer Street Site
NYSDEC BCP Site No. C905044
Olean, New York

Date	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration ¹ (mg/m ³)	Vacuum (in of H ₂ O)	Air Flow Rate		Volume of Air Processed Since Previous Reading		Rate of VOC Removal		VOCs Removed Since Last Monitoring Period		Total VOC Removal to Date		Notes
						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
09/13/18	0.0	86	1.4	1237	52.0	490	401	0	0.00E+00	0.0	0.0	0.0	0.0	0.0	0	
09/13/18	0	105	28	1511	52.0	490	401	0	0.00E+00	0.0	0.0	0.0	0.0	0.0	0	
09/13/18	0	119	35	1712	51.0	495	405	8095	2.29E+02	28.3	62.3	0.2	0.4	0.2	0	
09/13/18	0	118	122	1698	51.0	495	405	8095	2.29E+02	28.0	61.8	0.4	0.9	0.6	1	
09/13/18	0	175	146	2518	52.0	490	401	10017	2.84E+02	41.1	90.7	0.6	1.3	1.2	3	
09/13/18	0	180	65	2590	50.0	500	409	6133	1.74E+02	43.2	95.2	0.4	1.0	1.6	4	
09/13/18	0	182	25	2619	52.0	490	401	24041	6.81E+02	42.8	94.3	1.8	3.9	3.4	8	
09/13/18	0	192	11	2762	52.0	490	401	12020	3.40E+02	45.1	99.5	0.9	2.0	4.3	10	
09/13/18	0	185	13	2662	52.0	490	401	10017	2.84E+02	43.5	95.9	0.8	1.7	5.1	11	
09/13/18	0	215	14	3093	52.0	490	401	14024	3.97E+02	50.5	111.4	1.1	2.5	6.2	14	
09/13/18	0	209	17	3007	51.0	495	405	20238	5.73E+02	49.6	109.4	1.7	3.8	8.0	18	
09/14/18	1	294	69	4230	50.0	500	409	433384	1.23E+04	70.5	155.5	44.2	97.5	52.2	115	
09/14/18	1	350	17	5036	48.0	510	417	25022	7.09E+02	85.6	188.8	3.3	7.2	55.5	122	
09/14/18	1	312	9	4489	51.0	495	405	16191	4.58E+02	74.1	163.4	2.2	4.9	57.7	127	
09/14/18	1	347	28	4993	51.0	495	405	16191	4.58E+02	82.4	181.7	2.2	4.8	59.9	132	
09/14/18	1	236	15	3396	50.0	500	409	53151	1.51E+03	56.6	124.8	6.3	13.8	66.1	146	
09/14/18	1	352	11	5064	49.0	505	413	12388	3.51E+02	85.3	188.0	1.5	3.3	67.6	149	
09/14/18	1	374	17	5381	50.0	500	409	12266	3.47E+02	89.7	197.8	1.8	4.0	69.4	153	
09/14/18	1	351	18	5050	49.0	505	413	12388	3.51E+02	85.0	187.5	1.8	4.0	71.2	157	
09/17/18	4	401	14	5769	49.0	505	413	1668282	4.72E+04	97.1	214.2	255.6	563.5	326.8	721	
09/17/18	4	382	13	5496	50.0	500	409	28620	8.10E+02	91.6	202.0	4.6	10.1	331.4	731	
09/17/18	4	356	23	5122	49.0	505	413	24776	7.02E+02	86.2	190.2	3.7	8.2	335.1	739	
09/17/18	4	400	37	5755	48.0	510	417	25022	7.09E+02	97.9	215.8	3.8	8.5	338.9	747	
09/17/18	4	388	21	5582	49.0	505	413	37165	1.05E+03	94.0	207.3	6.0	13.2	344.9	761	
09/18/18	5	389	11	5597	50.0	500	409	453826	1.29E+04	93.3	205.7	72.2	159.2	417.1	920	
09/18/18	5	380	14	5467	49.0	505	413	86718	2.46E+03	92.1	203.0	13.5	29.8	430.6	950	
09/18/18	5	400	21	5755	50.0	500	409	24531	6.95E+02	95.9	211.6	3.9	8.6	434.6	958	
09/18/18	5	384	14	5525	50.0	500	409	12266	3.47E+02	92.1	203.1	2.0	4.3	436.5	963	
09/18/18	5	392	18	5640	50.0	500	409	12266	3.47E+02	94.0	207.3	1.9	4.3	438.5	967	
09/20/18	7	450	17	6474	50.0	500	409	1018043	2.88E+04	107.9	238.0	174.6	385.0	613.1	1,352	

