



# Memo

Date: April 05, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 03, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Monday April 03, 2017 site work. On this day HES deployed an extra CAMP station (one additional near building station) so that they would be able to effectively monitor work being conducted by the contractor on this day. The remediation contractor was segregating dirt and debris from the antiperspirant cans and jars of antiperspirant cream that has been staged in the roll-offs on site so they could be drummed for disposal as requested by the disposal facility. In addition, a subcontractor was removing the two underground storage tanks (USTs) for disposal/recycling that were encountered in the SA-1 excavation. The contractor re-secured the plastic sheeting in areas where required.

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.

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, the contractor was planning to segregate the dirt and debris from the antiperspirant cans and jars of antiperspirant cream that were staged in the roll-offs on site so this source material can be drummed for disposal, and a subcontractor was removing the two fuel tanks encountered in the SA-1 excavation. Therefore, HES deployed an additional CAMP station such that they deployed one upwind station, two downwind stations, and two near building stations to effectively monitor the work activities occurring at the site on this day. 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 areas of the site where the tank removal and source material handling activities were conducted to collect particulate

(Dust) and volatile organic compound (VOC) measurements. A total of five CAMP stations were deployed at the site on this day. In addition, HES has 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 five on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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. On Monday April 03, 2017, neither water nor foam were required for odors or vapors emanating from the work areas. There were no noticeable visible dusts released from the work activities during this monitoring event.

An HDR representative was on site on Monday April 03, 2017 to observe the source material segregating and drumming activities, the fuel tank removal activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five operating CAMP stations during site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due the site activities on this day.

It should be noted that the excavator working on the tank removal operations had a hydraulic line that failed and hydraulic oil leaked onto the ground in the area of the hose where it failed. The contractor stopped the leak, repaired the hose and removed any soils that were impacted with the hydraulic oil and secured these soils in plastic; the soils will be taken off site for disposal. A NYSDEC spill number was called (NYSDEC Spill No. 1700059) for this spill. When the two USTs were discovered, they were given a spill number as well (NYSDEC Spill No. 1700057).

Currently there are three full 20-yd roll-offs and one partially filled roll-off containing the source materials from the SA-3 excavation (antiperspirant spray cans and jars of antiperspirant cream). The roll-offs are covered with vinyl covers secured in place with elastic tie-down cords. As discussed previously, the contractor began separating the source materials in the roll-offs from the soil and debris and they are placing the source materials in drums as requested by the disposal facility.

Below is a summary table for the 04/03/2017 CAMP monitoring event.

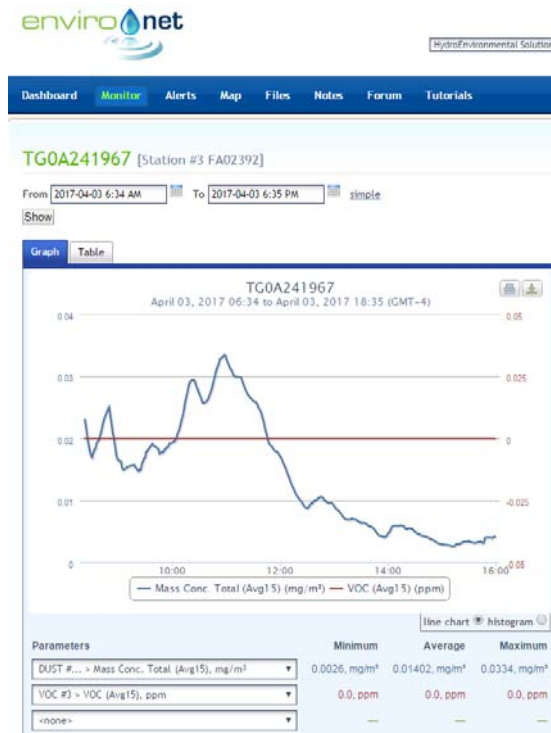
**Date: 04/03/17**

<b>CAMP Data</b>	<b>Upwind (Sta. 3)</b>	<b>Downwind (Sta. 1)</b>	<b>Downwind (Sta. 4)</b>	<b>Buildings (Sta. 2)</b>	<b>Add'l Buildings (Sta. 7)</b>
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.02	0.02	0.56	0.51
Overall Ave.	0.00	0.00	0.01	0.11	0.17
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0026	0.0035	0.0139	0.0077	0.0087
Max. 15-min. Ave.	0.0334	0.0417	0.0414	0.0457	0.0391
Overall Ave.	0.0140	0.0170	0.0238	0.0209	0.0218

**Date: 04/03/17**

<b>CAMP Data</b>	<b>Morgan Str. (Sta. 5)</b>
<b>VOCs (ppm)</b>	
Min. 15-min. Ave.	0.00
Max. 15-min. Ave.	0.05
Overall Ave.	0.01
<b>Dust (mg/m<sup>3</sup>)</b>	
Min. 15-min. Ave.	0.0055
Max. 15-min. Ave.	0.0327
Overall Ave.	0.0151

## Environet CAMP Data Summary Graphs



04/03/17 - Station #3 (Upwind)



04/03/17 - Station #1 (Downwind)



04/03/17 - Station #4 (Downwind)



04/03/17 - Station #2 (Near Buildings)





04/03/17 - Station #7 (Additional Near Buildings)



04/03/17 - Station #5 (Morgan Street)



# Memo

Date: April 05, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 04, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Tuesday April 04, 2017 site work. On this day HES deployed two sets of CAMP stations (one additional upwind station, two additional downwind stations, and 1 additional near building station) so that they would be able to effectively monitor work being conducted by the contractor at the north area of the site and south area of the site simultaneously. The remediation contractor was moving stockpiled acceptable soil from the stockpiles in the southern area to the northern stockpile area. In addition, a subcontractor was beginning the pilot testing for the micropiles at the southern portion of the site in the hotel footprint area. The contractor re-secured the plastic sheeting in areas where required. There was rain during the day so the Dust monitors were not in operation when the rain was heavy in the morning to avoid damaging the meters.

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.

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, the contractor was planning to conduct soil moving activities at the northern portion of the site and a subcontractor was on site to start the pilot test micropile installation in the hotel footprint area. Therefore, HES deployed an additional four CAMP stations (1 upwind, 2 downwind, & 1 near building) for a portion of the monitoring event to effectively monitor the work activities occurring at different portions of the site on this day. The CAMP stations were deployed in the northern portion of the site for the soil stockpiling work and the micropile drilling activities in the hotel footprint area. 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 set up around areas of the site where soil disturbance activities were conducted to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of eight CAMP stations were deployed at the site on this day. In addition, HES has an off-site CAMP monitoring station west of the site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Hall Ave. for this monitoring event. The eight on-site monitoring stations were repositioned as needed based on the excavation areas where the contractor was working. CAMP Station #1, #2, and #3 were shut down after about 11:00 am when work activities were completed in the northern portion of the site. Station #4 was kept on to provide additional coverage for the micropile pilot test activities in the area of the hotel footprint.

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. On Tuesday April 04, 2017, neither water nor foam were required for odors or vapors emanating from the work areas. There were no noticeable visible dusts released from the work activities during this monitoring event. It rained or was humid for a majority of the monitoring event on this day; there were no visible dust released from the work activities on this day.

An HDR representative was on site on Tuesday April 04, 2017 to observe the soil moving and stockpiling activities, the micropile pilot testing activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the eight operating CAMP stations during site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to concrete removal and loading activities.

Currently there are three full 20-yd roll-offs and one partially filled roll-off containing the source materials from the SA-3 excavation (antiperspirant spray cans and jars of antiperspirant cream). The roll-offs are covered with vinyl covers secured in place with elastic tie-down cords. As discussed for the April 03 monitoring event, the contractor will be separating the source materials in the roll-offs from the soil and debris and they are placing the source materials in drums as requested by the disposal facility. This source material segregation and drumming activities were not conducted on this day.

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

**Date: 04/04/17**

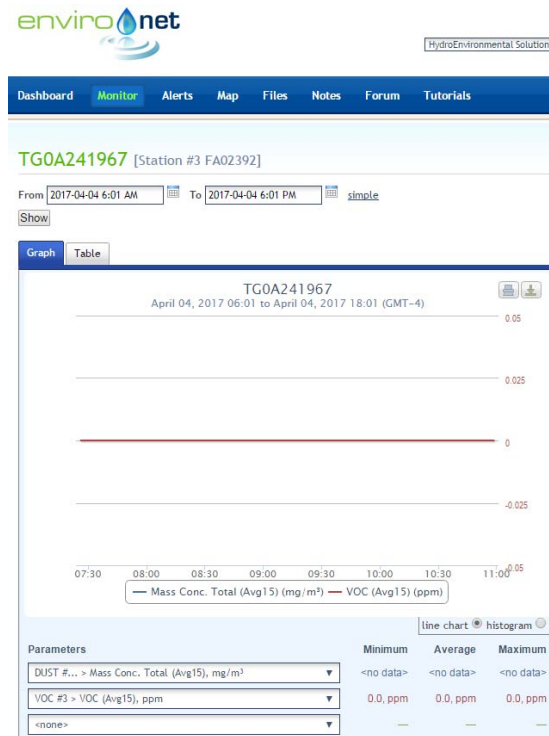
CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.06	0.03	0.00	0.09
Overall Ave.	0.00	0.04	0.01	0.00	0.05
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	-	-	0.0000	-	0.0043
Max. 15-min. Ave.	-	-	0.0177	-	0.0134
Overall Ave.	-	-	0.0113	-	0.0096

\* The Dust meters were not in operation until the rain began to slow down around 10:30 am.

