D&B ENGINEERS AND ARCHITECTS

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February 18, 2021

VIA E-MAIL

Robert Strang, E.I.T., Assistant Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, N Y 12233-7017

Re: Soil Vapor Intrusion Evaluation Report
Former Bright Outdoors Site
631 Field Street
Johnson City, NY 14611
D&B No. 3150-45X

Dear Mr. Strang:

This letter report presents the results of the soil vapor intrusion evaluation conducted by D&B Engineers and Architects (D&B) for the Former Bright Outdoors Site (Site) property located at 631 Field Street in Johnson City, New York.

Site Description and Background

The Site consists of 1.77 acres of commercial/industrial property and is bounded by State Route 17 to the south, a self-storage building to the east, commercial property to the north, and residential properties along Marie Street to the west as shown on Figure 1, provided as Attachment 1. The area surrounding the Site is a mixed commercial and residential neighborhood served by public water.

Bright Outdoors, Inc. operated on the property from 1984 to 1996. The company assembled casual outdoor furniture from polyvinyl chloride (PVC) pipe and vinyl-coated polyester upholstery from 1984 to 1990 and manufactured consumer sporting goods from PVC pipe from 1990 to 1996. Operations by Bright Outdoors used small quantities of various materials containing numerous chemical solvents. Several of the materials used contained trichloroethane (TCA), 2-butanone, acetone, and toluene, which were detected in samples collected from various environmental media during several subsurface investigations at the Site.

A Record of Decision (ROD) was signed by NYSDEC and accepted by the NYSDOH in 2007 (NYSDEC 2007). The Site remedy identified in the ROD included three soil vapor extraction (SVE) systems that were installed in April and May 2010 at the warehouse building to collect 1,1,1-TCA and TCE contaminated sub-slab vapors and exhaust them above the roof line. Twelve sub-slab vapor monitoring points and eight groundwater monitoring wells have been installed for site monitoring as shown of Figure 2, provided as Attachment 2. The remedial treatment system was commissioned on May 18, 2010. In addition, the approximately 60-foot-long central trench drain that ran through the middle of the warehouse building was removed. The floor drain discharge pipe at the north end of the

central trench drain was plugged and capped as part of the remedial action. Approximately 10 tons of nonhazardous soil was removed from the bottom of the excavation where the former trench drain in the warehouse had been removed and disposed of offsite.

The remedy relies on a site management plan (SMP) to manage the remaining contamination at the Site. The SMP was approved by NYSDEC in October 2011, revised in October 2020, and includes an environmental easement, engineering controls and institutional controls to mitigate potential exposure pathways (i.e., direct contact, ingestion, or inhalation of VOCs from subsurface groundwater) during future construction work and/or ground intrusive activities. In addition, Site management activities specified in the SMP include biennial monitoring of groundwater, and annual monitoring of soil vapor, and SVE stack emissions.

In February 2016, the on-Site SVE system was shut down following the necessary sampling events. As approved by the NYSDEC, the system was to remain off as the building was identified as vacant.

D&B Observations

D&B visited the Site for the first time in March 2019 to conduct routine groundwater monitoring. At the request of the NYSDEC D&B also collected a round of indoor and ambient air samples from the Site building. This air sampling event was completed to evaluate indoor air quality while the SVE system was not operational and evaluate the need to restart the SVE system.

D&B returned to the Site in January 2020 to conduct sub-slab vapor sampling at the request of the NYSDEC. An inspection of the SVE system and stack discharge sampling was also performed at this time.

During the March 2019 and January 2020 Site visits, D&B observed that the current Site owner, U-Haul/U-Haul of Johnson City, had made several modifications to the Site building footprint as it is being converted into an indoor self-storage facility. Walls have been constructed to enclose most of the Open Storage Area and a portion of the exterior concrete block wall between this area and the former Assembly Area has been removed as shown on the conceptual site plan, Attachment 3.

During the 2020 site inspection a large gap was observed between the concrete slab of the Open Storage and the Assembly Areas due to the removal of the exterior concrete block wall. The concrete floor in the Open Storage Area has also been resurfaced with a skim coat of concrete. As a result of this skim coat, sub-slab vapor monitoring point SS-106 could not be located. Storage lockers have been constructed as shown on the site plan in much of the building, with the exception of in the Plate Room. The Plate Room contains large wooden storage boxes and raw materials being used to construct the storage lockers along the eastern half of the room. As a result, sub-slab vapor monitoring points SS-101, SS-103, SS-105 could not be located. D&B did not have access to the southwest portion of the building where sub-slab vapor monitoring point SS-109 is located.

Due to modifications within the building footprint, stack #2 (central) and #3 (southern) associated with the soil vapor extraction (SVE) system are now inside the building, while stack #1 (northern) remains

outdoors. The central stack (#2) is in a corner adjacent to an overhead door and the southern stack (#3) is located inside a storage locker (fourth locker). The SVE systems were observed to be operating during the January 2020 Site visit as evidenced by the audible sound of the blower motor and the differential pressures observed on their respective u-tube manometers (0.22 to 0.24 inches of H_2O). Each SVE system has an independent fan and an electrical switch adjacent to the fan. Stack #1 and stack #2 appeared to be in good physical condition. Stack (#3) was observed to have poly sheeting wrapped and attached with plastic zip ties around the PVC elbow below the pump. The poly sheeting was removed, and the elbow was observed to be cracked and a section of PVC was missing. The poly sheeting was reattached with plastic zip ties and the SVE system inspection was conducted. The January 2020 SVE System Inspection Field Form is provided as Attachment 4.

Expansion joints, cracks and/or penetrations were observed in the concrete floor to varying degrees throughout the facility. Most of the expansion joints and cracks were existing and it appeared that the previously installed caulk has not been maintained. D&B was not able to determine if the cracks are superficial or extend through the slab. Six, 1-inch-diameter holes were observed in the slab of the Wire Room and were observed to be filled with dust and dirt. These holes extended at least six inches below the surface.

Sampling and Analysis

Groundwater Sampling Results

Based upon a review of all available historical groundwater analytical data of samples collected from the Site, detectable concentrations of chemicals of concern have exhibited a decreasing trend since implementation of the remedy in 2010. All concentrations of VOCs detected during the most recent groundwater sampling event, conducted in March 2019, were detected at concentrations below the Class GA Standards with the exception of one well which exhibited an exceedance of 1,1,1-TCA (5.2 ug/l in MW-05) as summarized in Table 1, provided as Attachment 5.

Air Sampling Results

Semi-annual vapor sampling has been conducted in July 2013, March 2014, July 2014, January 2015, July 2015, February 2016, April 2016, February 2017 and January 2020 with samples collected from several sub-slab vapor points, up to three indoor air locations, and the three exhaust stacks when the system was in operation.

