Date:	May 2, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 2, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Tuesday, May 2, 2017 site work. SiteWorks loaded stockpiles of soils deemed not suitable for reuse on site into trucks provided by Protek. The trucks removed the soils from site and delivered it to a recycling facility in Bethlehem, PA. SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, SiteWorks direct-loaded soils into dump trucks for removal from site.

HES conducted the CAMP monitoring around the soil stockpiling area in the northern portion of the site where work was being conducted. Hand-held meters were also used to monitor in the area were soil was being handled. In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of four CAMP stations were deployed at the site on this day. In addition, HES had an off-site CAMP monitoring station west of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The four on-site monitoring stations

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were only utilized during the soil-moving activities in the first few hours of the day, and no repositioning was necessary.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. The surface soils remained moist due to rain from the previous week. There was no visible dust leaving the site during this monitoring event.

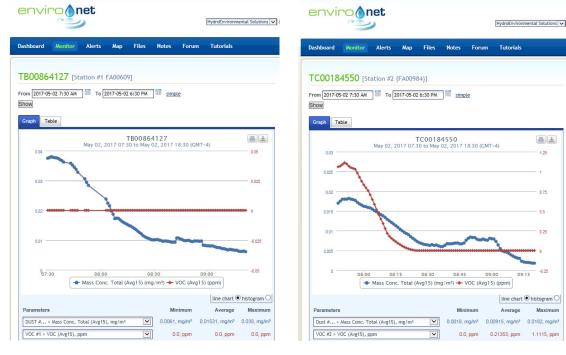
An HDR representative was on site on Tuesday, May 2, 2017 to observe the site activities in the northern (Restaurant) area. All three trucks remained on top of newly laid plastic sheeting to prevent contact with site soils and the tires were hosed down prior to departure in the event that any incidental dust or soils adhered to the treads or sidewalls.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Date: 05/02/17					
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.07
Max. 15-min. Ave.	0.00	0.00	0.13	1.11	0.11
Overall Ave.	0.00	0.00	0.06	0.01	0.09
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0082	0.0061	-0.0019	0.0018	0.0071
Max. 15-min. Ave.	0.0287	0.0380	0.0290	0.0182	0.0253
Overall Ave.	0.0156	0.0153	0.0075	0.0092	0.0135

Below is a summary table for the 05/02/2017 CAMP monitoring event.

Date: 05/02/17



5/02/2017 Station #1 (Downwind)

5/02/2017 Station #2 (Near Building)



5/02/2017 Station #3 (Upwind)

enviro HydroEnvironmental Solutions 🗸 ~ Dashboard Monitor Alerts Map Files Notes Forum Tutorials TB00893068 [Station #4 FA00544] From 2017-05-02 7:30 AM 🔲 To 2017-05-02 6:30 PM 🔤 simple Show Graph Table TB00893068 May 02, 2017 07:30 to May 02, 2017 18:30 (GMT-4) E 1 0.05 -0.025 -0.01 07:30 08:00 08:30 - Mass Conc. Total (Avg15) (mg/m<sup>3</sup>) - VOC (Avg15) (ppm) line chart 
histogram Average Maximum Parameters Minimum -0.0019. ma/m<sup>3</sup> 0.00746. ma/m<sup>3</sup> 0.029. ma/m<sup>3</sup> DUST #... > Mass Conc. Total (Avg15), mg/m3 VOC #4 > VOC (Avg15), ppm ~ 0.0, ppm 0.05914, ppm 0.1284, ppm

5/02/2017 Station #4 (Downwind)

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Dashboard	Monitor	Alerts	Мар	Files	Notes	Forum	Tutorials	
TFOA1583 From 2017-05-02 Show Graph Table	2 7:30 AM	ation #5			] 🖩 simpl	<u>le</u>		
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0.005 07:30	<u></u>	8:00 Mass Conc	08:30		09:00 g/m³) — \	09:30 /OC (Avg		0.05
							line chart	histogram
Parameters						imum	Average	Maximum
DUST # > Ma VOC #5 > VOC			, mg/m³	~	0.0071, r 0.0655		0.01353, mg/m <sup>a</sup>	0.0253, mg/m <sup>3</sup> 0.1145, ppm

5/02/2017 Station #5 (Morgan Street)

Date:	May 6, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 3, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Wednesday, May 3, 2017 site work. SiteWorks loaded stockpiles of concrete into trucks provided by Protek. The trucks removed the soils from site and delivered it to a recycling facility. SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site, as well as grading of soils in around the hotel footprint in order to prepare the site for Rapid Impact Compaction (RIC) to begin later this month.

A NYSDEC representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, SiteWorks direct-loaded concrete into dump trucks for removal from site and disturbed soils while re-grading the site to the desired elevation for RIC work.

HES conducted the CAMP monitoring around the soil stockpiling area in the northern portion of the site where work was being conducted as well as in the southern portion around the hotel footprint. Hand-held meters were also used to monitor in the area where soil was being handled. In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of six (6) CAMP stations were deployed at the site on this day; two (2) additional downwind stations were setup in the southern portion of the site. In addition, HES had an off-site CAMP monitoring

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station west of the site between the site and the Waverly Early Childhood Center. The offsite CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The six on-site monitoring stations were utilized during the soil-moving activities throughout the day, and were setup, broken down, and repositioned as necessary.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. The surface soils remained moist due to rain from the previous week. There was no visible dust leaving the site during this monitoring event.

A NYSDEC representative was on site on Wednesday, May 3, 2017 to observe the site activities in the northern (Restaurant) area and the southern (Hotel) area. All trucks remained on top of newly laid plastic sheeting to prevent contact with site soils and the tires were hosed down prior to departure in the event that any incidental dust or soils adhered to the treads or sidewalls. Additionally, site soils were watered down throughout the day in order to maintain dust control.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/03/2017 CAMP monitoring event.

Date. 05/05/17					
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.01	0.00	0.00
Max. 15-min. Ave.	0.00	0.01	0.13	0.05	0.14
Overall Ave.	0.00	0.00	0.09	0.00	0.04
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0002	0.0003	-0.0017	0.0043	0.0001
Max. 15-min. Ave.	0.0230	0.0237	0.0266	0.0393	0.0544
Overall Ave.	0.0057	0.0058	0.0066	0.0114	0.0242

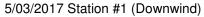
#### Date: 05/03/17

#### Date: 05/03/17

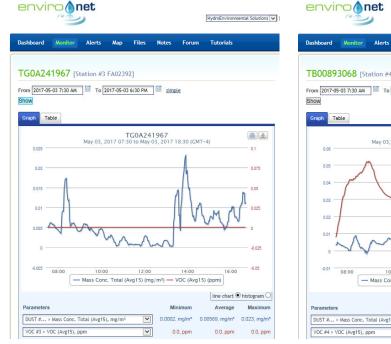
CAMP Data	Add'l Downwind (Sta. 8)	Add'l Downwind (Sta. 9)
VOCs (ppm)	(000.0)	(000.0)
Min. 15-min. Ave.	0.00	0.00
Max. 15-min. Ave.	0.00	0.05
Overall Ave.	0.00	0.02
Dust (mg/m <sup>3</sup> )		
Min. 15-min. Ave.	0.0003	0.0002
Max. 15-min. Ave.	0.0197	0.0309
Overall Ave.	0.0115	0.0074

## **Environet CAMP Data Summary Graphs**





5/03/2017 Station #2 (Near Building)



5/03/2017 Station #3 (Upwind)



5/03/2017 Station #5 (Morgan Street)



5/03/2017 Station #4 (Downwind)



5/03/2017 Station #8 (Additional Downwind)



5/03/2017 Station #9 (Additional Downwind)

Date:	May 6, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 4, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Thursday, May 4, 2017 site work. SiteWorks transferred soils from the southern area to the north while conducting re-grading activities in preparation of the Rapid Impact Compaction (RIC) to begin later this month. SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site and accessed stockpiles of clean fill which had been stored on site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, SiteWorks continued re-grading activities and transported soils from the southern portion of the site to the northern stockpiles for reuse in the future.

HES conducted the CAMP monitoring around the soil stockpiling area in the northern portion of the site where work was being conducted as well as a second setup in the southern portion around the hotel footprint. Hand-held meters were also used to monitor in the area where soil was being handled. In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. On this day, two full setups were used on site; a total of eight (8) CAMP stations were deployed at the site on this day. In addition, HES had an off-site CAMP monitoring station west of the site

between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The eight on-site monitoring stations were utilized during the soil-moving activities throughout the day, and were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. There was no visible dust leaving the site during this monitoring event.

An HDR representative was on site on Thursday, May 4, 2017 to observe the site activities in the northern (Restaurant) area and the southern (Hotel) area. All trucks entering and leaving the site remained on top of newly laid plastic sheeting to prevent contact with site soils and the tires were hosed down prior to departure in the event that any incidental dust or soils adhered to the treads or sidewalls. Additionally, site soils were watered down throughout the day in order to maintain dust control.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/04/2017 CAMP monitoring event.

Dutc. 05/04/17					
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.03	0.12	0.01	0.26
Overall Ave.	0.00	0.00	0.07	0.00	0.05
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0003	0.0075	-0.0015	0.0033	0.0030
Max. 15-min. Ave.	0.0356	0.0825	0.0341	0.0806	0.0678
Overall Ave.	0.0048	0.0136	0.0087	0.0136	0.0520

#### Date: 05/04/17

### Date: 05/04/17

	Add'l Upwind	Add'l Downwind		vind Add'l Down		Add'l Buildings		
CAMP Data	(Sta. 6)	(Sta. 8)	(Sta. 9)			(Sta. 7)		
VOCs (ppm)								
Min. 15-min. Ave.	0.00	0.00		0.00		0.00		
Max. 15-min. Ave.	0.04	0.04		0.15		0.15 0.15		0.15
Overall Ave.	0.00	0.00		0.08		0.02		
Dust (mg/m <sup>3</sup> )								
Min. 15-min. Ave.	0.0010	0.0022		0.0016		0.0100		
Max. 15-min. Ave.	0.0222	0.0258		0.0441		0.0375		
Overall Ave.	0.0058	0.0088		0.0087		0.0152		

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5/04/2017 Station #1 (Downwind)



5/04/2017 Station #3 (Upwind)

5/04/2017 Station #2 (Near Building)



5/04/2017 Station #4 (Downwind)

envii		net 🤌					HydroEnviron	mental Solutions
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Parameters					Mini	imum	Average	Maximum
DUST # >	Mass Conc.	Total (Avg15)	, mg/m³	~	0.003, r	ng/m³	0.05098, mg/m³	0.0678, mg/m <sup>2</sup>
VOC #5 > V	OC (Avg15),	ppm		~	0.0	, ppm	0.08415, ppm	0.2644, ppm

5/04/2017 Station #5 (Morgan Street)



5/04/2017 Station #6 (Additional Upwind)



5/04/2017 Station #7 (Additional Near Building)



5/04/2017 Station #8 (Additional Downwind)

5/04/2017 Station #9 (Additional Downwind)

Date:	May 9, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 9, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Tuesday, May 9, 2017 site work. SiteWorks transferred soils from the southern area to the north while conducting re-grading activities in preparation of the Rapid Impact Compaction (RIC) to begin later this month. SoilTesting drilled vapor wells for baseline samples ahead of the RIC work. SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, SiteWorks continued re-grading activities and transported soils from the southern portion of the site to the northern stockpiles for reuse in the future, and SoilTesting drilled and installed vapor well points.