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						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
09/20/18	7	575	20	8273	38.0	560	458	162560	4.60E+03	154.5	340.6	32.3	71.3	645.4	1,423	
09/20/18	7	517	19	7438	40.0	550	450	13492	3.82E+02	136.4	300.8	3.0	6.7	648.4	1,430	
09/21/18	8	326	21	4695	42.0	540	442	505587	1.43E+04	84.5	186.4	87.8	193.7	736.3	1,624	
10/01/18	18	450	3.9	6474	51.0	495	405	5816459	1.65E+05	106.9	235.6	955.0	2105.8	1691.3	3,729	
10/01/18	18	360	14	5180	49.0	505	413	148659	4.21E+03	87.2	192.3	24.3	53.5	1715.5	3,783	
10/02/18	19	337	8	4849	50.0	500	409	466092	1.32E+04	80.8	178.2	66.5	146.7	1782.1	3,929	
10/02/18	19	177	3	2547	52.0	490	401	120203	3.40E+03	41.6	91.7	12.8	28.1	1794.8	3,958	
10/03/18	20	198	4	2849	52.0	490	401	384648	1.09E+04	46.5	102.6	29.4	64.8	1824.2	4,022	
10/10/18	27	165	NM	2374	52.0	490	401	4110931	1.16E+05	38.8	85.5	304.0	670.3	2128.2	4,693	
10/11/18	28	173	4	2489	52.0	490	401	534902	1.51E+04	40.7	89.7	36.8	81.2	2165.0	4,774	
10/11/18	28	152	4	2187	45.0	525	429	64394	1.82E+03	38.3	84.4	4.1	9.1	2169.1	4,783	Remove water blockage in vapor piping from SVE wells SVE-6, 10, 12 and -14
10/11/18	28	124	3	1784	46.0	520	425	19134	5.42E+02	30.9	68.2	1.1	2.4	2170.2	4,785	
10/16/18	33	116	NM	1669	46.0	520	425	3112513	8.81E+04	28.9	63.8	152.2	335.5	2322.4	5,121	
10/24/18	41	137	ND	1971	54.0	480	392	4403832	1.25E+05	31.5	69.6	235.6	519.6	2558.0	5,640	Measure PID on individual SVE wells
10/24/18	41	199	ND	2863	47.0	515	421	44217	1.25E+03	49.2	108.4	2.9	6.5	2561.0	5,647	Turn off wells 1. 2. 11 & 14
10/24/18	41	119	ND	1712	49.0	505	413	18582	5.26E+02	28.8	63.6	1.2	2.7	2562.2	5,650	Air sparge on. 1 hour each Zones 1 and 2
10/24/18	41	197	ND	2834	49.0	505	413	37165	1.05E+03	47.7	105.2	2.4	5.3	2564.6	5,655	Shut sparge off at 12:30
10/24/18	41	185	ND	2662	51.0	495	405	24286	6.88E+02	43.9	96.9	1.9	4.2	2566.5	5,659	Adjust sparge to 15 minutes all wells per day
11/06/18	54	56.5	1	813	53.0	485	397	7340825	2.08E+05	13.1	29.0	366.8	808.9	2933.3	6,468	
11/07/18	55	47	0	676	53.0	485	397	547290	1.55E+04	10.9	24.1	11.5	25.4	2944.9	6,493	
11/07/18	55	68	0	978	50.0	500	409	134921	3.82E+03	16.3	36.0	3.1	6.9	2948.0	6,500	
11/14/18	62	68	0	978	50.0	500	409	3961781	1.12E+05	16.3	36.0	109.8	242.0	3057.7	6,742	System shut down due to freezing temperatures
11/15/18	62	68	0	978	50.0	500	409	0	0.00E+00	0.0	0.0	0.0	0.0	3057.7	6,742	Restart system