Indoor and ambient air samples collected in March 2019 exhibited several contaminants of concern as shown on Table 2, provided as Attachment 6. The March 2019 air sample locations are shown on Figure 3, provided as Attachment 7. During the January 2020 monitoring event, the Plate Room contained large wooden storage boxes and raw materials being used to construct the storage lockers along the eastern half of the room. As a result, sub-slab vapor monitoring points SS-101, SS-103, SS-105 could not be located. In addition, D&B did not have access to the southwest portion of the building where sub-slab vapor monitoring point SS-109 is located. Sub-slab soil vapor samples were collected from sub-slab soil vapor sampling ports SS-102, SS-104, SS-106, SS107, SS-108, SS-111, SS-112 and

from the three SVE discharge stacks using 6-liter summa canisters with mass flow controllers preset by the laboratory to collect 12-hour integrated samples as prescribed in the SMP.

Several of the VOC's identified within the indoor ambient air samples indicate that the presence of these compounds may be related to residual on-site sources, such as cleaning products, solvents and, petroleum-based compounds. The ambient air sample also had several contaminants of concern detected which may be due to the presence of cleaning products, solvents and petroleum-based compounds within the vicinity of the sample.

Soil vapor and discharge stack air samples collected in January 2020 exhibited several contaminants of concern as shown on Table 3, provided as Attachment 8.

Conclusions and Recommendations

The analytical results for the soil vapor and discharge stack air samples collected on January 21, 2020 indicated several VOCs were present in the samples. Trichloroethene (TCE) was the only analyte detected in soil vapor that exceeded specific guidelines presented in the Guidance. TCE was detected in the sample collected from soil vapor sampling port SS-111, located in the Plate Room at a concentration of 410 µg/m^3. A summary of historical air sampling results from June 2013 through January 2020 for select constituents of concern are shown on Table 4, provided as Attachment 9.

As such, D&B determined the following conclusions after evaluating the March 2019 indoor air data against the January 2020 soil vapor data in a matrix as shown in Table 5, provided as Attachment 10:

- Indoor and ambient outdoor air samples collected in 2019 identified low concentrations of carbon tetrachloride. Carbon tetrachloride has not been recognized by the site management plan as a site-related contaminant of concern (COC) (Aztech, 2017).

- According to decision Matrix A of the New York State Department of Health (NYSDOH), a comparison of the indoor air samples to sub-slab samples for carbon tetrachloride resulted in a recommendation of no further action.

- According to decision Matrix A of the New York State Department of Health (NYSDOH), a comparison of the indoor air samples to sub-slab samples for TCE resulted in a recommendation of mitigation as the action to minimize the current and potential exposures associated with soil vapor intrusion.

- According to decision Matrix B, a comparison of the indoor air samples to the sub-slab samples for PCE and 1,1,1-TCA resulted in a recommendation of no further action.

Based on the conclusions stated above D&B provides the following recommendations:

- Continue operation of the on-site SVE system to depressurize the soil vapor below the buildings and thereby prevent potential contaminants in soil vapor from migrating into the

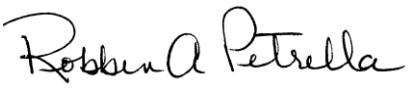
building and assist in mass removal of contaminants below the Site building within the vadose zone. In addition, it is recommended that annual indoor air and soil vapor sampling resume to evaluate the effectiveness of the SVE system in reducing the concentrations in soil vapor and confirm that the system remains effective in mitigating vapor migration into the building.

- Repair cracks and/or penetrations observed in January 2020 and the broken PVC elbow on the southern stack (#3). Prior to completing repairs, D&B suggests smoke testing be performed to determine if preferential pathways exist. If required, existing caulk in expansion joints should be removed and new caulk/sealant should be reapplied. Penetrations should be cleaned of dirt/ debris and filled with mortar/grout. The PVC elbow should be removed and a new PVC elbow should be installed. Following these activities smoke testing should be performed. Another round of pressure readings, soil vapor and indoor air samples should be collected after making the repairs and starting up the system to see whether the repairs worked or if additional measures are needed.

- As the southern stack (#3) is located inside a storage locker, coordination with the Site owner should be made to prevent this locker from being rented/leased.

- As patrons of the current owner or the public will have access to the Site, modifications to the current electrical service should be evaluated to prevent the unauthorized shutdown of the SVE systems. D&B would recommend installing a protective lock box over the exposed switches associated with the fans.

Very truly yours,



Robbin A. Petrella
Senior Associate

RAPt/cf
Attachments
♦3150\RAP021821RS_Ltr

ATTACHMENT 1

FIGURE 1 - SITE LOCATION MAP

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

D&B ENGINEERS AND ARCHITECTS, P.C.