HES conducted the CAMP monitoring around the soil stockpiling area in the northern portion of the site where work was being conducted to install vapor wells as well as a second setup in the southern portion around the hotel footprint. Hand-held meters were also used to monitor in the area where soil was being handled. Additional spot readings were made throughout the site with the PID and FID. In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. On this day, two full setups were used on site; a total of eight (8) CAMP stations were

deployed at the site. In addition, HES had an off-site CAMP monitoring station west of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The eight on-site monitoring stations were utilized during the soil-moving activities and drilling throughout the day, and were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. There was no visible dust leaving the site during this monitoring event.

An HDR representative was on site on Tuesday, May 9, 2017 to observe the site activities in the northern (Restaurant) area and the southern (Hotel) area. All trucks entering and leaving the site remained on top of newly laid plastic sheeting to prevent contact with site soils and the tires were hosed down prior to departure in the event that any incidental dust or soils adhered to the treads or sidewalls.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/09/2017 CAMP monitoring event.

Butc. 05/05/17					
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.02	0.12	0.00	0.33
Overall Ave.	0.00	0.01	0.09	0.00	0.12
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0001	0.0037	-0.0020	0.0041	0.0080
Max. 15-min. Ave.	0.0141	0.0200	0.0162	0.0139	0.0699
Overall Ave.	0.0041	0.0072	0.0057	0.095	0.0504

#### Date: 05/09/17

### Date: 05/09/17

	Add'l Upwind	Add'l Downwind	Add'l Downwind	Add'l Buildings
CAMP Data	(Sta. 6)	(Sta. 8)	(Sta. 9)	(Sta. 7)
VOCs (ppm)				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.00	0.11	0.20
Overall Ave.	0.00	0.00	0.03	0.06
Dust (mg/m <sup>3</sup> )				
Min. 15-min. Ave.	0.0019	0.0033	0.0026	0.0078
Max. 15-min. Ave.	0.0151	0.0090	0.0481	0.0303
Overall Ave.	0.0054	0.0055	0.0112	0.0133





5/09/2017 Station #1 (Downwind)



5/09/2017 Station #3 (Upwind)

5/09/2017 Station #4 (Downwind)

5/09/2017 Station #2 (Near Building)



5/09/2017 Station #5 (Morgan Street)



5/09/2017 Station #6 (Additional Upwind)

5/09/2017 Station #7 (Additional Near Building)



5/09/2017 Station #8 (Additional Downwind)

5/09/2017 Station #9 (Additional Downwind)

### Page 1

# Memo

Date:	May 11, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 10, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Wednesday, May 10, 2017. SiteWorks conducted load out of small amount of concrete from regarding effort. SoilTesting drilled vapor wells for baseline samples ahead of the RIC work. SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

A NYSDEC representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, SoilTesting drilled and installed vapor well points around the northern and central portion of the site.

HES conducted the CAMP monitoring around the northern portion of the site where work was being conducted to install vapor wells. The CAMP stations were repositioned as the work progressed further to the south. Hand-held meters were also used to monitor in the area where soil was being handled. Additional spot readings were made throughout the site with the PID and FID. In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an offsite CAMP monitoring station west of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The four on-site monitoring stations

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were utilized during the drilling activities throughout the day, and were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. There was no visible dust leaving the site during this monitoring event.

A NYSDEC representative was on site on Wednesday, May 10, 2017 to observe the site activities in the northern (Restaurant) area. All trucks entering and leaving the site remained on top of newly laid plastic sheeting to prevent contact with site soils and the tires were hosed down prior to departure in the event that any incidental dust or soils adhered to the treads or sidewalls.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Date: 05/09/17		-			
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.01	0.07	0.00	0.37
Overall Ave.	0.00	0.00	0.04	0.00	0.05
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0000	0.0000	-0.0003	0.0052	-0.0066
Max. 15-min. Ave.	0.0083	0.0123	0.0767	0.0194	0.0673
Overall Ave.	0.0024	0.0051	0.0146	0.0098	0.0112

Below is a summary table for the 05/09/2017 CAMP monitoring event.



5/10/2017 Station #1 (Downwind)

Dashboard

Show

0.01

0.0075 0.005

-0.0025 08:00

Parameters



5/10/2017 Station #2 (Near Building)



5/10/2017 Station #3 (Upwind)

5/10/2017 Station #4 (Downwind)

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Dashboard	Monitor	Alerts	Мар	Files	Notes	Forum	Tutorials	
TF0A158 From 2017-05- Show Graph Tab	10 7:30 AM	ation #5			simple	<u>e</u>		
0.08		May 10, 2		FFOA15 10 to May	8317 10, 2017 1	8:30 (GM	Γ-4)	0.4
0.06	A							0.3
0.04		A	MR.	h	M	Π	$h_{\rm M}$	0.2
-0.02			V~ ×	ML	ΔĮ	s.		-0.1
0.02 01	3:00	10:00 Mass Cond	Total (4	12:00 Avg15) (m	g/m³) — V	14:00 OC (Avg1		histogram
Parameters					Mini	mum	Average	Maximum
DUST # >	Mass Conc. T	otal (Avg15)	, mg/m³	~	-0.0066, n	ng/m³ 0	.01115, mg/m <sup>3</sup>	0.0673, mg/m <sup>3</sup>
VOC #5 > VC	IC (Avg15), p	pm		~	0.0	, ppm	0.04751, ppm	0.3729, ppm

5/10/2017 Station #5 (Morgan Street)

Date:	May 13, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 11, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Thursday, May 11, 2017. SiteWorks continued the regarding effort in the southern portion of the site ahead of the Rapid Impact Compaction (RIC) work expected the following week. SoilTesting resumed drilling and installing vapor wells for baseline samples ahead of the RIC work. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

A NYSDEC representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, Siteworks continued regarding activities, and SoilTesting drilled and installed vapor well points around the southern and central portion of the site.

HES conducted the CAMP monitoring around the Southern portion of the site where work was being conducted to install vapor wells. Repositioning of the CAMP stations was not necessary on this day due to consistent wind conditions. Hand-held meters were also used to monitor in the area where soil was being handled. Additional spot readings were made throughout the site with the PID and FID but not determined to be above background levles. In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP

monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The four on-site monitoring stations were utilized during the drilling activities throughout the day, and were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. There was no visible dust leaving the site during this monitoring event.

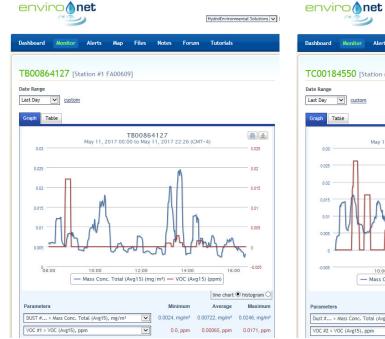
A NYSDEC representative was on site on Thursday, May 11, 2017 to observe the site activities in the southern area (Hotel footprint). All trucks entering and leaving the site remained on top of newly laid plastic sheeting to prevent contact with site soils and the tires were hosed down prior to departure in the event that any incidental dust or soils adhered to the treads or sidewalls.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/11/2017 CAMP monitoring event.

Bate: 00/11/1/					
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.02	0.07	0.01	0.08
Overall Ave.	0.00	0.00	0.05	0.00	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0005	0.0024	-0.0007	0.0000	0.0055
Max. 15-min. Ave.	0.0986	0.0246	0.0111	0.0251	0.0757
Overall Ave.	0.0147	0.0072	0.0032	0.0105	0.0570

#### Date: 05/11/17

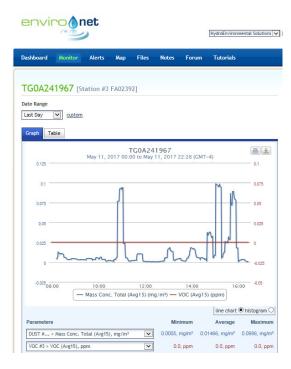




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#### 5/11/2017 Station #1 (Downwind)



5/11/2017 Station #3 (Upwind)

#### 5/11/2017 Station #2 (Near Building)



5/11/2017 Station #4 (Downwind)

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Dashboard	Monitor	Alerts	Мар	Files	Notes	Forur	n Tutorials	
TFOA158 Date Range Last Day Graph Tal	<ul> <li>custom</li> </ul>	ation #5 (f	FA0240	05)]				
0.12 —		May 11, 20		TFOA15 00 to May		2:30 (G	MT-4)	0.1
0.1 -		И		k				0.08
0.06	M		m	ral 1	m	_^	mr	0.04
0.02	J	Y L						-0.02
	00:80	10:00 Mass Conc.	Total (A	12:00 Avg15) (mj		14:00 /OC (Av		● histogram ○
Parameters					Mini	imum	Average	Maximum
DUST # >	Mass Conc. T	otal (Avg15),	mg/m³	~	0.0055, r	ng/m³	0.05695, mg/m <sup>3</sup>	0.0757, mg/m <sup>3</sup>
VOC #5 > V	DC (Avg15), p	pm		~	0.0	, ppm	0.00439, ppm	0.0837, ppm

5/11/2017 Station #5 (Morgan Street)

Date:	May 13, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 12, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Friday, May 12, 2017. SoilTesting resumed drilling and installing vapor wells for baseline samples ahead of the Rapid Impact Compaction (RIC) work expected the following week. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, SoilTesting drilled and installed vapor well points around the entire site.

HES conducted the CAMP monitoring around the Southern portion of the site where work was being conducted to install vapor wells. Repositioning of the CAMP stations to the northern portion of the site as SoilTesting relocated to install a vapor well in the North. Hand-held meters were also used to monitor in the area where soil was being handled. Additional spot readings were made throughout the site with the PID and FID but not determined to be above background levels. In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The four on-site monitoring stations were utilized during the drilling activities throughout the day, and were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Siteworks continually patrolled the site with a water truck in order to maintain saturated conditions. There was no visible dust leaving the site during this monitoring event.