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						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
11/21/18	68	68	0	978	50.0	500	409	3630611	1.03E+05	16.3	36.0	50.3	110.9	3108.0	6,853	System shut down due to freezing temperatures
11/24/18	68	68	0	978	50.0	500	409	0	0.00E+00	0.0	0.0	0.0	0.0	3108.0	6,853	Restart system
11/30/18	74	39	0	561	53.0	485	397	3343228	9.47E+04	9.1	20.0	26.6	58.6	3134.6	6,912	
12/04/18	78	34	0	489	33.0	585	478	2855794	8.09E+04	9.5	21.0	38.6	85.1	3173.2	6,997	
12/11/18	85	10	0	144	36.0	570	466	4586344	1.30E+05	2.7	6.0	41.9	92.5	3215.1	7,089	
12/11/18	85	24	0	347	53.0	485	397	154669	4.38E+03	5.6	12.4	1.1	2.5	3216.3	7,092	
12/17/18	91	35		501	53.0	485	397	3343228	9.47E+04	8.1	17.9	40.1	88.4	3256.4	7,180	
12/24/18	98	21	0	302	55.0	475	388	3833606	1.09E+05	4.8	10.6	44.1	97.3	3300.5	7,278	System shut down due to freezing temperatures
04/24/19	98	21	0	302	40.0	550	450	0	0.00E+00	0.0	0.0	0.0	0.0	3300.5	7,278	Sparge off
04/24/19	98	21	0	304	45.0	525	429	83713	2.37E+03	5.3	11.7	0.4	0.8	3300.9	7,278	
04/26/19	100	37	0	527	50.0	500	409	1060972	3.00E+04	8.8	19.4	12.7	28.0	3313.6	7,306	
05/06/19	110	28	0	397	52.0	490	401	5871899	1.66E+05	6.5	14.3	77.7	171.3	3391.3	7,478	
05/24/19	128	52	0	751	56.0	470	384	9863608	2.79E+05	11.8	26.0	162.7	358.8	3554.0	7,836	
05/24/19	128	49	0	708	54.0	480	392	74575	2.11E+03	11.3	25.0	1.5	3.4	3555.5	7,840	
06/11/19	146	14	0	196	58.0	460	376	9689478	2.74E+05	3.0	6.6	128.2	282.6	3683.7	8,122	
06/11/19	146	14	0	201	54.0	480	392	100087	2.83E+03	3.2	7.1	0.6	1.2	3684.2	8,124	
06/19/19	154	5	0	71	57.0	465	380	4317544	1.22E+05	1.1	2.4	17.0	37.5	3701.2	8,161	
07/16/19	181	24	0	341	56.0	470	384	15092301	4.27E+05	5.3	11.8	87.8	193.5	3789.0	8,355	
08/01/19	197	44	0	626	56.0	470	384	8704879	2.46E+05	9.8	21.6	119.2	262.8	3908.2	8,618	
08/01/19	197	54	0	773	46.0	520	425	38269	1.08E+03	13.4	29.5	0.7	1.6	3908.9	8,619	
08/13/19	209	32	0	456	41.0	545	446	7640657	2.16E+05	8.3	18.3	129.1	284.6	4038.0	8,904	
08/13/19	209	33	0	478	37.0	565	462	76231	2.16E+03	9.0	19.8	1.0	2.2	4039.0	8,906	
08/13/19	209	41	0	588	39.0	555	454	61267	1.73E+03	10.9	24.0	0.9	2.1	4039.9	8,908	
08/20/19	216	48	0	692	51.0	495	405	3964664	1.12E+05	11.4	25.2	75.9	167.3	4115.8	9,075	
09/04/19	231	62	0	888	52.0	490	401	8654591	2.45E+05	14.5	32.0	194.4	428.7	4310.2	9,504	
09/04/19	231	51	0	738	42.0	540	442	105975	3.00E+03	13.3	29.3	2.3	5.1	4312.5	9,509	
09/09/19	236	46	0.4	662	42.0	540	442	3165991	8.97E+04	11.9	26.3	62.8	138.4	4375.3	9,648	

Table 1 - Summary of SVE System VOC Mass Removal
Site Management Plan
229 Homer Street Site
NYSDEC BCP Site No. C905044
Olean, New York