**Date: 04/04/17**

CAMP Data	Add'l Upwind (Sta. 7)	Add'l Downwind (Sta. 6)	Add'l Downwind (Sta. 9)	Add'l Buildings (Sta. 8)
<b>VOCs (ppm)</b>				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.01	0.01	0.00	0.02
Overall Ave.	0.00	0.00	0.00	0.00
<b>Dust (mg/m<sup>3</sup>)</b>				
Min. 15-min. Ave.	0.0053	0.0053	0.0000	0.0000
Max. 15-min. Ave.	0.0200	0.0508	0.0326	0.0427
Overall Ave.	0.0105	0.0120	0.0159	0.0174

## Environet CAMP Data Summary Graphs



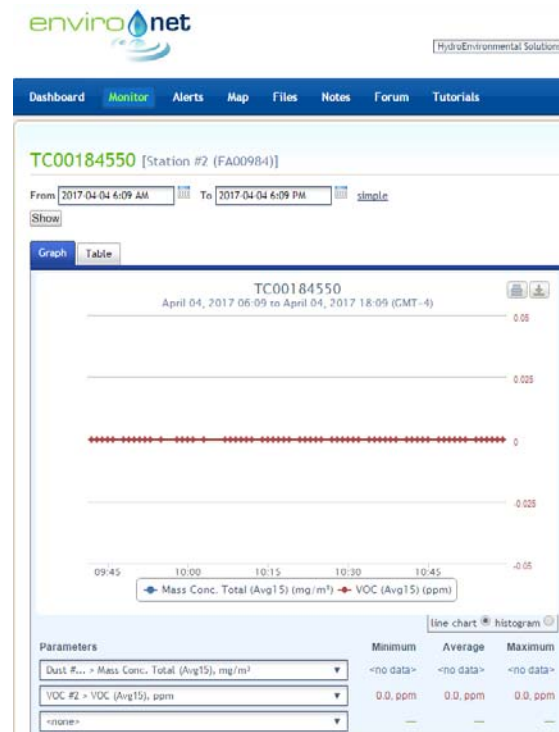
04/04/17 - Station #3 (Upwind)



04/04/17 - Station #1 (Downwind)



04/04/17 - Station #4 (Downwind)



04/04/17 - Station #2 (Near Buildings)



04/04/17 - Station #5 (Morgan Street)



04/04/17 - Station #7 (Additional Upwind)



04/04/17 - Station #6 (Additional Downwind)



04/04/17 - Station #9 (Additional Downwind)

Marbledale Road BCP Site  
Summary of CAMP Results (04/04/17)  
April 05, 2017

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04/04/17 - Station #8 (Additional Near Buildings)





# Memo

Date: April 06, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 05, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Wednesday April 05, 2017 site work. On this day HES deployed an extra CAMP station (one additional near building station) so that they would be able to effectively monitor work being conducted by the contractor on this day. The remediation contractor was segregating dirt and debris from the antiperspirant cans and jars of antiperspirant cream that has been staged in the roll-offs on site so they could be drummed for disposal as requested by the disposal facility. In addition, a subcontractor was continuing with the pilot test drilling for the micropiles in the hotel footprint area and additional soils were being removed in the area of the hotel footprint and stockpiled. The contractor re-secured the plastic sheeting in areas where required.

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.

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, the contractor continued to segregate the dirt and debris from the antiperspirant cans and jars of antiperspirant cream that were staged in the roll-offs on site so this source material can be drummed for disposal; a total of 10 drums have been filled with these source materials up to this date. In addition, a subcontractor was on site continuing with the pilot test micropile installation activities in the hotel footprint area while the contractor continued to remove soils from the Hotel footprint area to prepare this area for the micropile installation activities. Therefore, HES deployed an additional CAMP station such that they deployed one upwind station, three downwind stations, and a near building station to effectively monitor the work activities occurring at

the site on this day. 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 areas of the site where the tank removal and source material handling activities were conducted to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of five CAMP stations were deployed at the site on this day. In addition, HES has 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 five on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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. On Wednesday April 05, 2017, neither water nor foam were required for odors or vapors emanating from the work areas. There were no noticeable visible dusts released from the work activities during this monitoring event.

A NYSDEC representative was on site on Wednesday April 05, 2017 to observe the soil moving and stockpiling activities, the source material segregating and drumming activities, and the micropile pilot testing activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the eight operating CAMP stations during site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to concrete removal and loading activities.

Currently there are three full 20-yd roll-offs and one partially filled roll-off containing the source materials from the SA-3 excavation (antiperspirant spray cans and jars of antiperspirant cream). The roll-offs are covered with vinyl covers secured in place with elastic tie-down cords. As discussed previously, this week the contractor began segregating the dirt and debris from the source materials in the roll-offs and they are placing the source materials in drums as requested by the disposal facility.

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

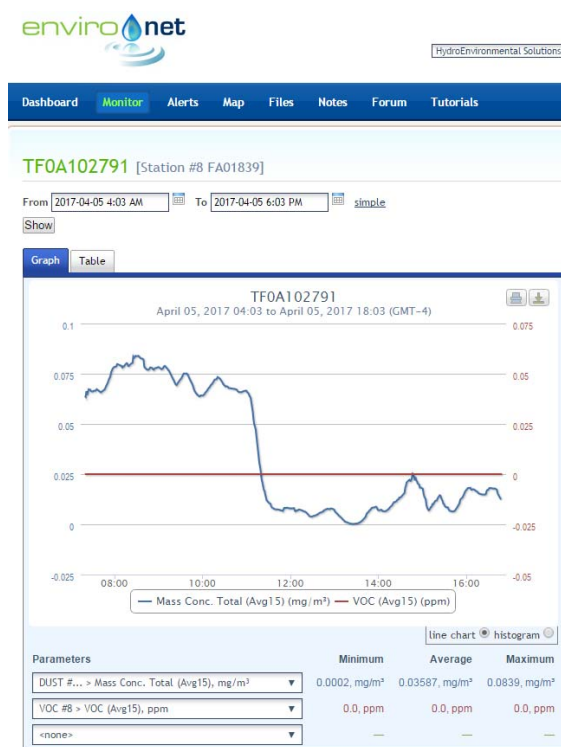
**Date: 04/05/17**

CAMP Data	Upwind (Sta. 8)	Downwind (Sta. 9)	Downwind (Sta. 4)	Buildings (Sta. 7)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.18	0.07	0.32	0.07
Overall Ave.	0.00	0.03	0.01	0.05	0.02
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0002	0.0043	0.0061	0.0005	0.0001
Max. 15-min. Ave.	0.0839	0.0920	0.1005	0.0990	0.0791
Overall Ave.	0.0359	0.0295	0.0378	0.0346	0.0304

**Date: 04/05/17**

CAMP Data	Add'l Downwind (Sta. 3)
<b>VOCs (ppm)</b>	
Min. 15-min. Ave.	0.00
Max. 15-min. Ave.	0.00
Overall Ave.	0.00
<b>Dust (mg/m<sup>3</sup>)</b>	
Min. 15-min. Ave.	0.0000
Max. 15-min. Ave.	0.0908
Overall Ave.	0.0227

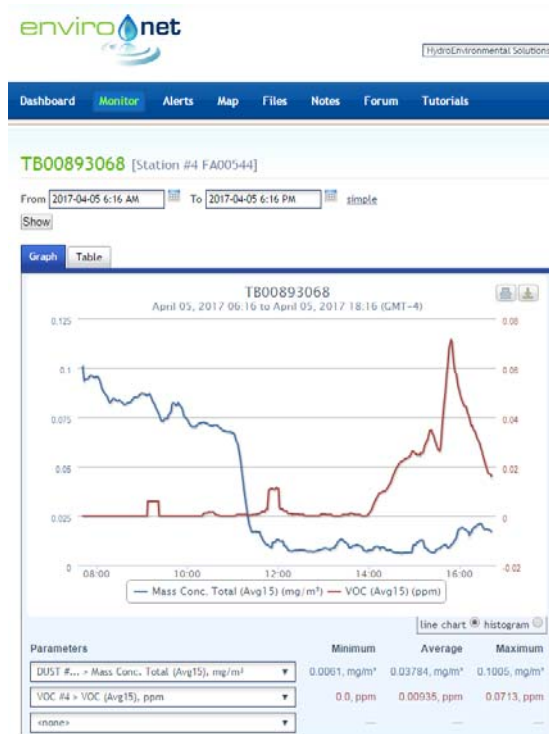
## Environet CAMP Data Summary Graphs



04/05/17 - Station #8 (Upwind)



04/05/17 - Station #9 (Downwind)



04/05/17 - Station #4 (Downwind)



04/05/17 - Station #7 (Near Buildings)



04/05/17 - Station #5 (Morgan Street)



04/05/17 - Station #3 (Add'l Downwind)



# Memo

Date: April 09, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 06, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Thursday April 06, 2017 site work. On this day HES deployed one set of CAMP stations to monitor site activities being conducted in the hotel footprint area of the site. A subcontractor for the remediation contractor continued with the pilot test drilling for the micropiles in the hotel footprint area. In addition, the contractor began installing a manhole in Marbledale Road that will be used to tie into the site at a later date. The contractor re-secured the plastic sheeting in areas where required on 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.

On this day NYSDEC completed “off-site” vapor intrusion sampling activities.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. As noted previously, a subcontractor continued with the pilot test micropile installation activities in the hotel footprint area. HES conducted the CAMP monitoring around the pilot test drilling activities. Hand-held meters were also used to monitor in the area of the test micropile borings and from the headspace in several of the on-site monitoring wells in the area of the pilot test activities. 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 area of the micropile pilot test 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 has 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 were repositioned as needed based on the areas where the contractor was working.

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. On Thursday April 06, 2017, neither water nor foam were required for odors or vapors emanating from the work areas. There were no noticeable visible dusts released from the work activities during this monitoring event. It rained on this day and the pilot test drilling activities were halted for the day at approximately 12:00 pm due to the wet conditions.