FORMER BRIGHT OUTDOORS SITE

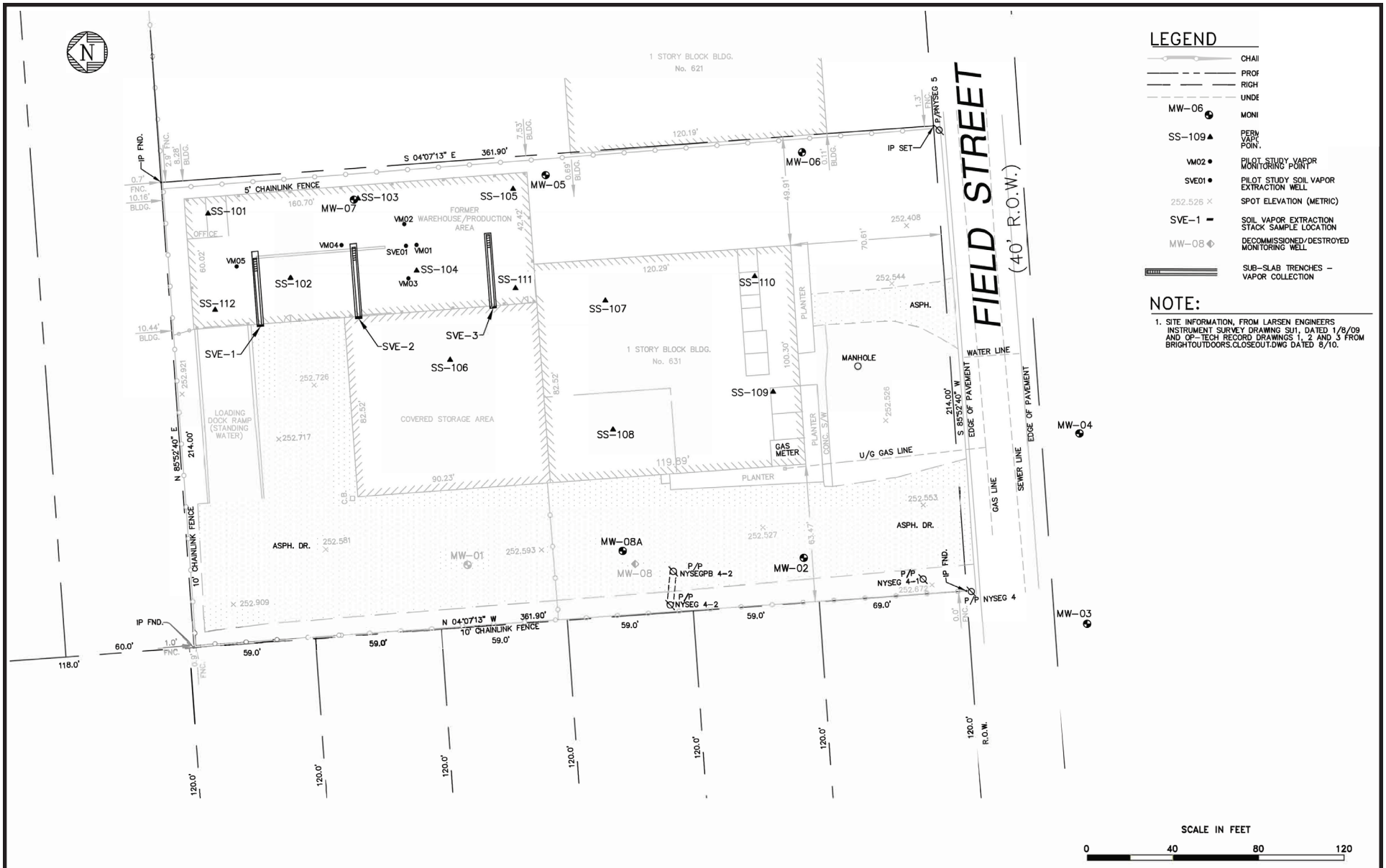
SITE LOCATION

FIGURE 1

Figure 1 - Site Location Map.indd (12/13/19 - 2:50 PM)

ATTACHMENT 2

FIGURE 2 – SITE FEATURES MAP



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORMER BRIGHT OUTDOORS SITE

D&B ENGINEERS AND ARCHITECTS, P.C.

SITE FEATURES MAP

FIGURE 2

Figure 2 - Site Features Map.indd (04/30/20 - 2:45 PM)

ATTACHMENT 3

U-HAUL'S CONCEPTUAL SITE PLAN

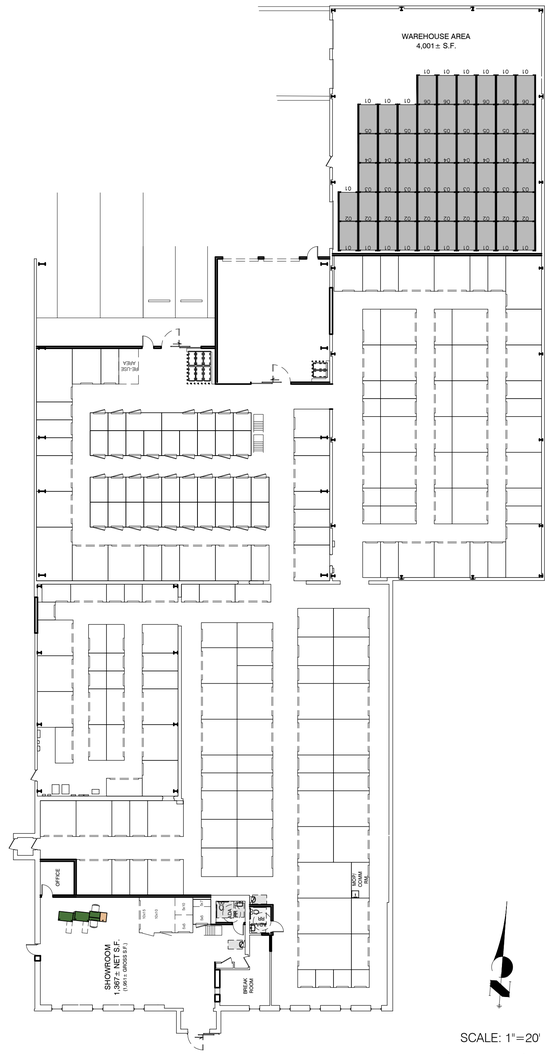
PROPOSED MIX

LOCKER SIZE		EXISTING STORAGE									PROPOSED STORAGE			GRAND TOTAL		
		INT.	SQ. FT.	%	DRIVE UP	SQ. FT.	%	TOTAL	SQ. FT.	%	QTY.	SQ. FT.	%	TOTAL	SQ. FT.	%
STK LKRS	5 x 5	0	0	0%	0	0	0%	0	0	0%	5/5	250	2%	5/5	250	0%
	5 x 7	0	0	0%	0	0	0%	0	0	0%	29/29	2,030	15%	29/29	2,030	3%
	10 x 5	0	0	0%	0	0	0%	0	0	0%	2/2	200	1%	2/2	200	0%
5 x 5		119	2,975	26%	0	0	0%	119	2,975	5%	16	400	3%	135	3,375	5%
5 x 7		0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%
5 x 8		0	0	0%	0	0	0%	0	0	0%	3	120	1%	3	120	0%
5 x 10		142	7,100	63%	13	650	1%	155	7,750	14%	67	3,350	24%	222	11,100	16%
7 x 10		0	0	0%	0	0	0%	0	0	0%	2	140	1%	2	140	0%
10 x 8		0	0	0%	0	0	0%	0	0	0%	14	1,120	8%	14	1,120	2%
10 x 10		10	1,000	9%	106	10,600	23%	116	11,600	20%	50	5,000	37%	166	16,600	24%
10 x 15		0	0	0%	66	9,900	22%	66	9,900	17%	7	1,050	8%	73	10,950	16%
10 x 20		1	200	2%	63	12,600	28%	64	12,800	23%	0	0	0%	64	12,800	18%
10 x 30		0	0	0%	38	11,400	25%	38	11,400	20%	0	0	0%	38	11,400	16%
20 x 20		0	0	0%	1	400	1%	1	400	1%	0	0	0%	1	400	0%
TOTAL		272	11,275	100%	287	45,550	100%	559	56,825	100%	231	13,660	100%	790	70,485	100%

U-BOX AREA = 4,001± S.F.
TOTAL U-BOXES = 106 (2-HIGH)

AERIAL VIEW N.T.S.

SITE PLAN



ENLARGED FLOOR PLAN

SHEET NOTES:

REVISIONS:

NO.	DATE	REMARKS
1	03/01/18	NH ADD STACKS PER EJS REVIEW
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-

PROFESSIONAL SEAL:

PRELIMINARY DOCUMENTS, NOT FOR CONSTRUCTION, FOR INFORMATION ONLY

ARCHITECT LOGO:

AMERCO REAL ESTATE COMPANY
CONSTRUCTION DEPARTMENT
2727 NORTH CENTRAL AVENUE
PHOENIX, ARIZONA 85004
P: (602) 263-6502

SITE ADDRESS:

U-Haul of Johnson City
621 Field St
Johnson City, NY 13790

SHEET CONTENTS:

Site Plan

800035

DRAWN:	BLC	SP1
CHECKED:	NH	
DATE:	01/17/18	

800035A1D

ATTACHMENT 4

JANUARY 2020 SVE SYSTEM INSPECTION FIELD FORM

System Inspection Field Form
Soil Vapor Mitigation Systems
Former Bright Outdoors Site
Johnson City, Broome County, New York
NYSDEC Site #7-04-023