Date	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration ¹ (mg/m ³)	Vacuum (in of H ₂ O)	Air Flow Rate		Volume of Air Processed Since Previous Reading		Rate of VOC Removal		VOCs Removed Since Last Monitoring Period		Total VOC Removal to Date		Notes
						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
09/30/19	257	44	0.8	633	51.0	495	405	12264350	3.47E+05	10.4	23.0	235.3	518.8	4610.6	10,166	
10/10/19	267	43	0.6	617	50.0	500	409	5862945	1.66E+05	10.3	22.7	103.3	227.7	4713.9	10,394	
10/17/19	274	32	0.7	458	50.0	500	409	4170296	1.18E+05	7.6	16.8	63.5	139.9	4777.3	10,534	System shut down on 10-22-19
11/07/19	279	33	0.3	469	51.0	495	405	2865729	8.11E+04	7.7	17.1	37.8	83.3	4815.1	10,617	System restarted, sparge off
11/14/19	286	25	0.1	355	50.0	500	409	4121234	1.17E+05	5.9	13.1	47.8	105.5	4862.9	10,723	
11/21/19	293	28.5	0.1	410	50.0	500	409	4121234	1.17E+05	6.8	15.1	44.7	98.5	4907.6	10,821	
11/25/19	297	22	0	311	50.0	500	409	2354991	6.67E+04	5.2	11.4	24.0	53.0	4931.6	10,874	
12/09/19	311	5.2	0	75	52.0	490	401	8053577	2.28E+05	1.2	2.7	44.7	98.5	4976.3	10,973	
12/19/19	321	0.8	0	12	56.0	470	384	5441991	1.54E+05	0.2	0.4	6.9	15.2	4983.2	10,988	System off for the winter
03/23/20	321	2.6	0	7	54.0	480	392	23550	6.67E+02	0.1	0.3	0.0	0.0	4983.2	10,988	Sparge off
03/30/20	328	6.9	0	19	55.0	475	388	3938477	1.12E+05	0.3	0.7	1.5	3.3	4984.7	10,991	
04/06/20	335	6.0	0	17	56.0	470	384	3873960	1.10E+05	0.3	0.6	2.0	4.4	4986.7	10,996	
04/10/20	339	6.9	0.2	19	56.0	470	384	2075335	5.88E+04	0.3	0.7	1.1	2.3	4987.7	10,998	
04/10/20	339	7.4	0.1	21	52.0	490	401	48081	1.36E+03	0.3	0.7	0.0	0.1	4987.8	10,998	
04/13/20	342	5.1	0	14	55.0	475	388	1747845	4.95E+04	0.2	0.5	0.9	1.9	4988.6	11,000	
04/17/20	346	3.8	0.1	11	55.0	475	388	2120718	6.01E+04	0.2	0.4	0.7	1.6	4989.4	11,002	
04/17/20	346	4.2	0.1	12	46.0	520	425	127562	3.61E+03	0.2	0.4	0.0	0.1	4989.4	11,002	
04/20/20	349	5.8	0.1	16	55.0	475	388	1701235	4.82E+04	0.3	0.6	0.7	1.5	4990.1	11,003	
04/23/20	352	3.1	0	9	53.0	485	397	1713256	4.85E+04	0.1	0.3	0.6	1.3	4990.7	11,004	
04/27/20	356	3.4	0	9	53.0	485	397	2260546	6.40E+04	0.2	0.3	0.6	1.3	4991.3	11,006	
04/27/20	356	4.2	0	12	53.0	485	397	23795	6.74E+02	0.2	0.4	0.0	0.0	4991.3	11,006	
05/04/20	359	0.3	0	1	53.0	485	397	1689460	4.78E+04	0.0	0.0	0.3	0.7	4991.6	11,006	
05/04/20	359	3.2	0	9	52.0	490	401	96162	2.72E+03	0.1	0.3	0.0	0.0	4991.6	11,006	
05/07/20	362	8.9	0	25	54.0	480	392	1648493	4.67E+04	0.4	0.9	0.8	1.7	4992.4	11,008	
05/11/20	366	8.1	0	23	53.0	485	397	2308136	6.54E+04	0.4	0.8	1.5	3.4	4993.9	11,012	
05/14/20	369	8.9	0	25	55.0	475	388	1677931	4.75E+04	0.4	0.9	1.1	2.5	4995.1	11,014	
05/18/20	373	7.8	0	22	55.0	475	388	2260546	6.40E+04	0.3	0.8	1.5	3.3	4996.5	11,017	
05/21/20	376	14.7	0	41	55.0	475	388	1631322	4.62E+04	0.6	1.4	1.4	3.2	4998.0	11,021	
05/26/20	381	13.6	0	38	56.0	470	384	2767114	7.84E+04	0.6	1.3	3.1	6.8	5001.1	11,027	

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Site Management Plan
229 Homer Street Site
NYSDEC BCP Site No. C905044
Olean, New York