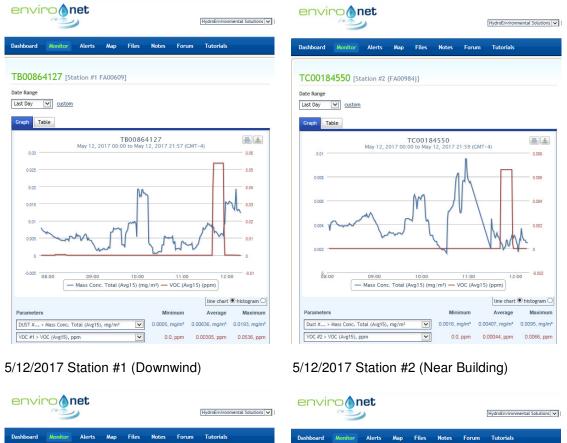
An HDR representative was on site on Friday, May 12, 2017 to observe the site activities in the southern area (Hotel footprint) as well as the northern area (Restaurant). All trucks entering and leaving the site remained on top of newly laid plastic sheeting to prevent contact with site soils and the tires were hosed down prior to departure in the event that any incidental dust or soils adhered to the treads or sidewalls.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/12/2017 CAMP monitoring event.

	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.05	0.11	0.01	0.02
Overall Ave.	0.00	0.00	0.07	0.00	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0000	0.0005	-0.0017	0.0016	0.0004
Max. 15-min. Ave.	0.0070	0.0193	0.0181	0.0095	0.0247
Overall Ave.	0.0021	0.0064	0.0055	0.0041	0.0076

#### Date: 05/12/17





5/12/2017 Station #3 (Upwind)



5/12/2017 Station #4 (Downwind)



5/12/2017 Station #5 (Morgan Street)

Date:	May 18, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 15, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Monday, May 15, 2017. Environmental Bulkheading Corp. (EBC) began drilling of Micropiles in the hotel footprint. SiteWorks moved concrete stockpiles in northern area of the site. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

A NYSDEC representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, EBC drilled and installed Micropiles in the hotel footprint and SiteWorks transferred concrete stockpiles.

HES conducted the CAMP monitoring around the Southern portion of the site where work was being conducted with the typical four CAMP stations. In addition, they used an additional CAMP station in the northern portion of the site to cover the concrete rubble moving activities. Hand-held meters were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below the CAMP action levels and not significantly elevated above ambient air background levels. In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The four on-site monitoring stations were utilized during the drilling activities throughout the day, and were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Siteworks continually patrolled the site with a water truck in order to maintain saturated conditions, especially the main "road" running north and south within the site where the site vehicles often travel. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site NYSDEC representative.

A NYSDEC representative was on site on Monday, May 15, 2017 to observe the site activities in the southern area (Hotel footprint) as well as the northern area.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to site activities.

As shown on the table below, the dust data at Station #6 was reading typical readings for that monitoring event; however at 1:58 pm the 1-minute reading jumped up to 400 mg/m<sup>3</sup> which caused a 15-min average of 26.7 mg/m<sup>3</sup>. The HES personnel on site received a "high-level" alert from the EnviroNet site on their cell phone and they investigated the cause of the elevated reading. There were no noticeable dust in the air in the vicinity of the station and there were no work activities going on in the area that would have caused this extremely elevated reading. As shown in the following table of data downloaded from the Environet site, the next seven 1-minute readings were all 400 mg/m<sup>3</sup>. It was determined that a filter in the dust monitor required replacement. The dust monitor was taken off line at 2:06 pm and the filter was replaced. As shown in the table, the meter was put back in operation at 2:36 pm with a new filter and was reading typical dust concentrations that were observed during this monitoring event. These elevated dust readings at Station #6 between 1:58 and 2:05 pm were caused by a meter malfunction, not site activities.

As shown in the graph for Station #6 on the first page of graphs, it seemed that the dust data is flat lined near zero mg/m<sup>3</sup> for most the sampling event; however, this is due to the meter malfunction and the extremely elevated readings at that time. The range of the data "flattened out" the rest of the data so it looks like it is at or near zero because of the scale of the graph.

TA00134405: Station #6 (Downwind Location)		
	1-Minute	15-Minute Average
Date / Time	Reading (mg/m <sup>3</sup> )	(mg/m³)
5/15/2017 13:50	0.001	0.0003
5/15/2017 13:51	0.000	0.0003
5/15/2017 13:52	0.001	0.0003
5/15/2017 13:53	0.003	0.0005
5/15/2017 13:54	0.000	0.0005
5/15/2017 13:55	0.001	0.0005
5/15/2017 13:56	0.001	0.0006
5/15/2017 13:57	0.000	0.0006
5/15/2017 13:58	400	26.7
5/15/2017 13:59	400	53.3
5/15/2017 14:00	400	80.0
5/15/2017 14:01	400	106.7
5/15/2017 14:02	400	133.3
5/15/2017 14:03	400	160.0
5/15/2017 14:04	400	186.7
5/15/2017 14:05	400	213.3
5/15/2017 14:35	0.004	0.0040
5/15/2017 14:36	0.006	0.0050
5/15/2017 14:37	0.004	0.0047
5/15/2017 14:38	0.004	0.0045
5/15/2017 14:39	0.004	0.0044
5/15/2017 14:40	0.004	0.0043
5/15/2017 14:41	0.013	0.0056
5/15/2017 14:42	0.005	0.0055
5/15/2017 14:43	0.004	0.0053
5/15/2017 14:44	0.005	0.0053
5/15/2017 14:45	0.004	0.0052

We have included a second graph of the Station #6 data on the last page of graphs showing the data collected from the start of the monitoring event until just before the meter malfunctioned.

Below is a summary table for the 05/15/2017 CAMP monitoring event.

	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 8)	(Sta. 6)	(Sta. 9)	(Sta. 7)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.22	0.00	0.17	0.16	0.02
Overall Ave.	0.02	0.00	0.03	0.03	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0004	0.0001	-0.0025	0.0031	0.0000
Max. 15-min. Ave.	0.0107	213.33 *	0.0186	0.0228	0.0281
Overall Ave.	0.0049	1.9655 *	0.0042	0.0059	0.0028

#### Date: 05/15/17

\* The elevated maximum and overall average dust readings at Station 6 were due to a meter malfunction, not site activities. Prior to the meter malfunction the maximum reading was 0.0061 mg/m<sup>3</sup> and the overall average reading was 0.0018 mg/m<sup>3</sup> (see the graph on the last page).

#### Date: 05/15/17

CAMP Data	Add'l Downwind (Sta. 2)
VOCs (ppm)	
Min. 15-min. Ave.	0.00
Max. 15-min. Ave.	0.00
Overall Ave.	0.00
Dust (mg/m <sup>3</sup> )	
Min. 15-min. Ave.	0.0005
Max. 15-min. Ave.	0.0255
Overall Ave.	0.0064

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Dashboard	Monitor	Alerts /	Map Files	Notes	Forum	Tutorials	
TC0018-	4550 [St	ation #2 (FA	400984)]				
From 2017-05	15 7:30 AM	То 2017	-05-15 6:30 PM	simpl	e		
Show							
Graph Ta	ole						
			TC001	84550			
0.03 -		May 15, 201	7 07:30 to May	15, 2017 1	8:30 (GMT	-4)	0.125
							2.5
0.025				4			0.1
0.02 —							0.075
0.015 -							0.05
0.01 -			N	1	٢		0.025
			~	D L	~	him	~
0.005	mon	~~	~				0
o —	4						-0.025
-0.005 09	00 10:0	0 11:00	12:00	13:00	14:00	15:00	16:00
			otal (Avg15) (r		OC (Avg1		
						line chart (	histogram
Parameters				Mini	mum	Average	Maximum
Dust # >	Mass Conc. To	ital (Avg15), m	g/m <sup>3</sup>	0.0005, m	ng/m³ 0.0	00638, mg/m³	0.0255, mg/m <sup>3</sup>
VOC #2 > V	OC (Avg15), p	pm	~	0.0,	ppm	0.0, ppm	0.0, ppm

5/15/2017 Station #2 (Add'I Downwind)

shboard	Monitor	Alerts	Мар	Files	Notes	Forum	Tutorials	
A0013	4405 [St	ation #6	FA0021	1]				
	5-15 7:30 AM	To 2	017-05-1	5 6:30 PM	simpl	<u>e</u>		
IOW								
Graph Ta	ble							
				TA0013				<b>a</b>
250 -		May 15, 2	2017.07:	so to May	15, 2017 1	8:30 (GMT	-4)	0.1
200 -						1		0.075
200						Λ		0.010
150. —								0.05
100 -								0.025
50 -								0
0 -								-0.02
-50								0.05
-30	08:00	Mass Con			:00 g/m³) — V	14:00 OC (Avg15		6:00 -0.05
	<u> </u>			2	-		line chart	histogra
							the chart e	2 HISLOBLA

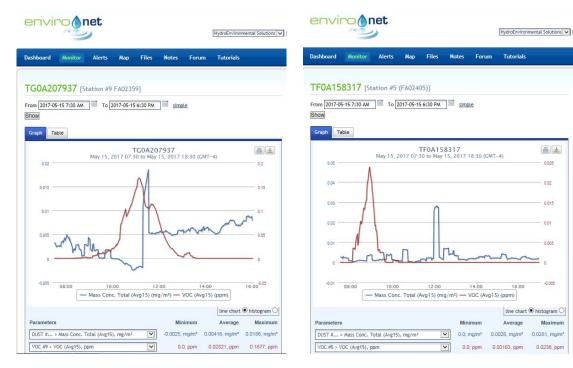
#### 5/15/2017 Station #6 (Downwind)

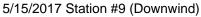


5/15/2017 Station #7 (Nearest Building)



#### 5/15/2017 Station #8 (Upwind)







5/15/2017 Station #5 (Morgan Street)

5/15/2017 Station #6 –Truncated Data (7:13 am through 1:53 pm; prior to the meter malfunction)

#### Page 1

# Memo

Date:	May 18, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 16, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Tuesday, May 16, 2017. Environmental Bulkheading Corp. (EBC) resumed drilling of Micropiles in the hotel footprint, while Siteworks moved soil stockpiles and GeoStructures Inc. (GSI) began Rapid Impact Compaction (RIC) work in the north. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

A NYSDEC representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, EBC drilled and installed Micropiles in the hotel footprint, Siteworks relocated soil stockpiles, and GSI began the RIC work.

HES conducted the CAMP monitoring around the Southern and Northern portions of the site where work was being conducted. Hand-held meters (PID, FID, & 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed (RIC activities) as well as to screen vapor points and well headspace in the area of the intrusive activities on the site. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were

to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day 2 sets of CAMP monitoring stations (8 total) were used to monitor the site activities conducted in the northern and southern portion of the site concurrently; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Siteworks continually patrolled the site with a water truck in order to maintain saturated conditions, especially the main "road" running north and south within the site where the site vehicles often travel. . There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site NYSDEC representative.

A NYSDEC representative was on site on Tuesday, May 16, 2017 to observe the site activities in the southern area (Hotel footprint) as well as the northern area (northern storm water retention basin).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/16/2017 CAMP monitoring event.