SVE SYSTEMS INSPECTION FORM

Post Commissioning, Routine or Non-Routine Inspections (circle one)

Date of Inspection: 01/20/20 FBO

Date of Previous Inspection: _____

Address: Field Street, Johnson city Tracking Number: _____

Equipment Documentation

As Found		Manometer Reading (in. H_2O)		As Left		Manometer Reading (in. H_2O)	
SVE System	Fan Model	Prior	Current	SVE System	Fan Model	Prior	Current
1-Northern	RP-265		2.3	1-Northern			2.3
2-Central	RP-265		2.4	2-Central			2.4
3-Southern	RP-265		2.2	3-Southern			2.2

	As Found		As Left	
Fan Check	Yes	No	Yes	No
Are all fans in operation?	X			
Is there a differential pressure shown in U-Tube manometer?	X			
If yes, provide readings above.	X			
Is each fan mounted securely?		X		
Are coupling connections secure?		X		
Is excessive noise heard when fan is running? (Yes)	X	X		
Does each fan induce suction when running?	X			
Is switch is locked in the ON position?		X		
Does smoke enter joints?				
If yes: Was joint re-sealed?				
Does smoke enter re-sealed joint?				
Piping Check				
Is glue evident at joints?	X			
Are system suction points sealed?	X			
Is piping system properly supported?	X			
Are valves and manometers installed at proper locations?	X			
Is excessive noise heard in piping joints?	X			
Were piping modifications and 10% of old joints smoke tested?		X		
Does smoke enter joints?				
If yes: Was joint re-sealed?				
Does smoke enter re-sealed joint?				
Slab Check				
Have new floor cracks appeared since the last inspection?	X			
Was each identified slab crack, repair, or modification smoke tested?		X		

Does smoke enter?				
If yes: Was area re-sealed with approved sealant*?				
Does smoke enter re-sealed area?				

Electrical Check

Are electrical wires and connections secure?	X			
Is each junction box closed?	X			
Are conduit properly supported?	X			
Are switch boxes locked?		X		
Does each fan start when the switch is ON position?	X			
Does each fan stop when the switch is in OFF position?	X			
Are mitigation system labels applied?	X			
Are the correct labels applied in the proper locations?				

Have the following items changed since the last visit?

	No	Yes	If yes, explain…
Building Footprint		X	
Ownership		X	

If any of these items have changed, a redesign may be required.
Contact the maintenance supervisor for field review.

Deviations/Comments

Southern Mitigation Stack - Elbow Coming out of wall and Connecting Vertically to the fan was observed to have poly sheeting zip tied around it, when removed it revealed large Cracks throughout and an approximate 3" section of PVC missing. Former open storage area is enclosed Partially

Performed by: Gunther J. Schwerr Date: _____

ATTACHMENT 5

TABLE 1 – 2019 GROUNDWATER SAMPLE RESULTS

Table 1
Former Bright Outdoors Site
Groundwater Sample Results
Volatile Organic Compounds

Sample ID	MW-02	MW-03	MW-04	MW-05	MW-06	MW-07	MW-08	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	3/27/2019	3/27/2019	3/27/2019	3/27/2019	3/27/2019	3/27/2019	3/27/2019	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS								
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	5
1,1,1-Trichloroethane	U	1.0 J	U	***5.2 J***	U	U	0.84 J	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	5
1,1,2-Trichloroethane	U	U	U	U	U	U	U	1
1,1-Dichloroethane	U	0.45 J	0.45 J	4.3	3.1	U	U	5
1,1-Dichloroethene	U	U	U	2.9	0.79 J	U	U	5
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	5
1,2-Dibromo-3-Chloropropane	U	U	U	U	U	U	U	0.04
1,2-Dibromoethane	U	U	U	U	U	U	U	0.0006
1,2-Dichlorobenzene	U	U	U	U	U	U	U	3
1,2-Dichloroethane	U	U	U	U	U	U	U	0.6
1,2-Dichloropropane	U	U	U	U	U	U	U	1
1,3-Dichlorobenzene	U	U	U	U	U	U	U	3
1,4-Dichlorobenzene	U	U	U	U	U	U	U	3
2-Hexanone	U	U	U	U	U	U	U	50
Acetone	U	U	U	U	U	U	U	50
Benzene	U	U	U	U	U	U	U	1
Bromodichloromethane	U	U	U	U	U	U	U	50
Bromoform	U	U	U	U	U	U	U	50
Bromomethane	U	U	U	U	U	U	U	5
Carbon Disulfide	U	U	U	U	U	U	U	60
Carbon Tetrachloride	U	U	U	U	U	U	U	5
Chlorobenzene	U	U	U	U	U	U	U	5
Chloroethane	U	U	U	0.40 J	U	U	U	5
Chloroform	U	U	U	U	U	U	U	7
Chloromethane	U	U	U	U	U	U	U	5
Cis-1,2-Dichloroethylene	U	U	U	U	2.8	U	U	5
Cis-1,3-Dichloropropene	U	U	U	U	U	U	U	0.4
Cyclohexane	U	U	U	U	U	U	U	--

See next page for footnotes.

Table 1
Former Bright Outdoors Site
Groundwater Sample Results
Volatile Organic Compounds

Sample ID	MW-02	MW-03	MW-04	MW-05	MW-06	MW-07	MW-08	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	3/27/2019	3/27/2019	3/27/2019	3/27/2019	3/27/2019	3/27/2019	3/27/2019	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	U	U	U	U	U	U	U	50
Dichlorodifluoromethane	U	U	U	U	U	U	U	5
Ethylbenzene	U	U	U	U	U	U	U	5
Isopropylbenzene	U	U	U	U	U	U	U	5
Methyl Acetate	U	U	U	U	U	U	U	--
Methyl Ethyl Ketone	U	U	U	U	U	U	U	50
Methyl Isobutyl Ketone	U	U	U	U	U	U	U	--
Methylcyclohexane	U	U	U	U	U	U	U	--
Methylene Chloride	U	U	U	U	U	U	U	5
Styrene	U	U	U	U	U	U	U	5
Tert-Butyl Methyl Ether	U	U	U	U	U	U	U	10
Tetrachloroethylene	U	U	U	U	U	U	U	5
Toluene	U	U	U	U	0.78	U	U	5
Trans-1,2-Dichloroethene	U	U	U	U	U	U	U	5
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	0.4
Trichloroethylene	1.2 J	1.2 J	0.84 J	4.9 J	U	U	0.95 J	5
Trichlorofluoromethane	U	U	U	U	U	U	U	5
Vinyl Chloride	U	U	U	U	U	U	U	2
Xylenes, Total	U	U	U	U	U	U	U	5
Total Volatile Compounds	1.2	2.65	1.29	17.7	7.47	0	1.79	--

Footnotes/Qualifiers:

ug/l: Micrograms per liter
--: No standard
U: Analyzed for but not detected
J: Estimated value