Date	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration ¹ (mg/m ³)	Vacuum (in of H ₂ O)	Air Flow Rate		Volume of Air Processed Since Previous Reading		Rate of VOC Removal		VOCs Removed Since Last Monitoring Period		Total VOC Removal to Date		Notes
						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
05/28/20	383	12.9	0	36	55.0	475	388	1141925	3.23E+04	0.6	1.3	1.2	2.6	5002.3	11,030	
06/01/20	387	16.6	0	46	53.0	485	397	2236750	6.33E+04	0.7	1.6	2.6	5.7	5004.8	11,036	
06/04/20	390	10.8	0	30	56.0	470	384	1706387	4.83E+04	0.5	1.0	1.9	4.1	5006.7	11,040	
06/08/20	394	13.5	0	38	53.0	485	397	2308136	6.54E+04	0.6	1.3	2.2	4.8	5008.9	11,045	
06/09/20	395	4.8	0	13	53.0	485	397	499700	1.41E+04	0.2	0.5	0.4	0.8	5009.3	11,045	AS turned on
06/11/20	397	111.8	0	311	52.0	490	401	1177986	3.34E+04	5.1	11.2	5.4	11.9	5014.7	11,057	
06/15/20	401	223.5	0	621	50.0	500	409	2354991	6.67E+04	10.4	22.8	30.9	68.1	5045.5	11,125	
06/18/20	404	197.5	0	549	50.0	500	409	1790774	5.07E+04	9.2	20.2	29.7	65.4	5075.2	11,191	
06/22/20	408	224.8	0	625	53.0	485	397	2284341	6.47E+04	10.1	22.3	38.5	84.9	5113.7	11,276	6-23-20 reduced AS from 24 to 17 hours/day
06/25/20	411	138.9	0	386	55.0	475	388	1677931	4.75E+04	6.1	13.5	24.3	53.6	5138.0	11,329	
06/29/20	415	154.6	0	430	54.0	480	392	2237241	6.34E+04	6.9	15.2	25.7	56.7	5163.7	11,386	
07/02/20	418	210.9	0	586	53.0	485	397	1737051	4.92E+04	9.5	20.9	24.9	54.8	5188.6	11,441	
07/06/20	422	263.8	0	733	52.0	490	401	2259810	6.40E+04	12.0	26.4	42.0	92.7	5230.6	11,534	
07/09/20	425	308.4	0.2	857	52.0	490	401	1754959	4.97E+04	14.0	30.9	39.5	87.1	5270.1	11,621	
07/13/20	429	207.4	0	576	53.0	485	397	2284341	6.47E+04	9.3	20.6	46.6	102.9	5316.8	11,724	
07/16/20	432	202.4	0	563	53.0	485	397	1713256	4.85E+04	9.1	20.1	27.6	60.9	5344.4	11,784	
07/20/20	436	150.2	0.3	417	53.0	485	397	2284341	6.47E+04	6.8	14.9	31.7	69.9	5376.1	11,854	
07/23/20	439	158.7	0.2	441	53.0	485	397	1713256	4.85E+04	7.1	15.7	20.8	45.9	5396.9	11,900	
07/27/20	443	182.8	0.1	508	52.0	490	401	2307891	6.54E+04	8.3	18.3	30.9	68.1	5427.8	11,968	
08/03/20	450	210.5	0	585	53.0	485	397	3997597	1.13E+05	9.5	20.9	62.2	137.1	5490.0	12,105	
08/06/20	453	203.8	0	566	52.0	490	401	1730918	4.90E+04	9.3	20.4	28.1	61.9	5518.0	12,167	
08/10/20	458	178.9	0.1	497	52.0	490	401	2740620	7.76E+04	8.1	17.9	41.3	91.0	5559.3	12,258	
08/13/20	460	220.9	1	614	51.0	495	405	1287150	3.64E+04	10.1	22.3	20.2	44.4	5579.5	12,303	Fluff bio-filter
08/17/20	464	240.7	1.7	669	50.0	500	409	2379522	6.74E+04	11.2	24.6	43.0	94.8	5622.5	12,398	
08/20/20	467	215.8	1.5	600	50.0	500	409	1766243	5.00E+04	10.0	22.0	31.7	70.0	5654.2	12,468	
08/24/20	471	214.9	1.3	597	50.0	500	409	2354991	6.67E+04	10.0	22.0	39.9	88.0	5694.1	12,556	
08/27/20	474	223.1	1.3	620	50.0	500	409	1766243	5.00E+04	10.3	22.8	30.4	67.1	5724.6	12,623	
08/31/20	478	204.8	1.7	569	49.0	505	413	2378541	6.74E+04	9.6	21.1	39.8	87.9	5764.4	12,710	
09/03/20	481	208.1	1.7	578	49.0	505	413	1783905	5.05E+04	9.7	21.5	29.0	63.9	5793.4	12,774	9-10-20 reduced AS from 17 to 12 hrs/day

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Site Management Plan
229 Homer Street Site
NYSDEC BCP Site No. C905044
Olean, New York