A NYSDEC representative was on site on Thursday April 06, 2017 to observe the micropile pilot testing activities, the manhole installation activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the eight operating CAMP stations during site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to concrete removal and loading activities.

Currently there are three full 20-yd roll-offs and one partially filled roll-off containing the source materials from the SA-3 excavation (antiperspirant spray cans and jars of antiperspirant cream). The roll-offs are covered with vinyl covers secured in place with elastic tie-down cords. As discussed previously, this week the contractor has began segregating the dirt and debris from the source materials in the roll-offs and they are placing the source materials in drums as requested by the disposal facility. This source material segregation work was not conducted on this day.



Below is a summary table for the 04/06/2017 CAMP monitoring event.

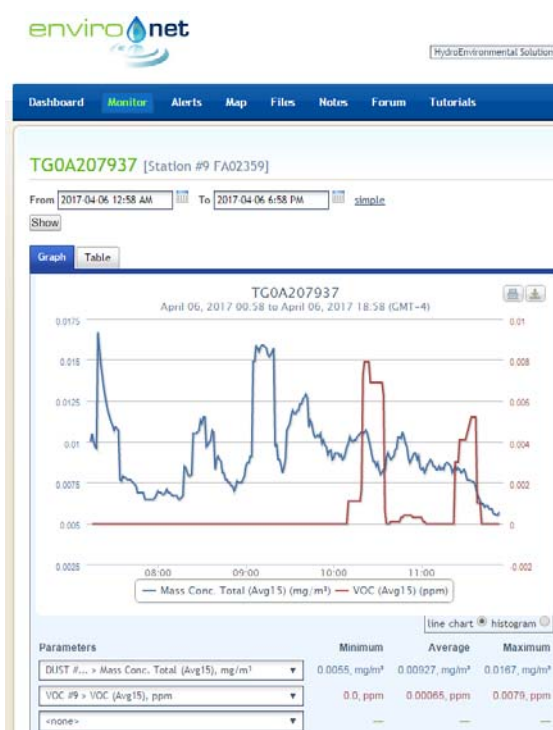
**Date: 04/06/17**

<b>CAMP Data</b>	<b>Upwind (Sta. 3)</b>	<b>Downwind (Sta. 9)</b>	<b>Downwind (Sta. 4)</b>	<b>Buildings (Sta. 8)</b>	<b>Morgan Str. (Sta. 5)</b>
<b>VOCs (ppm)</b>					
<b>Min. 15-min. Ave.</b>	0.00	0.00	0.00	0.00	0.00
<b>Max. 15-min. Ave.</b>	0.00	0.01	0.08	0.06	0.17
<b>Overall Ave.</b>	0.00	0.00	0.04	0.01	0.12
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0018	0.0055	0.0041	0.0029	0.0017
<b>Max. 15-min. Ave.</b>	0.0090	0.0167	0.0144	0.0083	0.0070
<b>Overall Ave.</b>	0.0035	0.0093	0.0072	0.0046	0.0034

## Environet CAMP Data Summary Graphs



04/06/17 - Station #3 (Upwind)



04/06/17 - Station #9 (Downwind)



04/06/17 - Station #4 (Downwind)



04/06/17 - Station #8 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (04/06/17)  
April 09, 2017

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04/06/17 - Station #5 (Morgan Street)



# Memo

Date: April 11, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 07, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Friday April 07, 2017 site work. On this day HES deployed an extra CAMP station (one additional station along Marbledale Road) so that they would be able to effectively monitor work being conducted at the site on this day. The drilling subcontractor continued with the pilot test drilling activities for the micropiles in the hotel footprint area. In addition, the remediation contractor was excavating soil from the Source Area-1B (SA-1B) location (northern portion of the SA-1 location) and loading trucks for off-site disposal.

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, a subcontractor continued with the pilot test micropile installation activities in the hotel footprint area and the remediation contractor was excavating soil from the SA-1B location. This excavation work was being conducted within 20 feet of the property line so they followed the protocol for soil disturbance work within 20 feet of the road and cordoned off the parking lane of the road in this area and positioned the additional CAMP station along the edge of Marbledale Road. HES conducted the CAMP monitoring around the pilot test drilling and the excavation activities. Hand-held meters were also used to monitor in the area of the test micropile borings and from the headspace in several of the on-site monitoring wells in the area of the pilot test activities and the excavation activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of five CAMP stations were deployed at the site on this day. In addition, HES has 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 were repositioned as needed based on the areas where the contractor was working.

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. There were noticeable fuel/gasoline odors in the area of SA-1B when they began excavation activities. The excavation area was foamed to reduce the fuel odors and the excavation area was covered with plastic while they were waiting for the next truck to arrive on site for loading. Water was not required for dust control on this day; there was no noticeable visible dust released from the work activities during this monitoring event. The site was still damp from the rain on the previous day.

A NYSDEC representative was on site on Friday April 07, 2017 to observe the micropile pilot testing activities, the SA-1B excavation activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five operating CAMP stations during site activities. The CAMP stations in the area of the SA-1B excavation revealed VOC concentrations that were higher than typically measured at the site from the noticeable fuel odors from the soils; however, none of the VOC or dust concentrations approached the action levels requiring a work stoppage or corrective measures due to concrete removal and loading activities. As noted, as a precaution, the SA-1B excavation area was foamed due to the fuel odors that were present during the excavation activities.

Currently there are three full 20-yd roll-offs and one partially filled roll-off containing the source materials from the SA-3 excavation (antiperspirant spray cans and jars of antiperspirant cream). The roll-offs are covered with vinyl covers secured in place with elastic tie-down cords. As discussed previously, this week the contractor began segregating the dirt and debris from the source materials in the roll-offs and they are placing the source materials in drums as requested by the disposal facility. This source material segregation work was not conducted on this day.

Below is a summary table for the 04/07/2017 CAMP monitoring event.

**Date: 04/07/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Marbledale Rd.. (Sta. 8)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.07	0.71	0.99	0.32
Overall Ave.	0.00	0.01	0.13	0.12	0.03
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0018	0.0003	0.0040	0.0044	0.0031
Max. 15-min. Ave.	0.0041	0.0187	0.0484	0.0271	0.0725
Overall Ave.	0.0019	0.0062	0.0148	0.0114	0.0142

**Date: 04/07/17**

CAMP Data	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>	
Min. 15-min. Ave.	0.00
Max. 15-min. Ave.	0.00
Overall Ave.	0.00
<b>Dust (mg/m<sup>3</sup>)</b>	
Min. 15-min. Ave.	0.0018
Max. 15-min. Ave.	0.0041
Overall Ave.	0.0019

## EnviroNet CAMP Data Summary Graphs



04/07/17 - Station #3 (Upwind)



04/07/17 - Station #1 (Downwind)

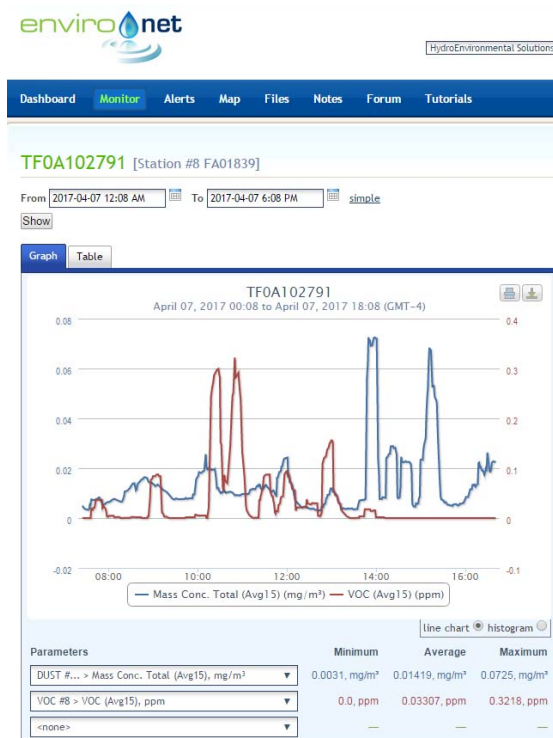


04/07/17 - Station #4 (Downwind)



04/07/17 - Station #2 (Near Buildings)





04/07/17 - Station #8 (Marbledale Rd.)



04/07/17 - Station #5 (Morgan Street)



# Memo

Date: April 14, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 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 Monday April 10, 2017 site work. On this day HES deployed two extra CAMP stations (one additional station along Marbledale Road and an additional station when stockpiling work was being conducted in the northern portion of the site) so that they would be able to effectively monitor all of the work activities being conducted at the site on this day. The drilling subcontractor continued with the pilot test drilling activities for the micropiles in the hotel footprint area. In addition, the remediation contractor continued excavating soil from the Source Area-1B (SA-1B) location (northern portion of the SA-1 location) as well as the additional portion of SA-2 and the SA-12 location, and loading trucks for off-site disposal. The contractor also conducted some soil stockpiling activities in the northern portion of 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, a subcontractor continued with the pilot test micropile installation activities in the hotel footprint area and the remediation contractor was excavating soil from the SA-1B, SA-2, and SA-12 locations as well as stockpiling some of the acceptable on-site soils. The excavation work for SA-1B was being conducted within 20 feet of the property line so the contractor followed the protocol for soil disturbance work within 20 feet of the road and cordoned off the parking lane of the road in this area and positioned an additional CAMP station along the edge of Marbledale Road in

the area of the excavation. HES conducted the CAMP monitoring around the pilot test drilling and the excavation activities. Hand-held meters were also used to monitor in the area of the test micropile borings and from the headspace in several of the on-site monitoring wells in the area of the pilot test activities and the excavation activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of six CAMP stations were deployed at the site on this day. In addition, HES has 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 six on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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. It was noted that there were some low-level fuel/gasoline odors when the excavator dug into the area where the tanks were located; however, they dissipated quickly and foaming was not required. In the afternoon the surface soils were beginning to dry out so the contractor sprayed down the site with water. There were no noticeable visible dusts released from the site during this monitoring event.