Exceeds Class GA Standard or Guidance Value

ATTACHMENT 6

TABLE 2 – INDOOR AND AMBIENT AIR SAMPLE RESULTS

Table 2
Former Bright Outdoors
Indoor and Ambient Air Samples
Volatile Organic Compounds (VOCs)

Sample ID / Sampling Date / Units	FBO-IA01-MAR19 03/27/19 ug/m^3	FBO-IA02-MAR19 03/27/19 ug/m^3	FBO-AA01-MAR19 03/27/19 ug/m^3	NYSDOH Air Guideline Value (ug/m3)
1,1,1-Trichloroethane	U	U	U	--
1,1,2,2-Tetrachloroethane	U	U	U	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.51 J	0.52 J	0.5 J	--
1,1,2-Trichloroethane	U	U	U	--
1,1-Dichloroethane	U	U	U	--
1,1-Dichloroethene	U	U	U	--
1,2,4-Trichlorobenzene	U	U	U	--
1,2,4-Trimethylbenzene	2.1	1.1	U	--
1,2-Dibromoethane (Ethylene Dibromide)	U	U	U	--
1,2-Dichlorobenzene	U	U	U	--
1,2-Dichloroethane	U	U	U	--
1,2-Dichloropropane	U	U	U	--
1,2-Dichlorotetrafluoroethane	U	U	U	--
1,3,5-Trimethylbenzene (Mesitylene)	0.52 J	0.35 J	U	--
1,3-Butadiene	U	U	U	--
1,3-Dichlorobenzene	U	U	U	--
1,4-Dichlorobenzene	U	U	U	--
1,4-Dioxane (P-Dioxane)	U	U	U	--
2,2,4-Trimethylpentane	U	U	U	--
2-Chlorotoluene	U	U	U	--
2-Hexanone	U	U	U	--
3-Chloropropene	U	U	U	--
4-Ethyltoluene	0.56 J	0.36 J	U	--
Acetone	25	25	U	--
Benzene	0.48 J	0.45 J	0.33 J	--
Benzyl Chloride	U	U	U	--
Bromodichloromethane	U	U	U	--
Bromoethene	U	U	U	--
Bromoform	U	U	U	--
Bromomethane	U	U	U	--
Carbon Disulfide	U	U	U	--
Carbon Tetrachloride	0.44	0.25	0.42	--
Chlorobenzene	U	U	U	--
Chlorodifluoromethane	0.95 J	1 J	1 J	--
Chloroethane	U	U	U	--
Chloroform	U	U	U	--
Chloromethane	1.1	1.2	1.2	--
Cis-1,2-Dichloroethylene	0.18 J	U	U	--
Cis-1,3-Dichloropropene	U	U	U	--
Cyclohexane	U	U	U	--
Cymene	U	U	U	--
Dibromochloromethane	U	U	U	--
Dichlorodifluoromethane	2.9	2.9	2.8	--
Ethylbenzene	0.86 J	0.6 J	U	--
Hexachlorobutadiene	U	U	U	--
Isopropanol	U	U	U	--
Isopropylbenzene (Cumene)	U	U	U	--
M,P-Xylenes	4	2.6	U	--
Methyl Ethyl Ketone (2-Butanone)	2.6	1.3 J	U	--

See next page for footnotes.

Table 2
Former Bright Outdoors
Indoor and Ambient Air Samples
Volatile Organic Compounds (VOCs)

Sample ID Sampling Date Units	FBO-IA01-MAR19 03/27/19 ug/m^3	FBO-IA02-MAR19 03/27/19 ug/m^3	FBO-AA01-MAR19 03/27/19 ug/m^3	NYSDOH Air Guideline Value (ug/m3)
VOCs continued				
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	U	U	U	--
Methyl Methacrylate	U	U	U	--
Methylene Chloride	0.98 J	1 J	1 J	60
Naphthalene	U	U	U	--
n-Butane	3.4	7.3	1.1 J	--
N-Butylbenzene	U	U	U	--
N-Heptane	U	U	U	--
N-Hexane	U	U	U	--
N-Propylbenzene	U	U	U	--
O-Xylene (1,2-Dimethylbenzene)	0.86 J	0.57 J	U	--
Sec-Butylbenzene	U	U	U	--
Styrene	U	U	U	--
T-Butylbenzene	U	U	U	--
Tert-Butyl Alcohol	U	U	U	--
Tert-Butyl Methyl Ether	U	U	U	--
Tetrachloroethylene(PCE)	U	U	U	30
Tetrahydrofuran	U	U	U	--
Toluene	4.3	3.1	U	--
Trans-1,2-Dichloroethene	U	U	U	--
Trans-1,3-Dichloropropene	U	U	U	--
Trichloroethylene (TCE)	U	U	U	--
Trichlorofluoromethane	1.5	1.6	1.5	--
Vinyl Chloride	U	U	U	--
Xylenes, Total	4.9	3.2	U	--

Qualifiers:

U: Analyzed but not detected

J: Estimated value

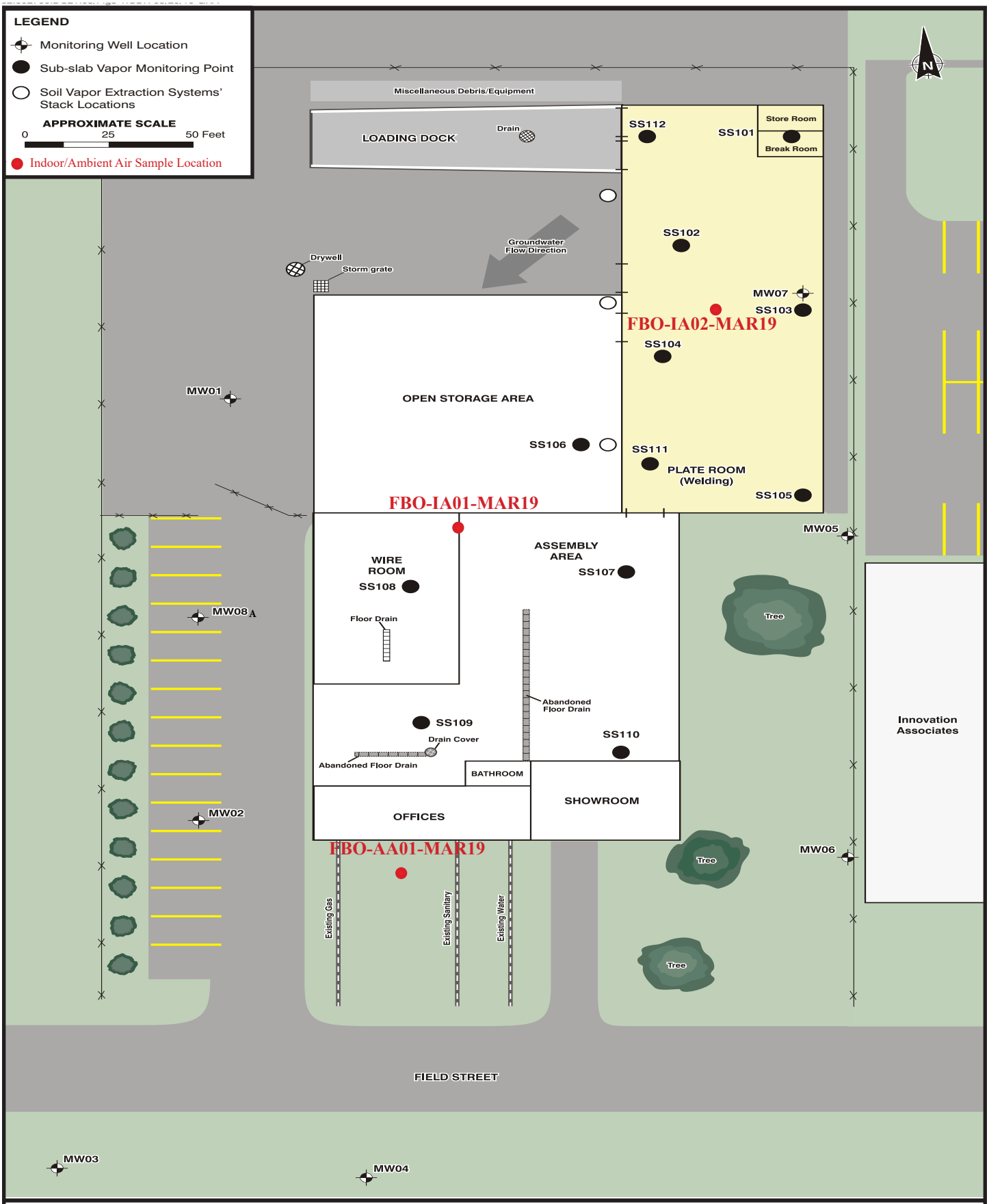
Notes:

ug/m^3: Micrograms per cubic meter

--: No guidance value

ATTACHMENT 7

FIGURE 3 – AIR SAMPLE LOCATION MAP



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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FORMER BRIGHT OUTDOORS

AIR SAMPLING LOCATIONS

FIGURE 3

ATTACHMENT 8

TABLE 3 – SUMMARY OF JANUARY 2020 SOIL VAPOR ANALYTICAL RESULTS

Table 3
Former Bright Outdoors
Summary of January 2020 Soil Vapor Analytical Results
Volatile Organic Compounds

Sample ID	FBO-SS-102	FBO-SS-104	FBO-SS-107	FBO-SS-108	FBO-SS-111	NYSDOH Air Guideline Value
Sampling Date	01/20/20	01/20/20	01/20/20	01/20/20	01/20/20	
Units	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
1,1,1-Trichloroethane (TCA)	3.5	36	160	46	6.5	--
1,1,2,2-Tetrachloroethane	U	U	U	U	U	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.46 J	0.51 J	0.52 J	0.56 J	U	--
1,1,2-Trichloroethane	U	U	U	U	U	--
1,1-Dichloroethane	U	U	U	0.24 J	U	--
1,1-Dichloroethene	U	U	U	U	U	--
1,2,4-Trichlorobenzene	U	U	U	U	U	--
1,2,4-Trimethylbenzene	U	0.38 J	U	U	U	--
1,2-Dibromoethane (Ethylene Dibromide)	U	U	U	U	U	--
1,2-Dichlorobenzene	U	U	U	U	U	--
1,2-Dichloroethane	U	U	U	U	U	--
1,2-Dichloropropane	U	U	U	U	U	--
1,2-Dichlorotetrafluoroethane	U	U	U	U	U	--
1,3,5-Trimethylbenzene (Mesitylene)	U	U	U	U	U	--
1,3-Butadiene	0.21 J	0.33 J	U	U	U	--
1,3-Dichlorobenzene	U	U	U	U	U	--
1,4-Dichlorobenzene	U	U	U	U	U	--
1,4-Dioxane (P-Dioxane)	U	U	U	U	U	--
2-Hexanone	U	U	U	U	U	--
4-Ethyltoluene	U	U	U	U	U	--
Acetone	13	12 J	21	2.8 J	13 J	--
Benzene	0.86	1.1	0.24 J	U	U	--
Benzyl Chloride	U	U	U	U	U	--
Bromodichloromethane	U	U	U	U	U	--
Bromoform	U	U	U	U	U	--
Bromomethane	U	U	U	U	U	--
Carbon Disulfide	U	U	0.29 J	0.40 J	U	--
Carbon Tetrachloride	0.39 J	0.42 J	0.44 J	U	U	--
Chlorobenzene	U	U	U	U	U	--
Chloroethane	U	U	0.29 J	U	U	--
Chloroform	U	U	U	U	1.6 J	--
Chloromethane	0.92 J	0.72 J	0.94 J	0.23 J	U	--
Cis-1,2-Dichloroethylene	U	U	U	U	U	--
Cis-1,3-Dichloropropene	U	U	U	U	U	--
Cyclohexane	U	U	U	U	U	--

See next page for qualfiers and notes.

Table 3
Former Bright Outdoors
Summary of January 2020 Soil Vapor Analytical Results
Volatile Organic Compounds

Sample ID	FBO-SS-102	FBO-SS-104	FBO-SS-107	FBO-SS-108	FBO-SS-111	NYSDOH Air Guideline Value
Sampling Date	01/20/20	01/20/20	01/20/20	01/20/20	01/20/20	
Units	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Dibromochloromethane	U	U	U	U	U	--
Dichlorodifluoromethane	2.5	2.5	4.6	1.8 J	3.7 J	--
Ethanol	--	--	--	--	--	--
Ethyl Acetate	--	--	--	--	--	--
Ethylbenzene	U	0.41 J	U	U	U	--
Hexachlorobutadiene	U	U	U	U	U	--
Isopropanol	U	2.0 J	2.6 J	U	5.7 J	--
m,p-Xylene	0.76 J	1.2 J	U	U	U	--
Methyl Ethyl Ketone (2-Butanone)	0.48 J	0.37 J	1.2 J	0.53 J	2.2 J	--
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone	U	U	U	U	U	--
Methylene Chloride	U	U	2.1	U	U	60
Naphthalene	U	U	U	U	U	--
N-Heptane	U	0.31 J	0.36 J	U	U	--
N-Hexane	U	U	6.1	U	U	--
O-Xylene (1,2-Dimethylbenzene)	0.21 J	0.35 J	U	U	U	--
Propylene	--	--	--	--	--	--
Styrene	U	U	U	U	U	--
Tert-Butyl Methyl Ether	U	U	U	U	U	--
Tetrachloroethylene (PCE)	U	0.32 J	0.35 J	U	U	30
Tetrahydrofuran	U	U	0.38 J	U	U	--
Toluene	1.4	2.2	0.57 J	U	U	--
Trans-1,2-Dichloroethene	U	U	U	U	U	--
Trans-1,3-Dichloropropene	U	U	U	U	U	--
Trichloroethylene (TCE)	U	0.29 J	U	0.40 J	**410**	2
Trichlorofluoromethane	1.3	1.3	1.6	4.3	1.4 J	--
Vinyl Acetate	--	--	--	--	--	--
Vinyl Chloride	U	U	U	U	U	--

Qualifiers:
U: Analyzed but not detected
J: Estimated value

Notes:
ug/m3: Micrograms per cubic meter
-- : Not calculated or no guideline value
Exceeds the maximum concentration of NYSDOH Air Guideline Value

D&B ENGINEERS AND ARCHITECTS, P.C.