	Upwind	Downwind	Downwind	Buildings	Morgan
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	Str.* (Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.09	0.21	0.01	0.00
Overall Ave.	0.00	0.02	0.13	0.00	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	-0.0010	0.0000	-0.0078	0.0003	-
Max. 15-min. Ave.	0.0165	0.0067	0.0071	0.0191	-
Overall Ave.	0.0029	0.0016	-0.0002	0.0044	-

#### Date: 05/16/17 (Southern setup)

\*The dust monitor from CAMP Station #5 on Morgan Street did not record dust levels.

### Date: 05/16/17 (Northern setup)

CAMP Data	Upwind (Sta. 7)	Downwind (Sta. 6)	Downwind (Sta. 9)	Buildings (Sta. 8)
VOCs (ppm)				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.34	0.2	0.20	0.15
Overall Ave.	0.14	0.00	0.04	0.02
Dust (mg/m <sup>3</sup> )				
Min. 15-min. Ave.	0.0000	0.0000	-0.0027	0.0079
Max. 15-min. Ave.	0.0548	0.0121	0.0149	0.0340
Overall Ave.	0.0050	0.0030	0.0059	0.0162

	HydroEnvironmental Solutions 🗸	enviroonet		HydroEnvironmental Solutions
ashboard <u>Monitor</u> Alerts Map Files Notes Foru	m Tutorials	Dashboard Monitor Alerts Map	Files Notes Forun	n Tutorials
B00864127 [Station #1 FA00609]		TC00184550 [Station #2 (FA0098	;4)]	
te Range ast Day 🔽 custom		Date Range		
Table		Graph Table		
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5/16/2017 Station #1 (Downwind)



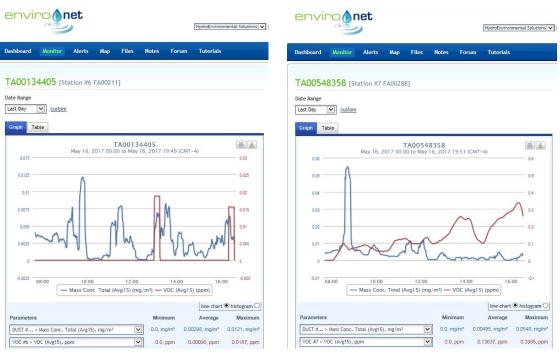
5/16/2017 Station #3 (Upwind)

5/16/2017 Station #4 (Downwind)

5/16/2017 Station #2 (Near Building)

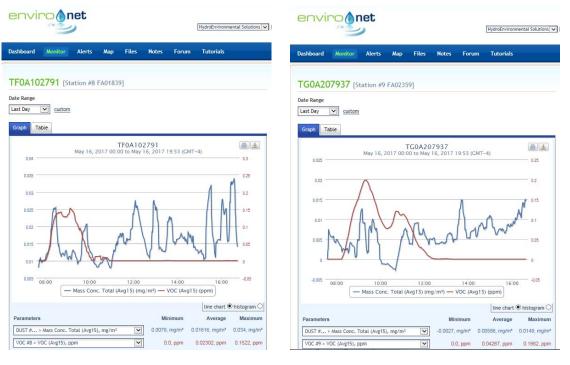
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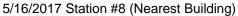
5/16/2017 Station #5 (Morgan Street)





5/16/2017 Station #7 (Upwind)





5/16/2017 Station #9 (Downwind)

# Memo

Date:	May 20, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 17, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Wednesday, May 17, 2017. Environmental Bulkheading Corp. (EBC) resumed drilling of Micropiles in the hotel footprint, while Siteworks began excavating soils to form the northern stormwater retention basin under the northern truck pad. GeoStructures Inc. (GSI) continued Rapid Impact Compaction (RIC) work in the North. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, EBC drilled and installed Micropiles in the hotel footprint, Siteworks conducted excavations in the north, and GSI resumed the RIC work in the North.

HES conducted the CAMP monitoring around the Southern and Northern portions of the site where work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed (RIC activities) as well as to screen vapor points and well headspace in the area of the intrusive activities on site. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 2 sets of CAMP monitoring stations (8 total) were used to monitor the site activities conducted in the northern and southern portion of the site concurrently; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Siteworks periodically patrolled the site with a water truck, as needed, in order to maintain saturated conditions; especially the main "road" running north and south within the site where the site vehicles often travel. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site HDR representative.

An HDR representative was on site on Wednesday, May 17, 2017 to observe the site activities in the southern area (Hotel footprint) as well as the northern area (northern storm water retention basin).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/17/2017 CAMP monitoring event.

	Upwind	Downwind	Downwind	Buildings	Morgan
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	Str.* (Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.13	0.28	0.00	0.00
Overall Ave.	0.00	0.05	0.18	0.00	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0080	0.0113	0.0011	0.0148	0.0142
Max. 15-min. Ave.	0.0779	0.0782	0.0691	0.0849	0.0441
Overall Ave.	0.0170	0.0181	0.0075	0.0269	0.0208

### Date: 05/17/17 (Southern setup)

### Date: 05/17/17 (Northern setup)

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	Upwind	Downwind	Downwind	Buildings
CAMP Data	(Sta. 7)	(Sta. 6)	(Sta. 9)	(Sta. 8)
VOCs (ppm)				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.62	0.12	0.30	0.08
Overall Ave.	0.19	0.03	0.22	0.01
Dust (mg/m <sup>3</sup> )				
Min. 15-min. Ave.	0.0171	0.0112	0.0142	0.0157
Max. 15-min. Ave.	0.0670	0.0885	0.0858	0.0770
Overall Ave.	0.0282	0.0298	0.0318	0.0308

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/17/2017 Station #1 (Downwind)	5/17/2017 Station #2 (Near Building)
Dashboard Monitor Alerts Map Files Notes Forum Tutorials	Dashboard Monitor Alerts Map Files Notes Forum Tutorials









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5/17/2017 Station #5 (Morgan Street)









5/17/2017 Station #8 (Nearest Building)

5/17/2017 Station #9 (Downwind)

# Memo

Date:	May 20, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 18, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Thursday, May 18, 2017. Environmental Bulkheading Corp. (EBC) resumed drilling of Micropiles in the hotel footprint, while Siteworks continued excavating soils to form the northern stormwater retention basin under the northern truck pad. GeoStructures Inc. (GSI) continued Rapid Impact Compaction (RIC) work along the southern boundary of the site. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, EBC drilled and installed Micropiles in the hotel footprint, Siteworks conducted excavations in the north, and GSI began the RIC work in the South.

HES conducted the CAMP monitoring around the Southern and Northern portions of the site where work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed (RIC activities) as well as to screen vapor points and well headspace in the area of the intrusive activities on site. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below

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the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 2 sets of CAMP monitoring stations (8 total) were used to monitor the site activities conducted in the northern and southern portion of the site concurrently; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Siteworks periodically patrolled the site with a water truck, as needed, in order to maintain saturated conditions; especially the main "road" running north and south within the site where the site vehicles often travel. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site HDR representative.

An HDR representative was on site on Thursday, May 18, 2017 to observe the site activities in the southern area (Hotel footprint) as well as the northern area (northern storm water retention basin).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

CAMP Station #6, located downwind of the storm water storage basin excavation area in the northern portion of the site, registered an initial elevated 1-minute dust concentration at 8:21 pm of 0.230 mg/m<sup>3</sup> when it was turned on. This "caused" a maximum 15-min average of 0.23 mg/m<sup>3</sup> during this sampling event. This 15-minute dust exceedance was not attributed to site activities; there was no noticeable dust in the air when the dust monitor was turned on and SiteWorks had not begun excavation work in this area at this time. This elevated reading was likely caused by the CAMP station/meter start up procedures. See the table below showing the 1-minute dust concentrations at Station #6 from when it was turned on; the subsequent dust measurements after the first 1-minute reading were well below 0.100 mg/m<sup>3</sup> and were back down to typical dust concentrations that were observed on this day.

It should be noted that the Environet site (where the data is uploaded and stored) calculates the 15-minute average based on the average of the previous fifteen 1-minute readings. The initial 1-minute reading will be the same value as the initial 15-minute reading since the system only has 1 data point to average for the 15-minute average calculation. Therefore, the initial fourteen 15-minute average concentrations at the start of each sampling event (for both dust and VOCs) provided by the Environet site do not include a full 15 minutes worth of data for the average values.

TA00134405: Station #6 (Downwind Location)							
Date / Time	1-Minute Reading (mg/m <sup>3</sup> )	15-Minute Average (mg/m³)					
5/18/2017 8:21	0.23	0.23					
5/18/2017 8:22	0.04	0.135					
5/18/2017 8:23	0.039	0.103					
5/18/2017 8:24	0.041	0.0875					
5/18/2017 8:25	0.04	0.078					
5/18/2017 8:26	0.035	0.0708					
5/18/2017 8:27	0.037	0.066					
5/18/2017 8:28	0.038	0.0625					
5/18/2017 8:29	0.039	0.0599					
5/18/2017 8:30	0.036	0.0575					
5/18/2017 8:31	0.036	0.0555					
5/18/2017 8:32	0.04	0.0543					
5/18/2017 8:33	0.039	0.0531					
5/18/2017 8:34	0.06	0.0536					
5/18/2017 8:35	0.061	0.0541					
5/18/2017 8:36	0.041	0.0415					
5/18/2017 8:37	0.038	0.0413					
5/18/2017 8:38	0.038	0.0413					

Below is a summary table for the 05/18/2017 CAMP monitoring event.

	Upwind	Downwind	Downwind	Buildings	Morgan
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	Str.* (Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.08	0.00	0.40	0.00	0.05
Overall Ave.	0.03	0.00	0.24	0.00	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0073	0.0115	-0.0028	0.0131	0.0149
Max. 15-min. Ave.	0.0714	0.0802	0.0600	0.0501	0.0603
Overall Ave.	0.0320	0.0316	0.0196	0.0290	0.0320

### Date: 05/18/17 (Southern setup)

#### Date: 05/18/17 (Northern setup)

CAMP Data	Upwind (Sta. 7)	Downwind (Sta. 6)	Downwind (Sta. 9)	Buildings (Sta. 8)
VOCs (ppm)				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.35	0.47	0.37	0.31
Overall Ave.	0.15	0.19	0.20	0.02
Dust (mg/m <sup>3</sup> )				
Min. 15-min. Ave.	0.0112	-0.0046	0.0084	0.0219
Max. 15-min. Ave.	0.0761	0.2300	0.0550	0.1003
Overall Ave.	0.0377	0.0352	0.0236	0.0570













5/18/2017 Station #5 (Morgan Street)





5/18/2017 Station #7 (Upwind)



5/18/2017 Station #8 (Nearest Building)

5/18/2017 Station #9 (Downwind)

# Memo

Date:	May 20, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 19, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Friday, May 19, 2017. Environmental Bulkheading Corp. (EBC) resumed drilling of Micropiles in the hotel footprint, while Siteworks continued excavating soils to form the southern storm water retention basin near the southern property boundary. GeoStructures Inc. (GSI) continued Rapid Impact Compaction (RIC) work in the northern storm water retention basin. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site.