An HDR representative was on site on Monday April 10, 2017 to observe the micropile pilot testing activities, the SA-1B, SA-2, and SA-12 excavation activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the six operating CAMP stations due to site soil disturbance activities. The CAMP stations in the area of the SA-1B excavation revealed VOC concentrations that were slightly higher than typically measured at the site; this was assumed to be from the fuel odors coming from the soils when the excavator dug into the soils in the area where the tanks were located; however, none of the VOC or dust concentrations approached the action levels requiring a work stoppage or corrective measures due to soil excavation and loading activities. The soils that contained fuel odors were removed for disposal.

It was noted that the CAMP station on Marbledale Road (Sta. #8) registered an elevated 1-minute dust concentration at 8:02 am of 3.43 mg/m<sup>3</sup> when HES was adjusting the air inlet on the CAMP station. This caused a maximum 15-min average of 0.3063 mg/m<sup>3</sup> during this interval. Excavation activities had not started at this time. This 15-minute Dust exceedance was not caused by site activities. Over time particulates can accumulate in

the sample inlet and if it is bumped or the CAMP station lid is shut abruptly, some particulates can be released into the meter causing a short-term elevated reading. See the table below showing the 1-minute concentrations at Station #8 around the time of the registered elevated concentration.

<b>TF0A102791: Station #8 Marbledale Rd. Location)</b>		
<b>Date / Time</b>	<b>1-Minute Reading (mg/m<sup>3</sup>)</b>	<b>15-Minute Average (mg/m<sup>3</sup>)</b>
4/10/2017 7:52	0.044	0.0724
4/10/2017 7:53	0.043	0.0638
4/10/2017 7:54	0.043	0.0627
4/10/2017 7:55	0.04	0.0549
4/10/2017 7:56	0.038	0.0511
4/10/2017 7:57	0.041	0.0472
4/10/2017 7:58	0.045	0.0435
4/10/2017 7:59	0.083	0.046
4/10/2017 8:02	3.43	0.3057
4/10/2017 8:03	0.034	0.3044
4/10/2017 8:04	0.056	0.3058
4/10/2017 8:05	0.045	0.3063
4/10/2017 8:06	0.036	0.306
4/10/2017 8:07	0.031	0.305
4/10/2017 8:08	0.038	0.3046
4/10/2017 8:09	0.042	0.3045
4/10/2017 8:10	0.031	0.3038
4/10/2017 8:11	0.036	0.3037
4/10/2017 8:12	0.036	0.3033
4/10/2017 8:13	0.03	0.3022
4/10/2017 8:14	0.033	0.2983
4/10/2017 8:15	0.034	0.2794
4/10/2017 8:16	0.032	0.2629

Currently there are three full 20-yd roll-offs and one partially filled roll-off containing the source materials from the SA-3 excavation (antiperspirant spray cans and jars of antiperspirant cream). The roll-offs are covered with vinyl covers secured in place with elastic tie-down cords. As discussed previously, last week the contractor began segregating the dirt and debris from the source materials in the roll-offs and they are placing the source materials in drums as requested by the disposal facility. This source material segregation work was not conducted on this day.

Below is a summary table for the 04/10/2017 CAMP monitoring event.

**Date: 04/10/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Marbledale Rd. (Sta. 8)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.05	0.12	0.08	0.19
Overall Ave.	0.00	0.01	0.08	0.02	0.03
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0101	0.0000	0.0130	0.0155
Max. 15-min. Ave.	0.0579	0.0633	0.0623	0.08770	0.3063*
Overall Ave.	0.0287	0.0239	0.0322	0.0288	0.0429

\* The elevated dust concentration at Station #8 was caused when the meter inlet was adjusted causing an elevated 1-minute reading.

**Date: 04/10/17**

CAMP Data	Add'l Upwind (Sta. 9)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>		
Min. 15-min. Ave.	0.00	0.00
Max. 15-min. Ave.	0.13	0.05
Overall Ave.	0.06	0.02
<b>Dust (mg/m<sup>3</sup>)</b>		
Min. 15-min. Ave.	0.0285	0.0097
Max. 15-min. Ave.	0.1290*	0.0493
Overall Ave.	0.0409	0.0234

\* The elevated dust concentration at Station was caused when the meter was first started up at 1:55 pm. The initial 1-minute reading was 0.129 mg/m<sup>3</sup>; the following 1-minute readings were down in the 0.03 to 0.04 mg/m<sup>3</sup> range which were typical for that day.

## Environet CAMP Data Summary Graphs



04/10/17 - Station #3 (Upwind)



04/10/17 - Station #1 (Downwind)



04/10/17 - Station #4 (Downwind)



04/10/17 - Station #2 (Near Buildings)

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04/10/17 - Station #8 (Marbledale Rd.)



04/10/17 - Station #9 (Add'l Upwind)



04/10/17 - Station #5 (Morgan Street)





# Memo

Date: April 14, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 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 Tuesday April 11, 2017 site work. On this day HES deployed two sets of CAMP stations (one additional upwind station, two additional downwind stations, and 1 additional near building station) so that they would be able to effectively monitor work activities being conducted by the contractor at the northern area and southern area of the site simultaneously. The drilling subcontractor continued with the pilot test drilling activities for the micropiles in the hotel footprint area. In addition, the remediation contractor continued excavating soil from the Source Area-1B (SA-1B) location (northern portion of the SA-1 location). The contractor also conducted backfilling operations in the SA-1B and the SA-2 excavation areas and they also conducted some soil moving and stockpiling activities in the northern portion of 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, a subcontractor continued with the pilot test micropile installation activities in the hotel footprint area and the remediation contractor was excavating soil from the SA-1B area and conducting backfilling activities in the SA-1B and SA-2 excavation areas as well as stockpiling and moving some of the acceptable on-site soils on the northern portion of the site. Due to the residual fuel odors in the soils in the area of the USTs that were removed, the remediation contractor, with the guidance of HES, installed some perforated piping bedded in gravel and a geotextile fabric covering (

20 ft x 10 ft area) that will be able to be incorporated into the design for the SVE system that is to be installed at the site to remove any residual fuel vapors from this area. After the piping and gravel and geotextile fabric was installed, the area was backfilled with soil. HES conducted the CAMP monitoring around the pilot test drilling and the excavation activities. Hand-held meters were also used to monitor in the area of the test micropile borings and from the headspace in several of the on-site monitoring wells and a SVE test well in the area of the pilot test activities and HES monitored the excavation activities as well. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of eight CAMP stations were deployed at the site on this day. In addition, HES has 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 repositioned as needed based on the areas where the contractor was working.

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. It was noted that there were some low-level fuel/gasoline odors when the excavator dug into the area where the tanks were located; however, they dissipated quickly and foaming was not required. There were no noticeable visible dusts leaving the site during this monitoring event.

An HDR representative was on site on Tuesday April 11, 2017 to observe the micropile pilot testing activities, the SA-1B, excavation activities, SA-1B, and SA-2 backfilling activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the eight operating CAMP stations due to site soil disturbance activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to concrete removal and loading activities.

Currently there are three full 20-yd roll-offs and one partially filled roll-off containing the source materials from the SA-3 excavation (antiperspirant spray cans and jars of antiperspirant cream). The roll-offs are covered with vinyl covers secured in place with elastic tie-down cords. As discussed previously, last week the contractor began segregating the dirt and debris from the source materials in the roll-offs and they are placing the source materials in drums as requested by the disposal facility. The source material segregation and drumming activities were not conducted on this day.

Below is a summary table for the 04/11/2017 CAMP monitoring event.

**Date: 04/11/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.09	0.19	0.03	0.10
Overall Ave.	0.00	0.01	0.12	0.01	0.02
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0173	0.0199	0.0233	0.0174	0.0191
Max. 15-min. Ave.	0.0429	0.0413	0.0451	0.0315	0.0392
Overall Ave.	0.0272	0.0262	0.0319	0.0271	0.0257

**Date: 04/11/17**

CAMP Data *	Add'l Upwind (Sta. 8)	Add'l Downwind (Sta. 6)	Add'l Downwind (Sta. 9)	Add'l Buildings (Sta. 7)
<b>VOCs (ppm)</b>				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.74	0.34	0.02
Overall Ave.	0.00	0.12	0.19	0.00
<b>Dust (mg/m<sup>3</sup>)</b>				
Min. 15-min. Ave.	0.0237	0.0187	0.0000	0.0219
Max. 15-min. Ave.	0.0579	0.0420	0.0369	0.0906
Overall Ave.	0.0327	0.0250	0.0111	0.0456

\* The second set of CAMP stations were positioned in the northern section of the site during soil moving and stockpiling activities.