Date	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration ¹ (mg/m ³)	Vacuum (in of H ₂ O)	Air Flow Rate		Volume of Air Processed Since Previous Reading		Rate of VOC Removal		VOCs Removed Since Last Monitoring Period		Total VOC Removal to Date		Notes
						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
09/14/20	492	129.4	1.9	360	49.0	505	413	6516210	1.85E+05	6.1	13.4	86.5	190.8	5879.9	12,965	
09/17/20	495	142.7	1.5	397	48.0	510	417	1801568	5.10E+04	6.7	14.9	19.2	42.3	5899.1	13,008	
09/24/20	502	123.2	1.5	342	48.0	510	417	4178636	1.18E+05	5.8	12.8	43.7	96.4	5942.8	13,104	
09/28/20	506	215.1	1.6	598	48.0	510	417	2427112	6.87E+04	10.2	22.4	32.3	71.2	5975.1	13,175	
10/01/20	509	188.7	1.8	524	51.0	495	405	1724295	4.88E+04	8.7	19.1	27.8	61.4	6003.0	13,237	
10/05/20	513	208.4	2.4	579	51.0	495	405	2331441	6.60E+04	9.6	21.1	36.4	80.3	6039.4	13,317	
10/08/20	516	204.2	2.1	568	51.0	495	405	1748581	4.95E+04	9.4	20.7	28.4	62.6	6067.8	13,380	
10/12/20	520	187.7	1.2	522	51.0	495	405	2331441	6.60E+04	8.6	19.0	36.0	79.3	6103.8	13,459	
10/15/20	523	178.4	0.5	496	50.0	500	409	1766243	5.00E+04	8.3	18.2	25.3	55.8	6129.1	13,515	After readings turned air sparge system off
10/19/20	527	125.5	1.9	349	53.0	485	397	2284341	6.47E+04	5.6	12.4	27.8	61.3	6156.9	13,576	
10/22/20	530	54.6	0.2	152	50.0	500	409	1815305	5.14E+04	2.5	5.6	12.6	27.8	6169.5	13,604	
10/26/20	534	33.1	0.2	92	50.0	500	409	2330459	6.60E+04	1.5	3.4	8.0	17.7	6177.5	13,621	
10/29/20	537	34.1	0.1	95	51.0	495	405	1724295	4.88E+04	1.6	3.4	4.6	10.1	6182.1	13,632	Turned air sparge back on on 10/27/20
11/02/20	541	47.7	0.8	133	50.0	500	409	2354991	6.67E+04	2.2	4.9	7.5	16.6	6189.7	13,648	
11/05/20	544	12	0.1	33	51.0	495	405	1797152	5.09E+04	0.6	1.2	4.3	9.4	6193.9	13,658	
11/09/20	548	14.7	0.3	41	49.0	505	413	2353764	6.67E+04	0.7	1.5	2.5	5.4	6196.4	13,663	
11/12/20	551	24.4	0.5	68	50.0	500	409	1766243	5.00E+04	1.1	2.5	2.7	6.0	6199.1	13,669	
11/16/20	555	9.7	0.1	27	50.0	500	409	2379522	6.74E+04	0.4	1.0	3.2	7.0	6202.3	13,676	After readings turned air sparge system off
11/19/20	558	12.6	0.1	35	50.0	500	409	1741712	4.93E+04	0.6	1.3	1.5	3.4	6203.8	13,679	
11/23/20	562	11.4	0.1	32	50.0	500	409	2330459	6.60E+04	0.5	1.2	2.2	4.9	6206.0	13,684	
11/25/20	564	9.4	0.3	26	50.0	500	409	1152964	3.26E+04	0.4	1.0	0.9	2.1	6207.0	13,686	
11/30/20	569	4.2	0.1	12	50.0	500	409	2968269	8.41E+04	0.2	0.4	1.6	3.5	6208.5	13,690	
12/03/20	572	2.6	0.1	7	50.0	500	409	1766243	5.00E+04	0.1	0.3	0.5	1.0	6209.0	13,691	
12/07/20	576	5.8	0.2	16	50.0	500	409	2232335	6.32E+04	0.3	0.6	0.7	1.6	6209.8	13,693	
12/10/20	579	6	0.2	17	50.0	500	409	1888899	5.35E+04	0.3	0.6	0.9	1.9	6210.6	13,694	
12/14/20	583	6	0.1	17	50.0	500	409	2330459	6.60E+04	0.3	0.6	1.1	2.4	6211.7	13,697	
12/18/20	587	8.4	0.2	23	51.0	495	405	2258583	6.40E+04	0.4	0.8	1.3	2.8	6213.0	13,700	
12/24/20	593	8	0.2	22	50.0	500	409	3655142	1.04E+05	0.4	0.8	2.3	5.2	6215.4	13,705	
04/12/21	593	4.5	0.4	8	53.0	485	397	47590	1.35E+03	0.1	0.3	0.0	0.0	6215.4	13,705	

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229 Homer Street Site
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Olean, New York