There were no NYSDEC "off-site" work activities on this day.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, EBC drilled and installed Micropiles in the hotel footprint, Siteworks conducted excavations in the South, and GSI continued with RIC work in the North.

HES conducted the CAMP monitoring around the Southern and Northern portions of the site where work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed (RIC activities) as well as to screen vapor points and well headspace in the area of the intrusive activities on site. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below

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the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 2 sets of CAMP monitoring stations (8 total) were used to monitor the site activities conducted in the northern and southern portion of the site concurrently; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Siteworks periodically patrolled the site with a water truck, as needed, in order to maintain saturated conditions; especially the main "road" running north and south within the site where the site vehicles often travel. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site HDR representative.

An HDR representative was on site on Friday, May 19, 2017 to observe the site activities in the southern area (within and around the Hotel footprint) as well as the northern area (northern storm water retention basin).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/19/2017 CAMP monitoring event.

	Upwind	Downwind	Downwind	Buildings	Morgan
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	Str.* (Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.18	0.35	0.00	0.40
Overall Ave.	0.00	0.09	0.23	0.00	0.01
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0139	0.0148	-0.0001	0.0232	0.0151
Max. 15-min. Ave.	0.0631	0.0640	0.0457	0.0601	0.0442
Overall Ave.	0.0225	0.0267	0.0164	0.0385	0.0281

### Date: 05/19/17 (Southern setup)

### Date: 05/19/17 (Northern setup)

	• •			
CAMP Data	Upwind (Sta. 7)	Downwind (Sta. 6)	Downwind (Sta. 9)	Buildings (Sta. 8)
VOCs (ppm)				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.29	0.00	0.24	0.07
Overall Ave.	0.09	0.00	0.12	0.00
Dust (mg/m <sup>3</sup> )				
Min. 15-min. Ave.	0.0145	0.0022	0.0191	0.0319
Max. 15-min. Ave.	0.1015	0.0415	0.0510	0.0539
Overall Ave.	0.0303	0.0137	0.0314	0.0396





5/19/2017 Station #1 (Downwind)



5/19/2017 Station #3 (Upwind)

5/19/2017 Station #4 (Downwind)

#### 5/19/2017 Station #2 (Near Building)

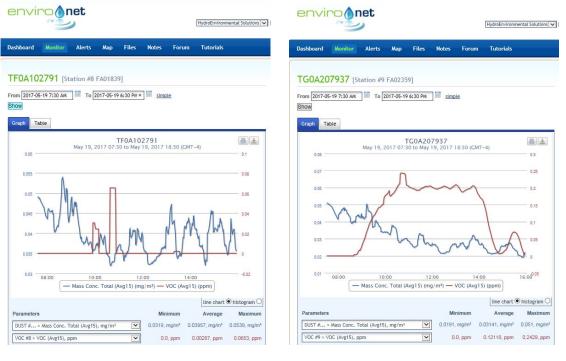
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5/19/2017 Station #5 (Morgan Street)





5/19/2017 Station #7 (Upwind)



5/19/2017 Station #8 (Nearest Building)

5/19/2017 Station #9 (Downwind)

# Memo

Date:	May 23, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 22, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Monday, May 22, 2017. Environmental Bulkheading Corp. (EBC) resumed drilling of Micropiles in the hotel footprint, while Siteworks continued to prepare the southern storm water retention basin near the southern property boundary for Rapid Impact Compaction (RIC) later in the week, as well as managing soil stockpiles for future re-use. GeoStructures Inc. (GSI) conducted no RIC work due to a malfunction in the on-board computer. Instead, maintenance was done to make repairs to the machine. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site as well as any changing wind conditions.

There were no NYSDEC "off-site" work activities on this day.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, EBC drilled and installed Micropiles in the hotel footprint and Siteworks managed and relocated soil stockpiles in the North.

HES conducted the CAMP monitoring around the Southern and Northern portions of the site where work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed (RIC activities) as well as to screen vapor points and well headspace in the area of the intrusive activities on site. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below

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the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 2 sets of CAMP monitoring stations (8 total) were used to monitor the site activities conducted in the northern and southern portion of the site concurrently; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Due to light to moderate rain throughout the day, Siteworks did not need to utilize the water truck in order to maintain saturated conditions. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site HDR representative. As a result of muddy conditions, all trucks leaving the site had there tires hosed down to remove all mud from the tread and sidewalls prior to entering Marbledale Road.

An HDR representative was on site on Monday, May 22, 2017 to observe the site activities in the southern area (within and around the Hotel footprint) as well as the northern area (northern storm water retention basin).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

CAMP Station #6, located along the western side of the site, downwind of the work being conducted in the area of the soil stockpile, registered a few elevated 1-minute dust readings between at 9:52 and 10:05 am ranging from of 0.314 to 1.36 mg/m<sup>3</sup> that "caused" a maximum 15-min average of 0.2695 mg/m<sup>3</sup> during this sampling event. There was on and off rain during this sampling event and HES indicated rain water dripped into the omnidirectional inlet while they were making adjustments to the monitoring station causing the elevated readings on the dust meter. This 15-minute dust exceedance was not attributed to site activities; there was no noticeable dust in the air in the vicinity of Station #6 during this interval. See the table below showing the 1-minute dust concentrations at Station #6 during this interval.

TA00134405: Station #6 (Downwind Location)						
Date / Time	1-Minute Reading (mg/m <sup>3</sup> )	15-Minute Average (mg/m³)				
5/22/2017 9:49	0.008	0.0071				
5/22/2017 9:50	0.008	0.0073				
5/22/2017 9:51	0.011	0.0075				
5/22/2017 9:52	0.691	0.0531				
5/22/2017 9:53	0.314	0.0735				
5/22/2017 9:54	1.36	0.1638				
5/22/2017 9:55	0.088	0.1692				
5/22/2017 9:56	0.568	0.2067				
5/22/2017 9:57	0.086	0.2121				
5/22/2017 9:58	0.17	0.2229				
5/22/2017 9:59	0.01	0.2231				
5/22/2017 10:00	0.009	0.2232				
5/22/2017 10:01	0.006	0.2229				
5/22/2017 10:02	0.01	0.2231				
5/22/2017 10:03	0.015	0.2236				
5/22/2017 10:04	0.012	0.2239				
5/22/2017 10:05	0.683	0.2689				
5/22/2017 10:06	0.021	0.2695				
5/22/2017 10:07	0.006	0.2239				
5/22/2017 10:08	0.008	0.2035				
5/22/2017 10:09	0.006	0.1132				
5/22/2017 10:10	0.01	0.108				
5/22/2017 10:11	0.006	0.0705				
5/22/2017 10:12	0.007	0.0653				
5/22/2017 10:13	0.011	0.0547				
5/22/2017 10:14	0.012	0.0548				

CAMP Station #8, located at the "near-building location" near the northern entrance to the site registered a few elevated 1-minute VOC readings between at 9:25 and 9:33 am ranging from of 0.54 to 9.37 ppm that "caused" a maximum 15-min average of 2.03 ppm. HDR and HES did not notice any odors in the air at this time. There was no intrusive work going on in the area of Station #8 during this monitoring event. See the table below showing the 1-minute VOC concentrations at Station #8 during this interval.

TF0A102791: Station #8 (Near Bld. Location)			
Date / Time	1-Minute Reading (ppm)	15-Minute Average (mg/m³)	
5/22/2017 9:22	0.00	0.00	
5/22/2017 9:23	0.00	0.00	
5/22/2017 9:24	0.00	0.00	
5/22/2017 9:25	1.954	0.1628	
5/22/2017 9:26	5.164	0.5932	
5/22/2017 9:27	9.369	1.3739	
5/22/2017 9:28	3.516	1.6669	
5/22/2017 9:29	1.89	1.8244	
5/22/2017 9:30	1.47	1.9469	
5/22/2017 9:31	0.952	2.0263	
5/22/2017 9:32	0.512	1.9098	
5/22/2017 9:33	0.54	1.8119	
5/22/2017 9:34	0.302	1.7113	
5/22/2017 9:35	0.231	1.7267	
5/22/2017 9:36	0.149	1.7366	
5/22/2017 9:37	0.085	1.7423	
5/22/2017 9:38	0.071	1.747	
5/22/2017 9:39	0.016	1.7481	
5/22/2017 9:40	0.012	1.6186	
5/22/2017 9:41	0.00	1.2743	
5/22/2017 9:42	0.00	0.6497	
5/22/2017 9:43	0.00	0.4153	
5/22/2017 9:44	0.00	0.2893	
5/22/2017 9:45	0.00	0.1913	
5/22/2017 9:46	0.00	0.1279	
5/22/2017 9:47	0.00	0.0937	
5/22/2017 9:48	0.00	0.0577	
5/22/2017 9:49	0.00	0.0376	
5/22/2017 9:50	0.00	0.0222	

Below is a summary table for the 05/22/2017 CAMP monitoring event.

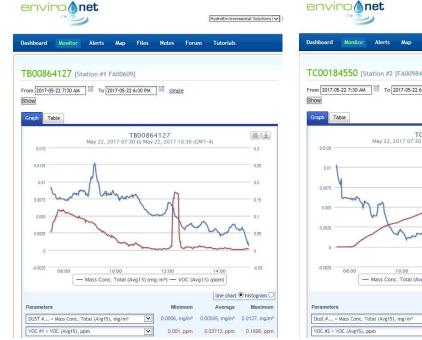
	Upwind	Downwind	Downwind	Buildings	Morgan
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	Str.* (Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.02	0.00	0.00
Max. 15-min. Ave.	0.05	0.17	0.30	0.39	0.02
Overall Ave.	0.01	0.04	0.08	0.21	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0000	0.0006	-0.0005	0.0000	0.0018
Max. 15-min. Ave.	0.0069	0.0127	0.0057	0.0103	0.0161
Overall Ave.	0.0037	0.0060	0.0024	0.0022	0.0055

### Date: 05/22/17 (Southern setup)

#### Date: 05/19/17 (Northern setup)

	Upwind	Downwind	Downwind	Buildings
CAMP Data	(Sta. 7)	(Sta. 6)	(Sta. 9)	(Sta. 8)
VOCs (ppm)				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.00	0.00	2.03
Overall Ave.	0.00	0.00	0.00	0.06
Dust (mg/m <sup>3</sup> )				
Min. 15-min. Ave.	0.0035	0.0013	0.0009	0.0029
Max. 15-min. Ave.	0.0383	0.2695 *	0.0190	0.0341
Overall Ave.	0.0107	0.0166	0.0077	0.0091

\* This 15-minute dust exceedance was not caused by site activities; some rain water was got into the sample inlet.