## Environet CAMP Data Summary Graphs



04/11/17 - Station #3 (Upwind)



04/11/17 - Station #1 (Downwind)



04/11/17 - Station #4 (Downwind)



04/11/17 - Station #2 (Near Buildings)

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04/10/17 - Station #5 (Morgan Street)



04/11/17 - Station #8 (Add'l Upwind)



04/11/17 - Station #6 (Add'l Downwind)



04/11/17 - Station #9 (Add'l Downwind)

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04/11/17 - Station #7 (Add'l Near Buildings)





## Memo

Date: April 14, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 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 Wednesday April 12, 2017 site work. On this day HES deployed two additional CAMP stations (one additional upwind station and an additional downwind station) so that they would be able to effectively monitor work activities being conducted by the contractor at the northern area and southern area of the site simultaneously. The drilling subcontractor (EBC) continued with the pilot test drilling activities for the micropiles in the hotel footprint area; on this day EBC was grouting the test borings (micropiles) and preparing for the load testing of the micropiles. Another drilling subcontractor (SoilTesting) began to conduct drilling on the hotel pad area as part of the required micropile load testing activities. SiteWorks resumed the segregation of the dirt and debris from the source materials in the roll-offs and placing the source materials in drums as requested by the disposal facility on this day. In addition, the remediation contractor excavated the area in the northern portion of the site for the installation of a permanent stormwater detention basin for the site as well as grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future. SiteWorks also conducted some soil moving and stockpiling activities in the northern portion of the site and backfilled some of the SA-1 area to the required grade.

It should be noted that SiteWorks spent some time out on Marbledale Road trying to fix/adjust the road plates in the area of the new manhole so it is not so loud when vehicles run over it.

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 continued with the pilot test micropile grouting and load testing preparation activities in the hotel footprint area and SoilTesting was conducting some borings in this area as part of the load testing procedures. SiteWorks was excavating for the detention basin in the northern portion of the site and also segregating and drumming the source materials from the SA-3 area. SiteWorks also conducted grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future as well as some SA-1B backfilling activities. Since there were some soil disturbance activities at SA-1B within 20 feet of the property line, the contractor followed the protocol for soil disturbance work within 20 feet of the road and cordoned off the parking lane of the road in this area and positioned a CAMP station (Station #9) along the edge of Marbledale Road in the area of the backfilling activities while working in this area. HES conducted the CAMP monitoring around the hotel footprint drilling and grading activities and the excavation activities in the northern portion of the site. Hand-held meters were also used to monitor in the area of the hotel borings and from the headspace in several of the on-site monitoring wells and a SVE test well in the area of the pilot test activities and HES monitored the excavation activities as well. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of six CAMP stations were deployed at the site on this day. In addition, HES has 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 six on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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 were no noticeable visible dusts leaving the site during this monitoring event.

A NYSDEC representative was on site on Wednesday April 12, 2017 to observe the micropile pilot testing activities, the, drainage basing structure excavation activities, backfilling and grading activities, Source material segregation and drumming activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the six operating CAMP

stations due to site soil disturbance activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to concrete removal and loading activities.

Currently there are three full 20-yd roll-offs and one partially filled roll-off containing the source materials from the SA-3 excavation (antiperspirant spray cans and jars of antiperspirant cream). The roll-offs are covered with vinyl covers secured in place with elastic tie-down cords. As discussed previously, last week the contractor began segregating the dirt and debris from the source materials in the roll-offs and they are placing the source materials in drums as requested by the disposal facility. The contractor resumed source material segregation and drumming activities on this day.

Below is a summary table for the 04/12/2017 CAMP monitoring event.

**Date: 04/12/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Marbledale Rd./Add'l Downwind (Sta. 9)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.03	0.55	0.00	0.21
Overall Ave.	0.00	0.00	0.08	0.00	0.10
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0000	0.0149	0.0120	0.0015
Max. 15-min. Ave.	0.0531	0.0546	0.0596	0.0580	0.0810
Overall Ave.	0.0196	0.0286	0.0310	0.0283	0.0183

**Date: 04/12/17**

CAMP Data	Morgan Str. (Sta. 5)	Add'l Upwind (Sta. 7)
<b>VOCs (ppm)</b>		
Min. 15-min. Ave.	0.00	0.00
Max. 15-min. Ave.	0.09	0.10
Overall Ave.	0.01	0.01
<b>Dust (mg/m<sup>3</sup>)</b>		
Min. 15-min. Ave.	0.0000	0.0138
Max. 15-min. Ave.	0.0334	0.0330
Overall Ave.	0.0112	0.0248

It should be noted that the Dust monitor in Station #7 lost battery power and shut down around 12:45 pm.

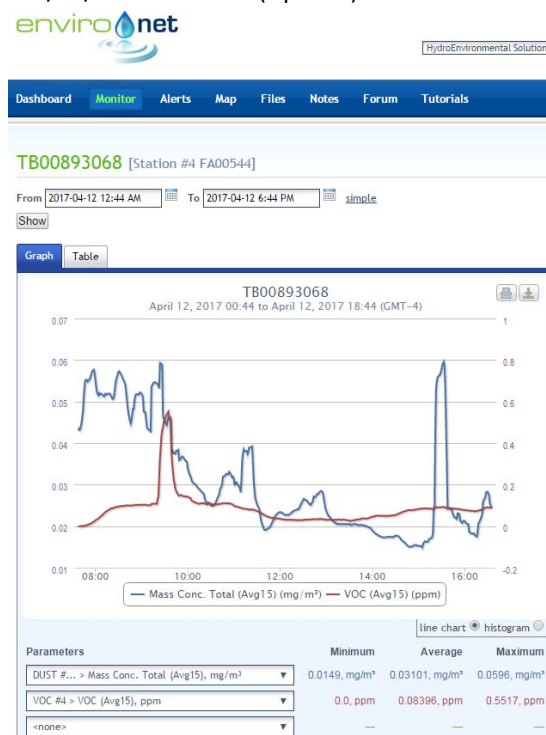
## Environet CAMP Data Summary Graphs



04/12/17 - Station #3 (Upwind)



04/12/17 - Station #1 (Downwind)



04/12/17 - Station #4 (Downwind)



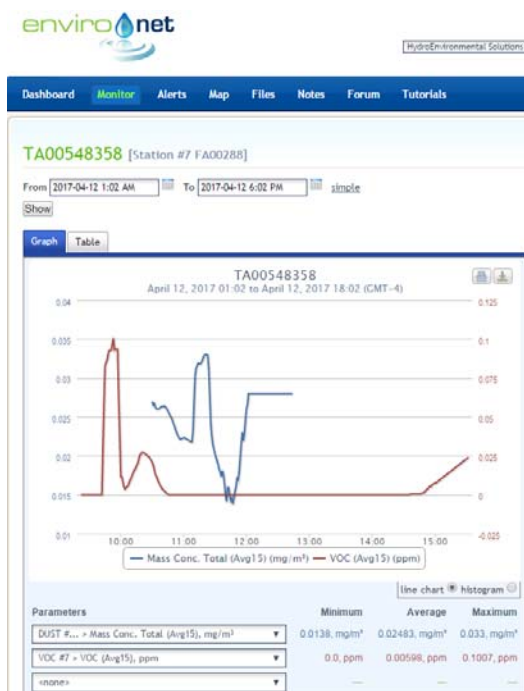
04/12/17 - Station #2 (Near Buildings)



04/12/17 - Station #9 (Marbledale Rd./Add'l Downwind)



04/12/17 - Station #5 (Morgan Street)



04/12/17 - Station #7 (Add'l Upwind)



## Memo

Date: April 15, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 13, 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 April 13, 2017 site work. On this day HES deployed two additional CAMP stations (one additional upwind station and an additional downwind station) so that they would be able to effectively monitor work activities being conducted by the contractor at the northern area and southern area of the site simultaneously. The drilling subcontractor (EBC) continued with the micropile pilot test activities in the hotel footprint area; on this day EBC was preparing for the load testing of the micropiles. Another drilling subcontractor (SoilTesting) continued to conduct drilling activities on the hotel pad area as part of the required micropile load testing activities. SiteWorks continued with the segregation of the dirt and debris from the source materials in the roll-offs and placing the source materials in drums as requested by the disposal facility on this day. In addition, the remediation contractor conducted grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future. SiteWorks also conducted some soil moving and stockpiling activities in the northern portion of the site as well as 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 continued with the pilot test micropile load testing preparation activities in the hotel footprint area and SoilTesting was conducting some borings in this area as part of the load testing procedures. SiteWorks was segregating and drumming the source materials from the SA-3 area. SiteWorks also conducted grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future. During grading activities west of the SA-1B area, the contractor encountered soils with fuel/gasoline odors (likely related to the fuel tanks). These soils were segregated and staged on plastic and covered; these soils that are impacted with fuel oil/gasoline will be removed from the site for disposal. SiteWorks also stockpiled some acceptable site soils for reuse at the site in the northern portion of the site that were generated during grading activities in the hotel area.

HES conducted the CAMP monitoring around the hotel footprint drilling and grading activities. Hand-held meters were also used to monitor in the area of the hotel borings and from the headspace in several of the on-site monitoring wells and a SVE test well in the area of the pilot test activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of six CAMP stations were deployed at the site on this day. In addition, HES has 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 six on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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. In the afternoon, the surface soils were beginning to dry out where the vehicles had been going back and forth while stockpiling soils in the northern portion of the site; therefore, the contractor sprayed down this "haul road area with water. There were no noticeable visible dusts leaving the site during this monitoring event.

A NYSDEC representative was on site on Thursday April 13, 2017 to observe the micropile pilot testing preparation activities, the grading and stockpiling activities, source



material segregation and drumming activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the six operating CAMP stations due to site soil disturbance activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to concrete removal and loading activities.

The contractor continued with the segregation of the source materials (antiperspirant spray cans and jars of antiperspirant cream) from the dirt and debris that were in the roll-offs and they are placing the source materials in drums as requested by the disposal facility.

Below is a summary table for the 04/13/2017 CAMP monitoring event.