Table 3
Former Bright Outdoors
Summary of January 2020 Soil Vapor Analytical Results
Volatile Organic Compounds

Sample ID	FBO-SS-112	FBO-SSDS01	FBO-SSDS02	FBO-SSDS03	NYSDOH Air Guideline Value
Sampling Date	01/20/20	01/20/20	01/20/20	01/20/20	
Units	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
1,1,1-Trichloroethane (TCA)	1.2	21	19	U	--
1,1,2,2-Tetrachloroethane	U	U	U	U	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52 J	0.48 J	0.49 J	0.49 J	--
1,1,2-Trichloroethane	U	U	U	U	--
1,1-Dichloroethane	U	0.31 J	0.49 J	U	--
1,1-Dichloroethene	U	U	U	U	--
1,2,4-Trichlorobenzene	U	U	U	U	--
1,2,4-Trimethylbenzene	U	U	U	0.36 J	--
1,2-Dibromoethane (Ethylene Dibromide)	U	U	U	U	--
1,2-Dichlorobenzene	U	U	U	U	--
1,2-Dichloroethane	U	U	U	0.21 J	--
1,2-Dichloropropane	U	U	U	U	--
1,2-Dichlorotetrafluoroethane	U	U	U	U	--
1,3,5-Trimethylbenzene (Mesitylene)	U	U	U	U	--
1,3-Butadiene	U	U	U	U	--
1,3-Dichlorobenzene	U	U	U	U	--
1,4-Dichlorobenzene	U	U	U	U	--
1,4-Dioxane (P-Dioxane)	U	U	U	U	--
2-Hexanone	U	U	U	U	--
4-Ethyltoluene	U	U	U	U	--
Acetone	U	4.4 J	9.9 J	11 J	--
Benzene	U	0.33 J	0.32 J	0.66	--
Benzyl Chloride	U	U	U	U	--
Bromodichloromethane	U	U	U	U	--
Bromoform	U	U	U	U	--
Bromomethane	U	U	U	U	--
Carbon Disulfide	U	U	6.3	0.42 J	--
Carbon Tetrachloride	0.39 J	0.39 J	0.40 J	0.60 J	--
Chlorobenzene	U	U	U	U	--
Chloroethane	U	U	U	U	--
Chloroform	U	0.20 J	U	U	--
Chloromethane	0.24 J	0.36 J	0.30 J	0.88 J	--
Cis-1,2-Dichloroethylene	U	U	U	U	--
Cis-1,3-Dichloropropene	U	U	U	U	--
Cyclohexane	U	U	U	U	--

See next page for qualfiers and notes.

Table 3
Former Bright Outdoors
Summary of January 2020 Soil Vapor Analytical Results
Volatile Organic Compounds

Sample ID	FBO-SS-112	FBO-SSDS01	FBO-SSDS02	FBO-SSDS03	NYSDOH Air Guideline Value
Sampling Date	01/20/20	01/20/20	01/20/20	01/20/20	
Units	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Dibromochloromethane	U	U	U	U	--
Dichlorodifluoromethane	2.6	2.3 J	3.9	2.0 J	--
Ethanol	--	--	--	--	--
Ethyl Acetate	--	--	--	--	--
Ethylbenzene	U	U	U	0.48 J	--
Hexachlorobutadiene	U	U	U	U	--
Isopropanol	U	U	1.5 J	1.9 J	--
m,p-Xylene	U	U	U	1.5 J	--
Methyl Ethyl Ketone (2-Butanone)	U	U	2.0	2.2	--
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone	U	U	U	U	--
Methylene Chloride	U	U	U	U	60
Naphthalene	U	U	U	U	--
N-Heptane	U	U	U	U	--
N-Hexane	U	U	U	U	--
O-Xylene (1,2-Dimethylbenzene)	U	U	U	0.42 J	--
Propylene	--	--	--	--	--
Styrene	U	U	U	U	--
Tert-Butyl Methyl Ether	U	U	U	U	--
Tetrachloroethylene (PCE)	U	U	0.29 J	U	30
Tetrahydrofuran	U	U	U	0.94 J	--
Toluene	U	0.40 J	0.47 J	1.2	--
Trans-1,2-Dichloroethene	U	U	U	U	--
Trans-1,3-Dichloropropene	U	U	U	U	--
Trichloroethylene (TCE)	U	U	U	0.23 J	2
Trichlorofluoromethane	1.3	1.3	1.7	1.1	--
Vinyl Acetate	--	--	--	--	--
Vinyl Chloride	U	U	U	U	--

Qualifiers:
U: Analyzed but not detected
J: Estimated value

Notes:
ug/m3: Micrograms per cubic meter
-- : Not calculated or no guideline value
Exceeds the maximum concentration of NYSDOH Air Guideline Value

ATTACHMENT 9

TABLE 4 – HISTORICAL AIR SAMPLE RESULTS (2013-2020)

Table 4
Former Bright Outdoors
Summary of Historical Air Sampling Results

Well ID/Date	Compound (ug/m^3)		
	PCE	1,1,1 TCA	TCE
SS-101			
Jan-20	NS	NS	NS
*Feb-17	ND	350	2.3
*Apr-16	ND	83	1.3
Feb-16	24	2.1	0.55
Jul-15	ND	5.8	ND
Jan-15	3.7	2.3	0.45
Jul-14	3.1	19	6.5
Mar-14	1.9	2.1	0.7
Jul-13	1.5	23	5.6
Jan-13	ND	150	5.4
SS-102			
Jan-20	ND	3.5	ND
*Feb-17	ND	770	ND
*Apr-16	ND	300	ND
Feb-16	26	5.2	ND
Jul-15	ND	7.7	ND
Jan-15	ND	4.5	ND
Jul-14	1.9	ND	2.4
Mar-14	2	4.6	ND
Jul-13	ND	260	ND
Jan-13	ND	48	ND
SS-103			
Jan-20	NS	NS	NS
*Feb-17	ND	370	ND
*Apr-16	ND	170	ND
Feb-16	19	ND	ND
Jan-15	ND	15	ND
Jul-14	1.6	0.64	2.6
Mar-14	2.1	ND	ND
Jul-13	ND	ND	0.85
Jan-13	ND	2.0	ND
SS-104			
Jan-20	0.32 J	36	0.29 J
*Feb-17	ND	190	2.7
*Apr-16	0.61	170	2.2
Feb-16	110	46	1.7
Jan-15	ND	50	1.4
Jul-14	2.8	130	15
Mar-14	2.7	48	2.8
Jul-13	ND	350	47
Jan-13	ND	150	5.2
SS-105			
Jan-20	NS	NS	NS
*Feb-17	ND	980	ND
*Apr-16	3.8	310	0.74
Feb-16	22	12	ND
Jan-15	2.3	18	ND
Mar-14	3.2	11	ND
Jul-13	21	100	1.9
Jan-13	4.1	38	0.42
SS-106			
Jul-14	5.2	43	3.9