5/22/2017 Station #1 (Downwind)





5/22/2017 Station #3 (Upwind)

5/22/2017 Station #4 (Downwind)

5/22/2017 Station #2 (Near Building)

shboard Monitor	Alerts	Map Files	Notes	Forum	Tutorials	
F0A158317 [	Charles HE /F	02 (05)1				
		10 CONTROL 1 -	-			
om 2017-05-22 7:30 A/	A To 2017	7-05-22 6:30 PM	simple			
Graph Table						
	May 22, 201	TF0A1 7 07:30 to Ma		:30 (GMT-	(4)	量土
0.03						0.025
0.025					п	0.02
0.02						0.015
0.015						0.01
	m.m.	~				0.005
0.01	as de l	~			m	0
0.005			~		1	50
alt			~	~		~ •
alt	10:00			14:00	16:0	0.005
	10:00 — Mass Conc. T					0.005

5/22/2017 Station #5 (Morgan Street)

HydroEnvironm	HydroEnvironmental Solutions
hboard Monitor Alerts Map Files Notes Forum Tutorials	Dashboard Monitor Alerts Map Files Notes Forum Tutorials
400134405 [Station #6 FA00211]	TA00548358 [Station #7 FA00288]
m 2017-05-22 7:30 AM 🔲 To 2017-05-22 6:30 PM 🛄 simple	From 2017-05-22 7:30 AM 🗮 To 🗾 🖬 simple
Table	Graph Table
TA00134405 May 22, 2017 07:30 to May 22, 2017 18:30 (GMT-4)	TA00548358           0.155         0.05
0.25	- 0.1 0.04
0.15	0.075 0.023 0.023
0.1	0.02 0.02
	- o cos cos cos cos cos cos cos cos cos c
-0.05 08:00 10:00 12:00 14:00 - Mass Conc. Total (Avg15) (mg/m³) VOC (Avg15) (ppm)	- 4.05 0 10:00 12:00 14:00 4.05 - Mass Conc. Total (Avg15) (mg/m <sup>3</sup> ) - VOC (Avg15) (ppm)
line chart @	histogram O
arameters Minimum Average	Maximum Parameters Minimum Average Maximu
DUST # > Mass Conc. Total (Avg15), mg/m <sup>3</sup> V 0.0013, mg/m <sup>3</sup> 0.01662, mg/m <sup>3</sup>	1.2695, mg/m <sup>3</sup> DUST # > Mass Conc. Total (Avg15), mg/m <sup>3</sup> 0.0035, mg/m <sup>3</sup> 0.01068, mg/m <sup>3</sup> 0.0383, mg/r

5/22/2017 Station #6 (Downwind)

5/22/2017 Station #7 (Upwind)



5/22/2017 Station #8 (Nearest Building)

5/22/2017 Station #9 (Downwind)

Date:	May 24, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 23, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Tuesday, May 23, 2017. Environmental Bulkheading Corp. (EBC) resumed drilling of Micropiles in the hotel footprint, while Siteworks loaded out soils deemed not suitable for reuse for off-site disposal. A total of 6 truckloads containing this soil left the site for disposal. GeoStructures Inc. (GSI) conducted no RIC work due to a malfunction in the on-board computer. Instead, maintenance was done to make repairs to the machine. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

A NYSDEC representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site as well as any changing wind conditions.

There were no NYSDEC "off-site" work activities on this day.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, EBC drilled and installed Micropiles in the hotel footprint and Siteworks loaded soils onto trucks for removal from site.

HES conducted the CAMP monitoring around the Southern portion of the site where intrusive work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed (drilling activities) as well as to screen vapor points and well headspace in the area of the intrusive activities on site. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below

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the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 1 set of CAMP monitoring stations was used to monitor the site activities conducted in the southern portion of the site; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Due to rain throughout the previous days and continued overcast conditions, Siteworks did not need to utilize the water truck in order to maintain saturated soil. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site DEC representative. As a result of muddy conditions, all trucks leaving the site had their tires hosed down to remove all mud from the treads and sidewalls prior to entering Marbledale Road.

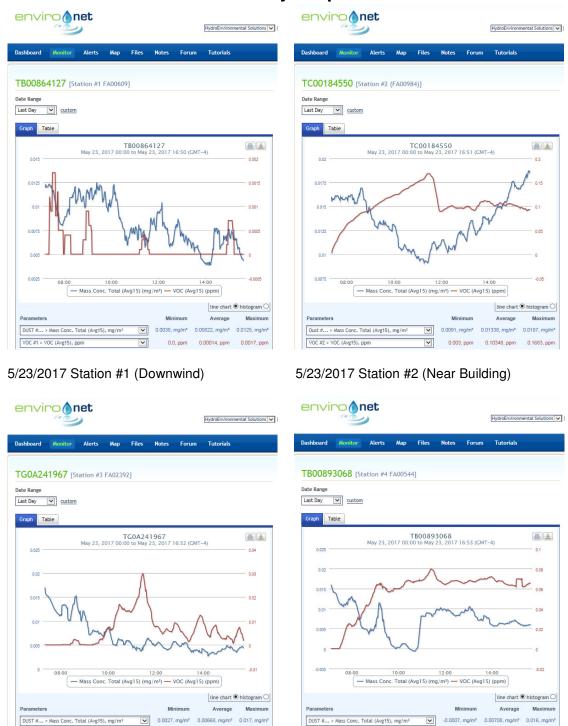
A NYSDEC representative was on site on Tuesday, May 23, 2017 to observe the site activities in the southern area (within and around the Hotel footprint).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 05/23/2017 CAMP monitoring event. **Date: 05/23/17** 

(Southern setup)

	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.03	0.00	0.08	0.17	0.03
Overall Ave.	0.01	0.00	0.06	0.10	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0027	0.0038	-0.0007	0.0091	0.0089
Max. 15-min. Ave.	0.0170	0.0125	0.0160	0.0187	0.0367
Overall Ave.	0.0067	0.0082	0.0071	0.0134	0.0128





~

0.0, ppm 0.0063, ppm 0.0298, ppm

VOC #3 > VOC (Avg15), ppm

5/23/2017 Station #4 (Downwind)

~

0.0, ppm 0.05709, ppm 0.0797, ppm

VOC #4 > VOC (Avg15), ppm

envir		et					HydroEnviron	mental Solutions 🗸
Dashboard	Monitor	Alerts	Мар	Files	Notes	Forum	Tutorials	
TFOA158 Date Range Last Day [ Graph Tat	✓ custom	ation #5	(FA0240	95)]				
0.04 —		May 23, 2		FFOA15 10 to May	<b>8317</b> 23, 2017 16:	53 (GMT-	-4)	<u>⊜</u> ± 0.03
0.03 —								0.02
0.02 —	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~				Лп	-	0.01
0.01 -					~~~	чы	hun	<u>л</u> ,
o —	08:00	Mass Cond	10:00 Total (A	wg15) (m	12:00 g/m³) — VO	14: C (Avg15)	(ppm)	16:00 <sup>0.01</sup>
								● histogram ○
Parameters					Minim		Average	Maximum
	Mass Conc. To OC (Avg15), p		, mg/m³	~	0.0089, mg 0.0, p		1278, mg/m <sup>3</sup> .00099, ppm	0.0367, mg/m <sup>a</sup>

5/23/2017 Station #5 (Morgan Street)

Date:	May 25, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 24, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Wednesday, May 24, 2017. Environmental Bulkheading Corp. (EBC) resumed drilling of Micropiles in the hotel footprint, while GeoStructures Inc. (GSI) resumed Rapid Impact Compaction (RIC) work in the northern stormwater retention basin #104, and then in the southern stormwater retention basin near the southern boundary. Siteworks began sifting the soil from the existing stockpiles of usable soil in the western center portion of the site with a mechanical sieve to remove large cobbles and boulders and make it more suitable for use as fill material on site and for compaction. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site as well as any changing wind conditions.

There were no NYSDEC "off-site" work activities on this day.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, EBC drilled and installed Micropiles in the hotel footprint, GSI conducted RIC in both the northern and southern portions of the site, and Siteworks sifted through soil stockpiles.

HES conducted the CAMP monitoring around both the northern and southern portion of the site where intrusive work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed (RIC activities) as well as to screen vapor points and well headspace in the area of the intrusive activities on site. Additionally, ambient air measurements were made throughout the site with the PID and FID during the

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monitoring event; all recorded instrument measurements for these ambient air samples were below the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 2 sets of CAMP monitoring stations were used to monitor the site activities conducted in the northern and southern portion of the site; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Due to rain throughout the previous days and continued overcast conditions, Siteworks did not need to utilize the water truck in order to maintain saturated soil. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site HDR representative. As a result of muddy conditions, all trucks leaving the site had their tires hosed down to remove all mud from the treads and sidewalls prior to entering Marbledale Road.

An HDR representative was on site on Wednesday, May 24, 2017 to observe the site activities in the northern (stormwater basin #104) and southern areas (within and around the Hotel footprint).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

It should be noted that the Station #5 DustTrak unit was registering elevated concentrations when it was first started up on this day with 15-minute average readings ranging between 0.133 and 0.557 mg/m<sup>3</sup>. There was no visible dust in the area when the meter was set up. HES consulted with the equipment supplier and it was determined that the elevated readings were likely due to a clogged filter from the recent rain events; the DustTrak unit was shut down at 8:28 am. A replacement DustTrak was installed and started up at 11:21 am. The replacement meter was reading typical dust measurements for this sampling event. The elevated readings registered on the unit in the morning were due to the meter malfunction and not dust concentration in the area at that time. From 11:21 am through 6:26 pm (when the station was shut down) the replacement DustTrak

unit measured a minimum 15-min average of 0.0060 mg/m<sup>3</sup>, a maximum 15-min average of 0.0103 mg/m<sup>3</sup>, and and overall average of 0.0074 mg/m<sup>3</sup>.

Below is a summary table for the 05/24/2017 CAMP monitoring event.

	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.02	0.11	0.33	0.00
Overall Ave.	0.01	0.00	0.07	0.22	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0003	0.0000	-0.0037	0.0000	0.0060
Max. 15-min. Ave.	0.0143	0.0474	0.0347	0.0419	0.5568 *
Overall Ave.	0.0070	0.0193	0.0132	0.0210	0.0551 *

Date: 05/24/17 (Southern setup)

\* The DustTrak malfunctioned in the morning; registering elevated readings immediately after it was started up, likely due to a clogged filter from the recent rain. These elevated readings are not due to dust conditions in the morning. A replacement DustTrak unit was installed at 11:21 am and was reading typical dust readings for the remainder of the sampling event at this station location. We have included 2 graphs for this location (1 with all of the data and 1 with the data collected with the replacement unit).