**Date: 04/13/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.01	0.05	0.11	0.05	0.19
Overall Ave.	0.00	0.00	0.06	0.02	0.06
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0011	0.0055	0.0000	0.0019
Max. 15-min. Ave.	0.0162	0.0367	0.0187	0.0179	0.0140
Overall Ave.	0.0049	0.0092	0.0111	0.0095	0.0061

**Date: 04/13/17**

CAMP Data	Add'l Upwind (Sta. 7)	Add'l Downwind (Sta. 9)
<b>VOCs (ppm)</b>		
Min. 15-min. Ave.	0.00	0.00
Max. 15-min. Ave.	0.18	0.18
Overall Ave.	0.05	0.06
<b>Dust (mg/m<sup>3</sup>)</b>		
Min. 15-min. Ave.	0.0020	0.0000
Max. 15-min. Ave.	0.0301	0.0213
Overall Ave.	0.0074	0.0059

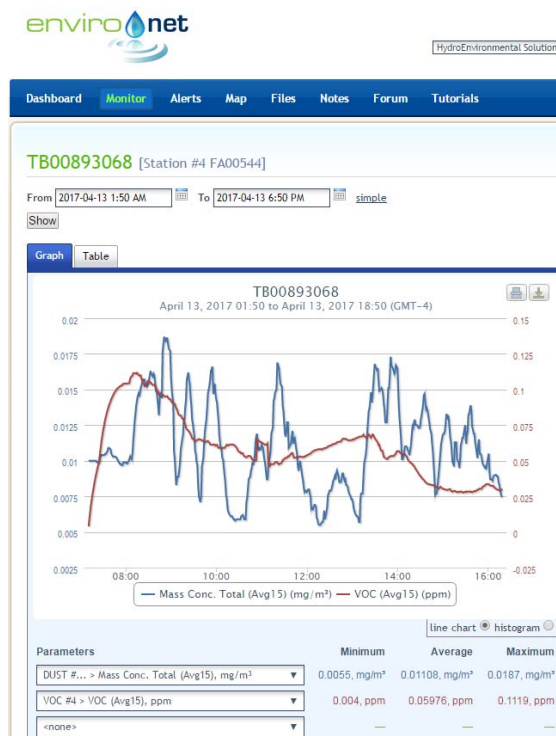
## Environet CAMP Data Summary Graphs



04/13/17 - Station #3 (Upwind)



04/13/17 - Station #1 (Downwind)



04/13/17 - Station #4 (Downwind)



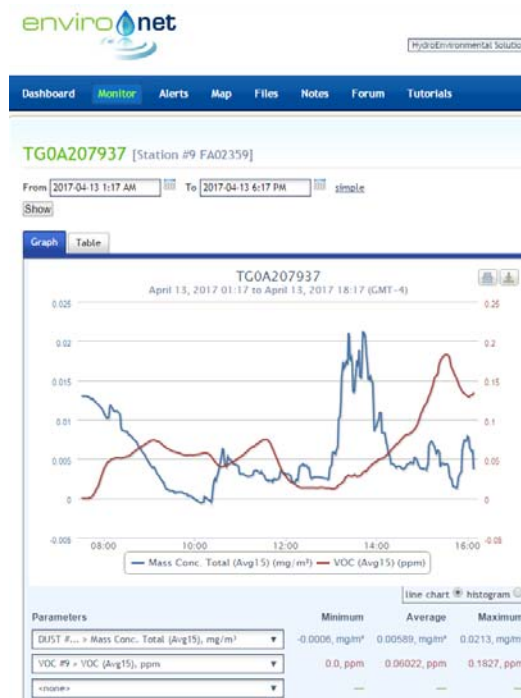
04/13/17 - Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (04/13/17)  
April 15, 2017

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04/13/17 - Station #7 (Add'l Upwind)



04/13/17 - Station #9 (Add'l Downwind)



04/13/17- Station #5 (Morgan Street)



## Memo

Date: April 17, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 14, 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 April 14, 2017 site work. On this day HES deployed two additional CAMP stations (one additional upwind station and an additional downwind station) so that they would be able to effectively monitor work activities being conducted by the contractor at the northern area and southern area of the site simultaneously. A drilling subcontractor (SoilTesting) continued to conduct drilling activities on the hotel pad area as part of the required micropile load testing activities. SiteWorks continued grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future and they moved some of the soils they removed and stockpiled this soil in the northern portion of the site for reuse in the future. 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 was conducting some borings in this area as part of the load testing procedures. SiteWorks conducted grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future and stockpiled this soil in the northern portion of the site for future reuse. During grading activities they encountered some ashy material and debris east of the hotel footprint area; this material was segregated and staged on plastic and covered and will be removed from the site for disposal.

HES conducted the CAMP monitoring around the hotel footprint drilling and hotel area grading activities. Hand-held meters were also used to monitor in the area of the hotel borings and from the headspace in several of the on-site monitoring wells and a SVE test well in the area of the pilot test activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of six CAMP stations were deployed at the site on this day. On this day HES positioned an additional CAMP station upwind and an additional CAMP station downwind of the soil stockpiling area in the northern portion of the site. In addition, HES has 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 six on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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. In the afternoon, the surface soils were beginning to dry out where the vehicles had been going back and forth while stockpiling soils in the northern portion of the site; therefore, the contractor sprayed down this "haul road area" with water to minimize the release of dust into the air. There were no noticeable visible dusts leaving the site during this monitoring event.

A NYSDEC representative was on site on Friday April 14, 2017 to observe the drilling activities in the hotel footprint area, the grading and stockpiling activities, and monitoring activities in and around the work area. During this monitoring event there were no

exceedances of the CAMP alert triggers at any of the six operating CAMP stations on-site due to site soil disturbance activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to site work activities.

The contractor completed the segregation of the source materials (antiperspirant spray cans and jars of antiperspirant cream) from the dirt and debris that were in the roll-offs on the previous day; the source materials were placed in drums as requested by the disposal facility. The contractor is making arrangements for the drums to be picked up for disposal.

Below is a summary table for the 04/14/2017 CAMP monitoring event.

**Date: 04/14/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.02	0.00
Max. 15-min. Ave.	0.00	0.04	0.02	0.09	0.16
Overall Ave.	0.00	0.00	0.01	0.04	0.05
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0000	0.0001	0.0036	0.0000
Max. 15-min. Ave.	0.0103	0.0353	0.0062	0.0327	0.0070
Overall Ave.	0.0036	0.0108	0.0203	0.0159	0.0001

**Date: 04/14/17**

CAMP Data	Add'l Upwind (Sta. 7)	Add'l Downwind (Sta. 9)
<b>VOCs (ppm)</b>		
Min. 15-min. Ave.	0.00	0.00
Max. 15-min. Ave.	0.08	0.12
Overall Ave.	0.02	0.05
<b>Dust (mg/m<sup>3</sup>)</b>		
Min. 15-min. Ave.	0.0021	0.0000
Max. 15-min. Ave.	0.0215	0.0319
Overall Ave.	0.0045	0.0071



## Environet CAMP Data Summary Graphs



04/14/17 - Station #3 (Upwind)



04/14/17 - Station #1 (Downwind)



04/14/17 - Station #4 (Downwind)



04/14/17 - Station #2 (Near Buildings)



Marbledale Road BCP Site  
Summary of CAMP Results (04/14/17)  
April 17, 2017

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04/14/17 - Station #7 (Add'l Upwind)



04/14/17 - Station #9 (Add'l Downwind)



04/14/17- Station #5 (Morgan Street)



## Memo

Date: April 18, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 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 Monday April 17, 2017 site work. On this day HES deployed an additional CAMP station (one additional downwind station) so that they would be able to effectively monitor work activities being conducted by the contractor at the northern area and southern area of the site simultaneously. The micropile drilling subcontractor (EBC) initiated the load testing procedures for the micropiles they installed. SiteWorks continued grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future and they moved some of the soils they removed and stockpiled this soil in the northern portion of the site for reuse in the future. 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 was conducting micropile load testing procedures and SiteWorks conducted grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future and stockpiled this soil in the northern portion of the site for future reuse.

HES conducted the CAMP monitoring around the hotel footprint drilling and hotel area grading activities as well as the soil stockpiling activities in the northern portion of the site.

Hand-held meters were also used to monitor in the area of the hotel footprint and grading activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of five CAMP stations were deployed at the site on this day. On this day HES positioned an additional CAMP station north (downwind) of the soil stockpiling area in the northern portion of the site. In addition, HES has 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 five on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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 were beginning to dry out where the vehicles were going back and forth while stockpiling soils in the northern portion of the site; therefore, the contractor sprayed down this "haul road area" with water several times during the day to minimize the release of dust into the air. There was no noticeable visible dust leaving the site during this monitoring event.

An HDR representative was on site on Monday April 17, 2017 to observe the load testing activities in the hotel footprint area, the grading and stockpiling activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five operating CAMP stations on-site due to site activities with the exception of a dust exceedance at Station #2. SiteWorks was cutting a concrete culvert pipe, to be used for the connection from the new manhole in Marbledale Road to the site. The exhaust and dust from the concrete saw was inadvertently aimed directly at Station #2 which was next to the concrete cutting activities. HES received a dust alert and immediately went to determine the cause of the dust exceedance at Station #2. HES moved the CAMP station a few feet away from the concrete cutting activities and out of the direct line from the discharge and the dust concentrations went down immediately.

CAMP Station #2, located in the area of the southern entrance to the site, registered an elevated 1-minute dust concentration at 9:26 am of  $2.42 \text{ mg/m}^3$  when the concrete pipe was being cut adjacent to the CAMP station. This caused a maximum 15-min average of  $0.2019 \text{ mg/m}^3$  during this interval. This 15-minute dust exceedance was caused by site-related activities (concrete cutting); however, it was not caused by soil disturbance

activities. It was noted that the dust from the cutting activities was not leaving the site. See the table below showing the 1-minute dust concentrations at Station #2 around the time of the registered elevated dust concentration. After the CAMP station was move a few feet away and out of the direct line of the discharge from the saw, the dust concentrations measured at Station #2 dropped down quickly.