Table 4
Former Bright Outdoors
Summary of Historical Air Sampling Results

Well ID/Date	Compound (ug/m^3)		
	PCE	1,1,1 TCA	TCE
SS-107			
Jan-20	0.35 J	160	ND
*Feb-17	ND	71	ND
*Apr-16	ND	98	ND
Feb-16	43	74	ND
Jan-15	1.1	280	ND
Jul-14	ND	380	4.1
Mar-14	2.5	51	ND
Jul-13	4.6	570	4.2
Jan-13	NS	NS	NS
SS-108			
Jan-20	ND	46	0.40 J
*Feb-17	ND	14	ND
*Apr-16	ND	16	0.37
Feb-16	29	12	0.25
Jan-15	ND	20	0.43
Jul-14	ND	43	4.6
Mar-14	6.6	45	0.92
Jul-13	NS	NS	NS
Jan-13	2.6	15	1.6
SS-109			
Jan-20	NS	NS	NS
Mar-14	Carpet Installed Over Port		
Jul-13	ND	56	2.2
Jan-13	NS	NS	NS
SS-111			
Jan-20	ND	6.5	410
*Feb-17	ND	ND	1,700
*Apr-16	ND	ND	1,300
Feb-16	27	5.4	340
Jan-15	ND	ND	110
Jul-14	2.0	2.8	180
Mar-14	2.0	0.87	76
Jul-13	ND	7.8	290
Jan-13	ND	ND	220
SS-112			
Jan-20	ND	1.2	ND
*Feb-17	ND	17	ND
*Apr-16	ND	11	ND
Feb-16	26	0.51	ND
Jan-15	ND	0.7	ND
Jul-14	7.1	3.2	3.4
Mar-14	1.1	ND	ND
Jul-13	1.00	4.7	2
Jan-13	ND	7.9	ND
North Stack #1			
Jan-20	ND	21	ND
Feb-16	13	8.7	0.23
Jan-15	0.62	6.6	ND
Jul-14	3.0	100	5
Mar-14	1.8	7.4	ND
Jul-13	ND	220	3.3
Jan-13	ND	270	0.76

Table 4
Former Bright Outdoors
Summary of Historical Air Sampling Results

Well ID/Date	Compound (ug/m^3)		
	PCE	1,1,1 TCA	TCE
Center Stack #2			
Jan-20	0.29J	19	ND
Feb-16	14	6.6	ND
Jan-15	0.91	4	ND
Jul-14	3.5	56	5.1
Mar-14	1.1	5.5	ND
Jul-13	ND	100	1.8
Jan-13	ND	23	ND
South Stack #3			
Jan-20	ND	ND	0.23J
Feb-16	16	3.8	57
Jan-15	0.96	6	95
Jul-14	5.5	46	650
Mar-14	50	19	2.0
Jul-13	NS	NS	NS
Jan-13	ND	21	400
Indoor Air 201			
**Mar-19	NS	NS	NS
*Feb-17	ND	ND	ND
*Apr-16	ND	ND	ND
Feb-16	33	ND	0.42
Jan-15	0.98	ND	ND
Jul-14	ND	ND	0.48
Mar-14	ND	ND	0.3
Jul-13	NS	ND	0.77
Jan-13	ND	ND	ND
Indoor Air 202			
**Mar-19	ND	ND	ND
*Feb-17	ND	ND	ND
*Apr-16	ND	ND	0.57
Feb-16	25	ND	ND
Jan-15	ND	ND	ND
Jul-14	ND	ND	0.48
Mar-14	0.95	ND	ND
Jul-13	ND	ND	0.84
Jan-13	ND	ND	ND
Indoor Air 203			
Mar-19	NS	NS	NS
*Feb-17	ND	ND	ND
*Apr-16	ND	ND	0.25
Feb-16	19	ND	ND

Notes:

All sample analysis by USEPA Method TO-15.

ND: Not detected above the laboratory minimum detection limit.

NS: Not sampled.

* Sampling conducted with SVE system turned off.

** Samples locations are approximate to historical locations.

ATTACHMENT 10

TABLE 5 - DETECTED SOIL VAPOR/INDOOR AIR ANALYTICAL RESULTS MATRIX COMPARISON

Table 5
Former Bright Outdoors Site
Detected Soil Vapor/Indoor Air Analytical Results Matrix Comparison
Volatile Organic Compounds

Sample ID (Sampling Date)	2020 Soil Vapor Sample Results (ug/m^3)	March 27, 2019 Air Concentrations			NYSDOH Soil Vapor/Indoor Air Decision Matrix Recommendation
		IA01 (ug/m^3)	IA02 (ug/m^3)	AA01 (ug/m^3)	
SS-102 (1/21/2020)					
1,1,1-Trichloroethane (TCA)	3.5		1.1 U	1.1 U	Matrix B - No Further Action
Carbon Tetrachloride	0.39 J		0.25	0.42	Matrix A - No Further Action
SS-104 (1/21/2020)					
1,1,1-Trichloroethane (TCA)	36		1.1 U	1.1 U	Matrix B - No Further Action
Carbon Tetrachloride	0.42 J		0.25	0.42	Matrix A - No Further Action
Tetrachloroethylene (PCE)	0.32 J		1.4 U	1.4 U	Matrix B - No Further Action
Trichloroethylene (TCE)	0.29 J		0.20 U	0.2 U	Matrix A - No Further Action
SS-107 (1/21/2020)					
1,1,1-Trichloroethane (TCA)	160	1.1 U		1.1 U	Matrix B - No Further Action
Carbon Tetrachloride	0.44 J	0.44		0.42	Matrix A - No Further Action
Tetrachloroethylene (PCE)	0.35 J	1.4 U		1.4 U	Matrix B - No Further Action
SS-108 (1/21/2020)					
1,1,1-Trichloroethane (TCA)	46	1.1 U		1.1 U	Matrix B - No Further Action
Trichloroethylene (TCE)	0.40 J	0.2 U		0.2 U	Matrix A - No Further Action
SS-111 (1/21/2020)					
1,1,1-Trichloroethane (TCA)	6.5		1.1 U	1.1 U	Matrix B - No Further Action
Trichloroethylene (TCE)	410		0.20 U	0.2 U	**Matrix A - Mitigate**
SS-112 (1/21/2020)					
1,1,1-Trichloroethane (TCA)	1.2		1.1 U	1.1 U	Matrix B - No Further Action
Carbon Tetrachloride	0.39 J		0.25	0.42	Matrix A - No Further Action

Notes:

ug/m3: Micrograms per cubic meter

Qualifiers:

U: Analyzed but not detected

J: Estimated value