Date	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration ¹ (mg/m ³)	Vacuum (in of H ₂ O)	Air Flow Rate		Volume of Air Processed Since Previous Reading		Rate of VOC Removal		VOCs Removed Since Last Monitoring Period		Total VOC Removal to Date		Notes
						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
04/15/21	596	5.5	0.6	9	52.0	490	401	1706878	4.83E+04	0.2	0.3	0.4	0.9	6215.8	13,706	Turned air sparge on for one day
04/19/21	600	4.1	0.6	7	50.0	500	409	2330459	6.60E+04	0.1	0.3	0.5	1.2	6216.3	13,707	Turned air sparge on for 12 hour per day
04/22/21	603	10.1	0.3	17	51.0	495	405	1748581	4.95E+04	0.3	0.6	0.6	1.3	6216.9	13,708	
04/26/21	607	9.5	0.3	16	51.0	495	405	2331441	6.60E+04	0.3	0.6	1.1	2.4	6218.0	13,711	
04/29/21	610	19.9	0.4	33	52.0	490	401	1730918	4.90E+04	0.5	1.2	1.2	2.7	6219.2	13,713	
05/03/21	614	4.1	0.2	7	50.0	500	409	2379522	6.74E+04	0.1	0.3	1.3	2.9	6220.5	13,716	
05/06/21	617	2.6	0.2	4	53.0	485	397	1689460	4.78E+04	0.1	0.2	0.3	0.6	6220.8	13,717	
05/10/21	621	2	0	3	52.0	490	401	2331931	6.60E+04	0.1	0.1	0.3	0.6	6221.1	13,717	
05/13/21	624	3.5	0	6	52.0	490	401	1682837	4.77E+04	0.1	0.2	0.2	0.5	6221.3	13,718	
05/17/21	628	6.5	0	11	50.0	500	409	2379522	6.74E+04	0.2	0.4	0.6	1.2	6221.8	13,719	
05/20/21	631	11.3	0	19	51.0	495	405	1748581	4.95E+04	0.3	0.7	0.7	1.6	6222.6	13,721	
05/24/21	635	7.6	0	13	52.0	490	401	2283850	6.47E+04	0.2	0.5	1.0	2.3	6223.6	13,723	
05/27/21	638	9.4	0	16	51.0	495	405	1772866	5.02E+04	0.3	0.6	0.7	1.6	6224.3	13,725	
06/01/21	643	2.3	0	4	53.0	485	397	2879221	8.15E+04	0.1	0.1	0.8	1.8	6225.1	13,726	
06/03/21	645	4.5	0	8	53.0	485	397	1118375	3.17E+04	0.1	0.3	0.2	0.4	6225.3	13,727	
06/07/21	649	2	0	3	53.0	485	397	2236750	6.33E+04	0.1	0.1	0.3	0.8	6225.6	13,728	
06/10/21	652	4.1	0	7	53.0	485	397	1689460	4.78E+04	0.1	0.2	0.2	0.5	6225.9	13,728	
06/14/21	656	4.4	0	7	53.0	485	397	2260546	6.40E+04	0.1	0.3	0.5	1.0	6226.3	13,729	
06/17/21	659	4.9	0	8	52.0	490	401	1754959	4.97E+04	0.1	0.3	0.4	0.8	6226.7	13,730	
06/21/21	663	3.5	0	6	53.0	485	397	2260546	6.40E+04	0.1	0.2	0.5	1.0	6227.2	13,731	
06/24/21	666	2.4	0	4	54.0	480	392	1719143	4.87E+04	0.1	0.1	0.2	0.5	6227.4	13,731	
06/28/21	670	4.6	0	8	53.0	485	397	2260546	6.40E+04	0.1	0.3	0.4	0.8	6227.8	13,732	
07/01/21	673	5.5	0	9	48.0	510	417	1826590	5.17E+04	0.2	0.3	0.4	0.9	6228.2	13,733	
07/06/21	678	3.5	0	6	49.0	505	413	2948399	8.35E+04	0.1	0.2	0.6	1.4	6228.9	13,735	
07/08/21	680	2.1	0	4	50.0	500	409	1202026	3.40E+04	0.1	0.1	0.2	0.4	6229.0	13,735	
07/12/21	684	2.8	0	5	51.0	495	405	2331441	6.60E+04	0.1	0.2	0.3	0.6	6229.3	13,736	
07/15/21	687	1.1	0	2	52.0	490	401	1730918	4.90E+04	0.0	0.1	0.2	0.4	6229.5	13,736	
07/19/21	691	0.2	0	0	51.0	495	405	2331441	6.60E+04	0.0	0.0	0.1	0.2	6229.5	13,736	
07/22/21	694	0.9	0	2	51.0	495	405	1748581	4.95E+04	0.0	0.1	0.0	0.1	6229.6	13,736	

Table 1 - Summary of SVE System VOC Mass Removal
Site Management Plan
229 Homer Street Site
NYSDEC BCP Site No. C905044
Olean, New York

Date	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration ¹ (mg/m ³)	Vacuum (in of H ₂ O)	Air Flow Rate		Volume of Air Processed Since Previous Reading		Rate of VOC Removal		VOCs Removed Since Last Monitoring Period		Total VOC Removal to Date		Notes
						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
07/26/21	698	0.1	0	0	50.0	500	409	2330459	6.60E+04	0.0	0.0	0.1	0.1	6229.6	13,736	
07/29/21	701	0.3	0	1	51.0	495	405	1772866	5.02E+04	0.0	0.0	0.0	0.0	6229.6	13,736	
08/02/21	705	1.3	0	2	50.0	500	409	2354991	6.67E+04	0.0	0.1	0.1	0.2	6229.7	13,737	
08/05/21	708	0.6	0	1	50.0	500	409	1766243	5.00E+04	0.0	0.0	0.1	0.2	6229.8	13,737	
08/09/21	712	0.9	0	2	50.0	500	409	2354991	6.67E+04	0.0	0.1	0.1	0.2	6229.9	13,737	
08/12/21	715	1.7	0	3	50.0	500	409	1766243	5.00E+04	0.0	0.1	0.1	0.2	6230.0	13,737	
08/16/21	719	1.6	0	3	50.0	500	409	2354991	6.67E+04	0.0	0.1	0.2	0.4	6230.2	13,738	
08/19/21	722	0.6	0	1	51.0	495	405	1748581	4.95E+04	0.0	0.0	0.1	0.2	6230.3	13,738	
08/23/21	726	0	0	0	50.0	500	409	2354991	6.67E+04	0.0	0.0	0.0	0.1	6230.3	13,738	
08/26/21	729	0.3	0	1	51.0	495	405	1748581	4.95E+04	0.0	0.0	0.0	0.0	6230.3	13,738	
08/30/21	733	0.5	0	1	50.0	500	409	2354991	6.67E+04	0.0	0.0	0.0	0.1	6230.4	13,738	
09/02/21	736	0.8	0	1	50.0	500	409	1766243	5.00E+04	0.0	0.0	0.1	0.1	6230.4	13,738	
09/07/21	741	0.7	0	1	50.0	500	409	2943738	8.34E+04	0.0	0.0	0.1	0.2	6230.5	13,738	
09/10/21	744	1	0	2	49.0	505	413	1684800	4.77E+04	0.0	0.1	0.1	0.1	6230.6	13,738	
09/13/21	747	0.4	0	1	50.0	500	409	1864368	5.28E+04	0.0	0.0	0.1	0.1	6230.7	13,739	
09/16/21	750	0.6	0	1	51.0	495	405	1874057	5.31E+04	0.0	0.0	0.0	0.1	6230.7	13,739	
09/20/21	754	1	0	2	50.0	500	409	2330459	6.60E+04	0.0	0.1	0.1	0.2	6230.8	13,739	
09/23/21	757	0.3	0	1	53.0	485	397	1713256	4.85E+04	0.0	0.0	0.1	0.1	6230.8	13,739	
09/27/21	761	0.6	0	1	52.0	490	401	2355972	6.67E+04	0.0	0.0	0.1	0.1	6230.9	13,739	
09/30/21	764	0.6	0	1	52.0	490	401	1682837	4.77E+04	0.0	0.0	0.0	0.1	6230.9	13,739	
10/04/21	768	0.8	0	1	52.0	490	401	2307891	6.54E+04	0.0	0.0	0.1	0.2	6231.0	13,739	
10/07/21	771	0.8	0	1	52.0	490	401	1754959	4.97E+04	0.0	0.0	0.1	0.1	6231.1	13,740	
10/11/21	775	1.1	0	2	52.0	490	401	2283850	6.47E+04	0.0	0.1	0.1	0.2	6231.2	13,740	
10/14/21	778	1.3	0	2	49.0	505	413	1808682	5.12E+04	0.0	0.1	0.1	0.2	6231.3	13,740	
10/18/21	782	1.3	0	2	51.0	495	405	2331441	6.60E+04	0.0	0.1	0.1	0.3	6231.4	13,740	
10/21/21	785	1	0	2	52.0	490	401	1730918	4.90E+04	0.0	0.1	0.1	0.2	6231.5	13,741	
10/25/21	789	0.7	0	1	53.0	485	397	2284341	6.47E+04	0.0	0.0	0.1	0.2	6231.6	13,741	
10/28/21	792	0.4	0	1	53.0	485	397	1713256	4.85E+04	0.0	0.0	0.0	0.1	6231.7	13,741	
11/01/21	796	0.4	0	1	54.0	480	392	2260791	6.40E+04	0.0	0.0	0.0	0.1	6231.7	13,741	