TC00184550: Station #2 (Near Building Location)		
Date / Time	1-Minute Reading (mg/m <sup>3</sup> )	15-Minute Average (mg/m <sup>3</sup> )
4/17/2017 9:15	0.008	0.0117
4/17/2017 9:16	0.007	0.0115
4/17/2017 9:17	0.009	0.0112
4/17/2017 9:18	0.008	0.011
4/17/2017 9:19	0.008	0.0109
4/17/2017 9:20	0.008	0.0108
4/17/2017 9:21	0.008	0.0107
4/17/2017 9:22	0.009	0.0107
4/17/2017 9:23	0.199	0.0233
4/17/2017 9:24	0.011	0.0221
4/17/2017 9:25	0.011	0.0221
4/17/2017 9:26	2.42	0.1827
4/17/2017 9:27	0.11	0.1895
4/17/2017 9:28	0.042	0.1915
4/17/2017 9:29	0.022	0.192
4/17/2017 9:30	0.033	0.1937
4/17/2017 9:31	0.025	0.1949
4/17/2017 9:32	0.023	0.1958
4/17/2017 9:33	0.032	0.1974
4/17/2017 9:34	0.027	0.1987
4/17/2017 9:35	0.032	0.2003
4/17/2017 9:36	0.015	0.2007
4/17/2017 9:37	0.026	0.2019
4/17/2017 9:38	0.027	0.1904
4/17/2017 9:39	0.012	0.1905
4/17/2017 9:40	0.008	0.1903
4/17/2017 9:41	0.008	0.0295
4/17/2017 9:42	0.008	0.0227
4/17/2017 9:43	0.008	0.0204
4/17/2017 9:44	0.011	0.0197
4/17/2017 9:45	0.008	0.018
4/17/2017 9:46	0.008	0.0169

For the remainder of the monitoring event, none of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to site work activities.

The contractor completed the segregation of the source materials (antiperspirant spray cans and jars of antiperspirant cream) from the dirt and debris that were in the roll-offs during the previous week; the source materials were placed in drums as requested by the disposal facility. The contractor is making arrangements for the drums to be picked up for disposal.

Below is a summary table for the 04/17/2017 CAMP monitoring event.

**Date: 04/17/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.01	0.12	0.06	0.01
Overall Ave.	0.00	0.00	0.06	0.02	0.00
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0013	0.0000	0.0045	0.0003
Max. 15-min. Ave.	0.0170	0.0189	0.0349	0.2019 *	0.0193
Overall Ave.	0.0041	0.0094	0.0097	0.0216	0.0050

**Date: 04/17/17**

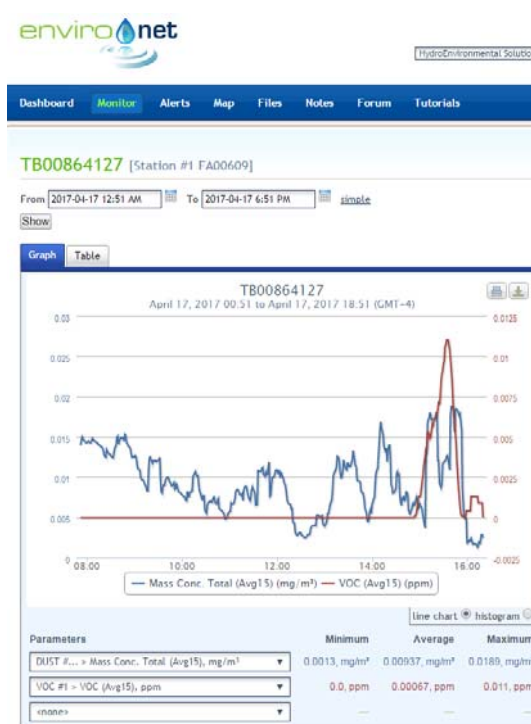
CAMP Data	Add'l Downwind (Sta. 6)
<b>VOCs (ppm)</b>	
Min. 15-min. Ave.	0.00
Max. 15-min. Ave.	0.12
Overall Ave.	0.04
<b>Dust (mg/m<sup>3</sup>)</b>	
Min. 15-min. Ave.	0.0000
Max. 15-min. Ave.	0.0446
Overall Ave.	0.0081

\* The Station #2 Dust exceedance was caused by the contractor cutting a concrete pipe in the immediate vicinity of the CAMP station.

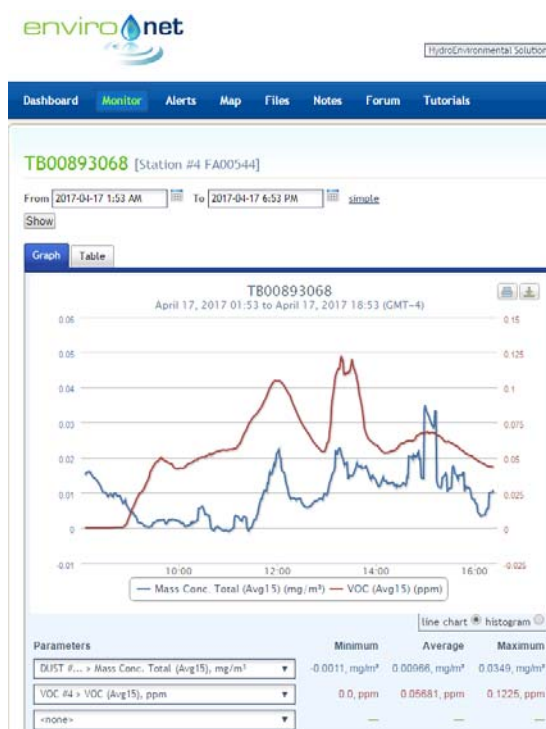
## Environet CAMP Data Summary Graphs



04/17/17 - Station #3 (Upwind)



04/17/17 - Station #1 (Downwind)



04/17/17 - Station #4 (Downwind)



04/17/17 - Station #2 (Near Buildings)



04/17/17 - Station #6 (Add'l Downwind)



04/17/17- Station #5 (Morgan Street)





# Memo

Date: April 20, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 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 Tuesday April 18, 2017 site work. On this day HES deployed three additional CAMP stations (one additional upwind station, two additional downwind stations, and one additional near building station) so that they would be able to effectively monitor work activities being conducted by the contractor at the northern area and southern area of the site simultaneously. The micropile drilling subcontractor (EBC) continued with the load testing procedures for the micropiles they installed. SiteWorks continued grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future and they moved some of the soils they removed and stockpiled this soil in the northern portion of the site for reuse in the future. In addition, 12 trucks were loaded out for disposal of unsuitable soils encountered recently. This unsuitable soil had been staged on plastic and covered with plastic until the trucks could be ordered. 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 was conducting micropile load testing procedures and SiteWorks conducted grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future and stockpiled this soil in the northern portion of the site for future reuse.

HES conducted the CAMP monitoring around the hotel footprint drilling and hotel area grading activities as well as the soil stockpiling activities in the northern portion of the site. Hand-held meters were also used to monitor in the area of the hotel footprint and grading activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of eight CAMP stations were deployed at the site on this day. On this day HES positioned an additional set of CAMP stations in the northern portion of the site to monitor the stockpiling and trucking activities. The other set of CAMP stations were positioned in the southern portion of the site surrounding the hotel pad area activities. In addition, HES has 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 repositioned as needed based on the areas where the contractor was working.

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 were beginning to dry out where the vehicles were going back and forth while stockpiling soils in the northern portion of the site; therefore, the contractor sprayed down this "haul road area" with water as needed during the day to minimize the release of dust into the air. There was no noticeable visible dust leaving the site during this monitoring event. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to site work activities.

At 11:00 am Station #6 stopped operating; it was removed to be charged and Station # 7 became the upwind station and Station #9 was moved to the downwind location. A NYSDEC representative was on site on Tuesday April 18, 2017 to observe the load testing activities in the hotel footprint area, the grading and stockpiling activities, soil loading and hauling activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the eight operating CAMP stations on-site due to site activities.

The contractor completed the segregation of the source materials (antiperspirant spray cans and jars of antiperspirant cream) from the dirt and debris that were in the roll-offs during the previous week; the source materials were placed in drums as requested by the

disposal facility. The contractor is making arrangements for the drums to be picked up for disposal.

Below is a summary table for the 04/18/2017 CAMP monitoring event.