	Upwind	Downwind	Downwind	Buildings
CAMP Data	(Sta. 7)	(Sta. 6)	(Sta. 9)	(Sta. 8)
VOCs (ppm)				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.01	0.00	0.83	0.00
Overall Ave.	0.00	0.00	0.14	0.00
Dust (mg/m <sup>3</sup> )				
Min. 15-min. Ave.	0.0020	0.0006	0.0000	0.0000
Max. 15-min. Ave.	0.0660	0.0600	0.0688	0.0561
Overall Ave.	0.0157	0.0124	0.0137	0.0172

#### Date: 05/24/17 (Northern setup)







5/24/2017 Station #3 (Upwind)

5/24/2017 Station #4 (Downwind)

5/24/2017 Station #2 (Near Building)

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E.

0.5

-0.1

Maximum

16:00

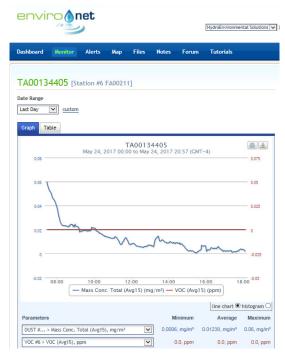
Average

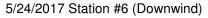
line chart 
histogram

14:00

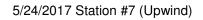
Tutorials

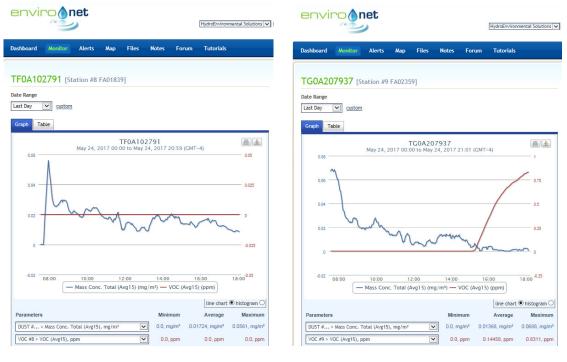












5/24/2017 Station #8 (Nearest Building)

5/24/2017 Station #9 (Downwind)

Date:	May 25, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 25, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Thursday, May 25, 2017. Siteworks backfilled compression holes created by recent Rapid Impact Compaction (RIC) work in the northern stromwater retention basin #104. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site. Due to the rainy conditions, no RIC work or micropile drilling took place on this day.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site as well as any changing wind conditions.

There were no NYSDEC "off-site" work activities on this day.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, Siteworks backfilled compression holes in the north.

HES conducted the CAMP monitoring around both the northern and southern portion of the site where intrusive work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or

property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an offsite CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 1 set of CAMP monitoring stations was used to monitor the site activities conducted in the northern portion of the site; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Due to rain throughout the day, Siteworks did not need to utilize the water truck in order to maintain saturated soil. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site HDR representative. As a result of muddy conditions, all trucks and personal vehicles leaving the site had their tires hosed down to remove all mud from the treads and sidewalls prior to entering Marbledale Road.

An HDR representative was on site on Thursday, May 25, 2017 to observe the site activities in the northern (stormwater basin #104).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Due to moderate rain throughout the day, the DustTrak monitors were not utilized onsite for this day; the moderate-to-heavy rain on this day would mitigate any dust generated from site activities and prevent migration off site. High humidity/rainy conditions often cause the DustTrak units to "over read" and an accumulation of water within the moisture trap will likely result in a clogged filter and can cause artificially high readings. In addition, moisture or rain pulled into the monitor can damage the unit.

Date: 05/25/17					
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.06	0.10	0.18	0.19	0.00
Overall Ave.	0.02	0.05	0.06	0.10	0.00
Dust (mg/m <sup>3</sup> ) *					
Min. 15-min. Ave.	<no data=""></no>	<no data=""></no>	<no data=""></no>	<no data=""></no>	0.0000
Max. 15-min. Ave.	<no data=""></no>	<no data=""></no>	<no data=""></no>	<no data=""></no>	0.0031
Overall Ave.	<no data=""></no>	<no data=""></no>	<no data=""></no>	<no data=""></no>	0.0012

Below is a summary table for the 05/25/2017 CAMP monitoring event.

\* Due to the rainy conditions on this day, the DustTrak units were not used.

	HydroEnvironmental Solutions
Dashboard Monitor Alerts Map Files Notes Forum Tutorials	Dashboard Monitor Alerts Map Files Notes Forum Tutorials
TB00864127 [Station #1 FA00609]	TC00184550 [Station #2 (FA00984)]
Date Range	From 2017-05-25 7:30 AM
Last Day 🔍 custom	Show
Graph Table	Graph Table
TB00864127 May 25, 2017 00:00 to May 25, 2017 15:34 (GMT-4)	TC00184550 May 25, 2017 07:30 to May 25, 2017 18:30 (GMT-4)
0.1	02
0.075	0.15
0.05	0.1
0.025	0.05
08:00 08:30 09:00 09:30 10:00 10:30 -0.025 - Mass Conc. Total (Avg15) (mg/m³) VDC (Avg15) (ppm)	08:00 08:30 09:00 09:30 10:00 10:30 -0.05 - Mass Conc. Total (Avg15) (mg/m <sup>1</sup> ) - VOC (Avg15) (ppm)
tine chart  histogram	tine chart  histogram
Parameters Minimum Average Maximum	Parameters Minimum Average Maximum
DUST # > Mass Conc. Total (Avg15), mg/m <sup>3</sup> <t< td=""><td>Dust # &gt; Mass Conc. Total (Avg15), mg/m³</td></t<>	Dust # > Mass Conc. Total (Avg15), mg/m³
Dashboard Monitor Alerts Map Files Notes Forum Tutorials	Dashboard Monitor Alerts Map Files Notes Forum Tutorials
TG0A241967 [Station #3 FA02392]	TB00893068 [Station #4 FA00544]
From 2017-05-25 7:30 AM To 2017-05-25 7:30 PM simple	From 2017-05-25 7:30 AM III To 2017-05-25 6:30 PM IIII simple
Graph Table	Graph Table
TG0A241967	TB00893068
May 25, 2017 07:30 to May 25, 2017 19:30 (GMT-4)	May 25, 2017 07:30 to May 25, 2017 18:30 (GMT-4)
	$\wedge$
0.04	
	0.15
	0.15
0.02	
0.02	
0	
0	0.55
08:30 09:00 09:30 10:00 -0.02 - Mass Conc. Total (Avg15) (mg/m <sup>3</sup> ) - VOC (Avg15) (opm) [tine chart @ histogram O]	05:00 08:30 09:00 09:30 10:00 00:30 00:50
0E30 09:00 09:30 10:00 10:30 -0.02 (	05 06:00 09:00 09:30 10:00 10:30 05 06:00 08:30 09:00 09:30 10:00 10:30 05 05 05 05 05 05 05 05 05 0

5/25/2017 Station #3 (Upwind)

5/25/2017 Station #4 (Downwind)



5/25/2017 Station #5 (Morgan Street)

Date:	May 26, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 26, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Friday, May 26, 2017. Siteworks began to lay the retention basin piping (to be tied into the off-site stormwater sewer system) within the northern stromwater retention basin #104 and Environmental Bulkheading Corp. (EBC) resumed drilling micropiles within the hotel footprint. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site. Due to saturated conditions of the soil, no Rapid Impact Compaction (RIC) work was conducted on this day.

An HDR representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site as well as any changing wind conditions.

There were no NYSDEC "off-site" work activities on this day.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, Siteworks laid piping in stormwater basin #104 in the north (non-intrusive) while EBC continued micropile drilling in the south.

HES conducted the CAMP monitoring around the southern portion of the site where intrusive work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below the CAMP action levels and were not significantly elevated above ambient air background levels.

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In accordance with the RAWP, a minimum of four (4) monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 1 set of CAMP monitoring stations was used to monitor the site activities conducted in the southern portion of the site; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Due to sustained rain throughout the previous day, Siteworks did not need to utilize the water truck in order to maintain saturated soil. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site HDR representative. As a result of muddy conditions, all trucks and personal vehicles leaving the site had their tires hosed down to remove all mud from the treads and sidewalls prior to entering Marbledale Road.

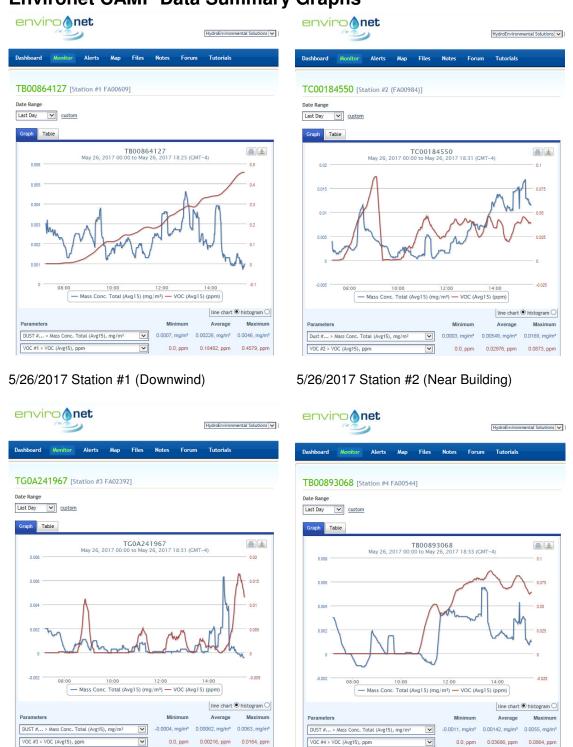
An HDR representative was on site on Friday, May 26, 2017 to observe the site activities in the southern (Hotel footprint) and northern (stormwater basin #104) areas.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Butc. 05/20/17					
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.02	0.46	0.09	0.09	0.28
Overall Ave.	0.00	0.18	0.04	0.01	0.02
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	-0.0004	0.0007	-0.0011	0.0003	0.0000
Max. 15-min. Ave.	0.0063	0.0046	0.0055	0.0169	0.0055
Overall Ave.	0.0006	0.0023	0.0014	0.0055	0.0037

Below is a summary table for the 05/26/2017 CAMP monitoring event.