Table 1 - Summary of SVE System VOC Mass Removal
Site Management Plan
229 Homer Street Site
NYSDEC BCP Site No. C905044
Olean, New York

Date	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration ¹ (mg/m ³)	Vacuum (in of H ₂ O)	Air Flow Rate		Volume of Air Processed Since Previous Reading		Rate of VOC Removal		VOCs Removed Since Last Monitoring Period		Total VOC Removal to Date		Notes
						(ACFM)	(SCFM)	(CF)	(m ³)	(kg/day)	(lb/day)	(kg)	(lb)	(kg)	(lb)	
11/04/21	799	0.3	0	1	54.0	480	392	1695593	4.80E+04	0.0	0.0	0.0	0.1	6231.7	13,741	
11/08/21	803	0.4	0	1	53.0	485	397	2308136	6.54E+04	0.0	0.0	0.0	0.1	6231.8	13,741	
11/11/21	806	0.3	0	1	53.0	485	397	1713256	4.85E+04	0.0	0.0	0.0	0.1	6231.8	13,741	
11/15/21	810	0.3	0	1	54.0	480	392	2237241	6.34E+04	0.0	0.0	0.0	0.1	6231.8	13,741	
11/17/21	812	0.5	0	1	53.0	485	397	1070785	3.03E+04	0.0	0.0	0.0	0.0	6231.9	13,741	
11/22/21	817	0.4	0	1	54.0	480	392	2920188	8.27E+04	0.0	0.0	0.1	0.1	6231.9	13,741	
11/26/21	821	0.4	0	1	54.0	480	392	2166591	6.14E+04	0.0	0.0	0.0	0.1	6232.0	13,741	
11/29/21	824	0.3	0	1	54.0	480	392	1742693	4.93E+04	0.0	0.0	0.0	0.1	6232.0	13,742	
12/02/21	827	0.2	0	0	53.0	485	397	1737051	4.92E+04	0.0	0.0	0.0	0.0	6232.0	13,742	
12/06/21	831	0.2	0	0	54.0	480	392	2260791	6.40E+04	0.0	0.0	0.0	0.0	6232.0	13,742	

Notes:

1. The estimated mass of contamination is based on ratio of the sum of the gasoline and diesel range organics (GRO and DRO) as measured by a vapor sample collected with a summa canister to the contemporaneous PID reading.

2. The ratio for 2018 and 2019 is 14.39 milligrams per cubic meter for each 1 part per million on the PID.

3. The ratio for 2020 is 2.78 milligrams per cubic meter for each 1 part per million on the PID.

4. The ratio for 2021 is 1.67 milligrams per cubic meter for each 1 part per million on the PID.