Date: 05/26/17



5/26/2017 Station #3 (Upwind)

5/26/2017 Station #4 (Downwind)

envir		et					HydroEnviror	mental Solutions 🗸
Dashboard	Monitor	Alerts	Мар	Files	Notes	Forun	n Tutorials	
TFOA15 Date Range Last Day Graph Ta	8317 [Sta v custom	ation #5	(FA0240	05)]				
0.005		May 26, 2		TFOA15	8317 26, 2017 11	8:34 (Gl		0.3
0.002 — 0 —	$\bigwedge$		v					0.1
-0.002	08:00		10:00 Total (4		2:00 g/m³) — V	14: OC (Avg	115) (ppm)	16:00 +0.1
Parameters					Minim	ium	Average	histogram      Maximum
	Mass Conc. T		, mg/m³		<ul> <li>0.0, mg</li> </ul>	ı/m³ (	0.00372, mg/m <sup>3</sup>	0.0055, mg/m³
VOC #5 > V	OC (Avg15), p	pm		1	• 0.0, p	pm	0.01598, ppm	0.2797, ppm

5/26/2017 Station #5 (Morgan Street)

Date:	May 31, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 30, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Tuesday, May 30, 2017. Environmental Bulkheading Corp. (EBC) continued to drill micropiles within the hotel footprint while Geo Structures Inc. (GIS) resumed rapid impact compaction (RIC) work around the southern portion of the site. In the north, Siteworks continued to lay pipe for the stormwater retention basin. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

A NYSDEC representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site as well as any changing wind conditions.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, micropile drilling and RIC work were both conducted in the South, while Siteworks laid stormwater retention pipe in the north.

HES conducted the CAMP monitoring around the southern portion of the site where intrusive work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four (4) monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an off-

site CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 1 set of CAMP monitoring stations was used to monitor the site activities conducted in the southern portion of the site; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Due to rain and overcast conditions throughout the current and previous days, Siteworks did not need to utilize the water truck in order to maintain saturated soil. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site NYSDEC representative. As a result of muddy conditions, all work trucks and personal vehicles leaving the site had their tires hosed down to remove all mud from the treads and sidewalls prior to entering Marbledale Road.

A NYSDEC representative was on site on Tuesday, May 30, 2017 to observe the site activities in the southern portion of the site (in and around the hotel footprint).

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

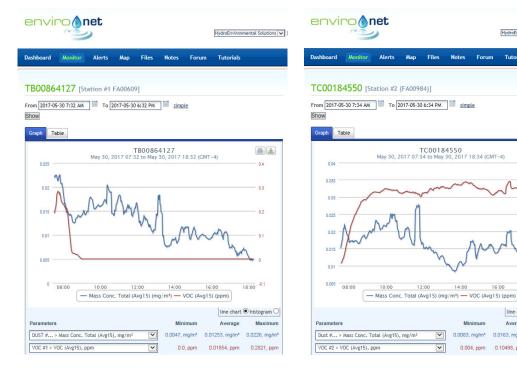
Date. 03/30/17					
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.01	0.28 *	0.03	0.12	0.00
Overall Ave.	0.00	0.02	0.02	0.10	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0011	0.0047	-0.0008	0.0083	0.0000
Max. 15-min. Ave.	0.0174	0.0226	0.0143	0.0279	0.0031
Overall Ave.	0.0081	0.0125	0.0055	0.0163	0.0012

Below is a summary table for the 05/30/2017 CAMP monitoring event. Date: 05/30/17

Station #1 PID was reading higher than normal upon startup, but after recalibration, the PID returned to background levels. See the PID data below. The PID was recalibrated after the 8:10 am reading.

#### Date: 05/30/17

	Downwind
CAMP Data	(Sta. 1)
Time	VOCs (ppm)
5/30/2017 7:30	0.29
5/30/2017 7:35	0.32
5/30/2017 7:40	0.30
5/30/2017 7:45	0.26
5/30/2017 7:50	0.22
5/30/2017 7:55	0.26
5/30/2017 8:00	0.21
5/30/2017 8:05	0.18
5/30/2017 8:10	0.18
5/30/2017 8:15	0.03
5/30/2017 8:20	0.02
5/30/2017 8:25	0.03
5/30/2017 8:30	0.00
5/30/2017 8:35	0.02
5/30/2017 8:40	0.01



HydroEnv

Tutorials

Forum

mon

16:00

0.0011, mg/m³ 0.00811, mg/m³ 0.0174, mg/m³

ental Solutions 🗸

0.02

18:00 -0.005

Maximum

line chart 
histogram

Average

0.0, ppm 0.00013, ppm 0.0148, ppm

5/30/2017 Station #1 (Downwind)

Map Files Notes

TG0A241967 May 30, 2017 07:30 to May 30, 2017 18:30 (GMT-4)

enviro**net** 

Dashboard

Show

raph Table

0.025

0.02 0.015

0.01

0.005

Parameters

08-00

VOC #3 > VOC (Avg15), ppm

DUST #... > Mass Conc. Total (Avg15), mg/m3

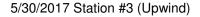
2

Monitor Alerts

TG0A241967 [Station #3 FA02392]

From 2017-05-30 7:30 AM To 2017-05-30 6:30 PM simple





10:00

12:00

- Mass Conc. Total (Avg15) (mg/m<sup>3</sup>) - VOC (Avg15) (ppm)

~

14:00

Minim

5/30/2017 Station #4 (Downwind)

#### 5/30/2017 Station #2 (Near Building)

12:00

**v** 

~

14:00

Minimum

0.0083, mg/m³ 0.0163, mg

16:00

HydroEnvironmental Solutions 🗸

0.15

0.05

18:00 -0.025

Maximum /m³ 0.0279, mg/m³

line chart 
histogram

Average

0.004, ppm 0.10498, ppm 0.123, ppm

Notes

enviro	net			HydroE	nvironmental Solutions
Dashboard Moni	itor Alerts Map	Files	Notes F	orum Tuto	rials
TF0A158317 From 2017-05-30 7:3	7 [Station #5 (FA02		simple		
Show Graph Table					
0.01	May 30, 2017 0	TF0A158 7:30 to May 30		0 (GMT-4)	0.00025
0.009	M				0.0002
0.007	$\bigwedge$	$\overline{\langle}$	٨	۲	0.0001
0.005 V			/ ~~	L I	0.00005
0.004 08:00	10:00 — Mass Conc. Total	12:00   (Avg15) (mg/	14:00 m³) — VOC	16:00 (Avg15) (ppm)	18:00 -0.00005
Parameters			Minimu		chart  histogram  kinete Maximum
	onc. Total (Avg15), mg/n	<b>ب</b>	0.005, mg/r		
VOC #5 > VOC (Avg	15), ppm	~	0.0, pp	m 1.0e-05,	, ppm 0.0002, ppm

5/30/2017 Station #5 (Morgan Street)

Date:	June 4, 2017
Project:	BCP Site # C360143
To:	Village of Tuckahoe
From:	Brendan Phillips, HDR
Subject:	Summary of CAMP Results During Site Work 109-125 Marbledale Road Tuckahoe, New York May 31, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during the site activities on Wednesday, May 31, 2017. Environmental Bulkheading Corp. (EBC) continued to drill micropiles within the hotel footprint while Geo Structures Inc. (GIS) resumed rapid impact compaction (RIC) work around the southern portion of the site. In the north, Siteworks continued to backfill the stormwater retention basin with clean DGA fill. Additionally, SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

A NYSDEC representative was on site to observe site activities on this day. It was confirmed that the CAMP monitoring stations were appropriately re-positioned as needed during the course of the day to account for the above-described work and locations of intrusive work on site as well as any changing wind conditions.

#### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, micropile drilling and RIC work were both conducted in the South, while Siteworks backfilled the stormwater retention basin in the North.

HES conducted the CAMP monitoring around the southern portion of the site where intrusive work was being conducted. Hand-held meters (PID, FID, and 4-Gas meter) were also used to monitor air in the areas where intrusive activities were occurring / where soil was being disturbed. Additionally, ambient air measurements were made throughout the site with the PID and FID during the monitoring event; all recorded instrument measurements for these ambient air samples were below the CAMP action levels and were not significantly elevated above ambient air background levels.

In accordance with the RAWP, a minimum of four (4) monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building or

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property boundary) were to be set up around the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES had an offsite CAMP monitoring station east of the site between the site and the Waverly Early Childhood Center. The off-site CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. On this day, 1 set of CAMP monitoring stations was used to monitor the site activities conducted in the southern portion of the site; they were monitored frequently throughout the day.

Details of the CAMP monitoring procedures and the monitoring equipment used to conduct the CAMP are included in previous data summary memoranda.

Water and vapor/odor suppressant foam are available on-site in the event there is a release of dust or VOCs from site activities. Foam was not required for odors or vapors emanating from the work areas. Due to rain and overcast conditions throughout the current and previous days, Siteworks did not need to utilize the water truck in order to maintain saturated soil. There was no visible dust leaving the site during this monitoring event as observed by either HES or the on-site NYSDEC representative. As a result of muddy conditions, all work trucks and personal vehicles leaving the site had their tires hosed down to remove all mud from the treads and sidewalls prior to entering Marbledale Road.

A NYSDEC representative was on site on Wednesday, May 31, 2017 to observe the site activities throughout the site.

For this day's activities, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Date: 05/31/17				-	
	Upwind	Downwind	Downwind	Buildings	Morgan Str.
CAMP Data	(Sta. 3)	(Sta. 1)	(Sta. 4)	(Sta. 2)	(Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.01	0.20	0.10	0.08	0.03
Overall Ave.	0.00	0.05	0.03	0.04	0.00
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0008	0.0037	-0.0004	0.0038	0.0030
Max. 15-min. Ave.	0.0445	0.0322	0.0522	0.0495	0.0155
Overall Ave.	0.0106	0.0119	0.0105	0.0138	0.0068

Below is a summary table for the 05/31/2017 CAMP monitoring event.





5/31/2017 Station #1 (Downwind)



5/31/2017 Station #2 (Near Building)

5/31/2017 Station #3 (Upwind)

5/31/2017 Station #4 (Downwind)

envir		et					HydroEnviror	nmental Solutions 🗸
Dashboard	Monitor	Alerts	Мар	Files	Notes	Forun	n Tutorials	
TF0A158	317 [Sta	tion #5 (	(FA024)	05)]				
From 2017-05-3	31 7:30 AM	🕅 То 2	017-05-31	1 6:30 PM	simpl	e		
Graph Tabl	le							
0.0175		May 31, 2		TF0A15 30 to May	8317 31, 2017 1	8:30 (GI	1T-4)	<b></b>
0.015								0.05
0.0125							$\mathbb{A}$	0.04
0.01						ſ	$\mathcal{H}^{-}$	0.03
0.0075				~	Л		V	0.02
0.005	$\sim$	2			~ L~			0.01
0	18:00	10:00		12:00	14	1:00	16:00	-0.01
			. Total (/		ig/m³) — V			
							line chart	● histogram ○
Parameters					Minir	num	Average	Maximum
DUST # > N	Aass Conc. To	otal (Avg15)	, mg/m³	~	0.003, m	ig/m³	0.00683, mg/m³	0.0155, mg/m <sup>a</sup>
VOC #5 > VO	C (Avg15), pp	m		~	0.0,	ppm	0.00096, ppm	0.0348, ppm

5/31/2017 Station #5 (Morgan Street)