**Date: 04/18/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.00	0.14	0.04	0.21
Overall Ave.	0.00	0.00	0.07	0.01	0.06
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0000	0.0000	0.0057	0.0050
Max. 15-min. Ave.	0.0380	0.0183	0.0178	0.0215	0.0117
Overall Ave.	0.0059	0.0076	0.0051	0.0121	0.0072

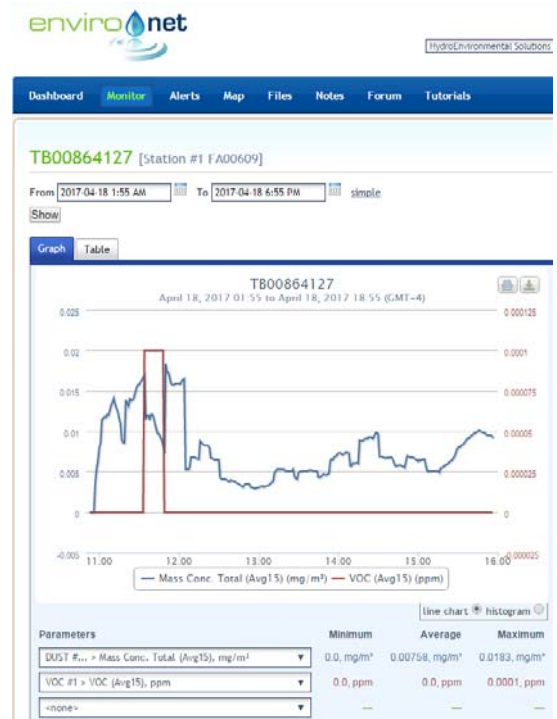
**Date: 04/18/17**

CAMP Data	Add'l Upwind / Downwind (Sta. 9)	Add'l Downwind (Sta. 6)	Add'l Downwind (Sta. 7)	Add'l Buildings (Sta. 8)
<b>VOCs (ppm)</b>				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.20	0.00	0.23	0.04
Overall Ave.	0.06	0.00	0.13	0.00
<b>Dust (mg/m<sup>3</sup>)</b>				
Min. 15-min. Ave.	0.0000	0.0000	0.0063	0.0000
Max. 15-min. Ave.	0.0222	0.0094	0.0458	0.0638
Overall Ave.	0.0054	0.0035	0.0110	0.0125

## Environet CAMP Data Summary Graphs



04/18/17 - Station #3 (Upwind)



04/18/17 - Station #1 (Downwind)



04/18/17 - Station #4 (Downwind)



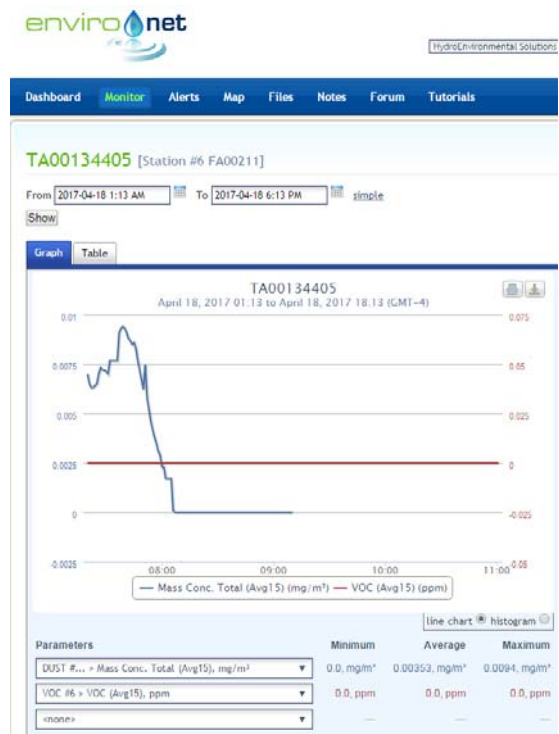
04/18/17 - Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (04/18/17)  
April 20, 2017

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04/18/17 - Station #9 (Add'l Upwind)



04/18/17 - Station #6 (Add'l Downwind)



04/18/17 - Station #7 (Add'l Downwind)



04/18/17- Station #8 (Add'l Near Building)

Marbledale Road BCP Site  
Summary of CAMP Results (04/18/17)  
April 20, 2017

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04/18/17- Station #5 (Morgan Street)



# Memo

Date: April 24, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 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 Wednesday April 19, 2017 site work. On this day HES deployed an additional CAMP station (one additional downwind station) so that they would be able to effectively monitor work activities being conducted by the contractor at the northern and southern areas of the site. The micropile drilling subcontractor (EBC) continued with the load testing procedures for the micropiles they installed (non-intrusive work). SiteWorks continued grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future and they moved some of the soils they removed and stockpiled this soil in the northern portion of the site for reuse in the future. In addition, SiteWorks also resumed excavation activities at the SA-4 area, 6 trucks were loaded out for disposal of the soils from SA-4. The SA-4 excavation was not completed on this day. 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. During the middle of the day there was a wind direction shift such that the station locations were adjusted to account for the wind direction change.

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 was conducting micropile load testing procedures and SiteWorks conducted SA-4 excavation activities and they also conducted grading activities to get to the appropriate elevations in the hotel area for the RIC activities



in the future and stockpiled this soil in the northern portion of the site for future reuse as well as some backfilling activities in the southeast corner area of the site.

HES conducted the CAMP monitoring around the SA-4 excavation and truck loading activities, the hotel footprint drilling and hotel area grading activities, as well as the soil stockpiling activities in the northern portion of the site. Hand-held meters were also used to monitor in the area of the SA-4 excavation activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of five CAMP stations were deployed at the site on this day. On this day HES positioned an additional CAMP station (Station #8) north (downwind) of the soil stockpiling area in the northern portion of the site when they were excavating at SA-4 and also stockpiling soils from the grading activities. This station was turned off after these activities were completed. The other four CAMP stations were positioned around the SA-4 location when they were excavating and then they were moved to the southern portion of the site when they were grading in the southeastern portion of the site. Station #8 was turned back on in the afternoon and positioned with the other stations when the contractor was working in the southern portion of the site, grading and backfilling. In addition, HES has 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 five on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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 were beginning to dry out where the vehicles were going back and forth while stockpiling soils in the northern portion of the site; therefore, the contractor sprayed down this "haul road area" with water as needed during the day to minimize the release of dust into the air. There was no noticeable visible dust leaving the site during this monitoring event. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to site work activities.

CAMP Station #8, located in the vicinity of the SA-3 excavation area, registered an elevated 1-minute dust concentration at 3:47 pm of  $1.62 \text{ mg/m}^3$  when the excavator was removing soils as part of the grading activities in the immediate vicinity of the CAMP station. This caused a maximum 15-min average of  $0.1762 \text{ mg/m}^3$  during this interval.

HES went over to Station # 8 to investigate the cause of the dust alert that was received. It could not be determined if the elevated dust reading was caused by diesel exhausts or dust released from the digging. At this time excavator work in this area was completed for the day. HES indicated they did not observe dust leaving the site from this activity. See the table below showing the 1-minute dust concentrations at Station #8 around the time of the registered elevated dust concentration.

TF0A102791: Station #8 (Add'l Downwind Location)		
Date / Time	1-Minute Reading (mg/m <sup>3</sup> )	15-Minute Average (mg/m <sup>3</sup> )
4/19/2017 15:44	0.026	0.0569
4/19/2017 15:45	0.024	0.0538
4/19/2017 15:46	0.083	0.0559
4/19/2017 15:47	1.62	0.1762
4/19/2017 15:48	0.072	0.1688
4/19/2017 15:49	0.097	0.164
4/19/2017 15:50	0.036	0.1635
4/19/2017 15:51	0.026	0.163
4/19/2017 15:52	0.024	0.1454
4/19/2017 15:53	0.252	0.1604
4/19/2017 15:54	0.034	0.1606
4/19/2017 15:55	0.059	0.1623
4/19/2017 15:56	0.027	0.1618
4/19/2017 15:57	0.034	0.1625
4/19/2017 15:58	0.033	0.1631
4/19/2017 15:59	0.05	0.1647
4/19/2017 16:00	0.031	0.1652
4/19/2017 16:01	0.117	0.1675
4/19/2017 16:02	0.029	0.0614
4/19/2017 16:03	0.031	0.0587
4/19/2017 16:04	0.033	0.0544
4/19/2017 16:05	0.045	0.055
4/19/2017 16:06	0.031	0.0553

The contractor completed the segregation of the source materials (antiperspirant spray cans and jars of antiperspirant cream) from the dirt and debris that were in the roll-offs during the previous week; the source materials were placed in drums as requested by the disposal facility. The contractor is making arrangements for the drums to be picked up for disposal.

Below is a summary table for the 04/19/2017 CAMP monitoring event.

**Date: 04/19/17**

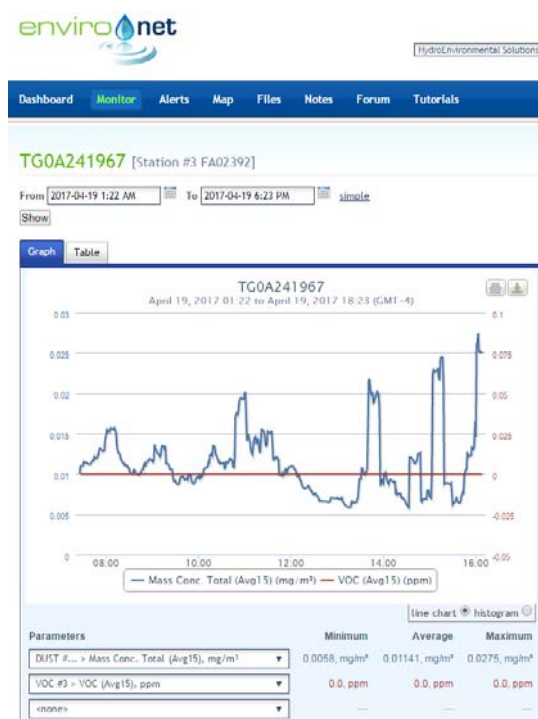
CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.04	0.11	0.02	0.28
Overall Ave.	0.00	0.00	0.08	0.00	0.17
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0058	0.0089	0.0000	0.0118	0.0081
Max. 15-min. Ave.	0.0275	0.0706	0.0382	0.0519	0.0145
Overall Ave.	0.0114	0.0184	0.0096	0.0213	0.0100

**Date: 04/19/17**

CAMP Data	Add'l Downwind (Sta. 8)
<b>VOCs (ppm)</b>	
Min. 15-min. Ave.	0.00
Max. 15-min. Ave.	0.22
Overall Ave.	0.06
<b>Dust (mg/m<sup>3</sup>)</b>	
Min. 15-min. Ave.	0.0096
Max. 15-min. Ave.	0.1762 *
Overall Ave.	0.0296

\* 15-minute dust exceedance at Station #8 was caused by an excavator conducting grading activities in the immediate vicinity of the CAMP station.

## Environet CAMP Data Summary Graphs



04/19/17 - Station #3 (Upwind)



04/19/17 - Station #1 (Downwind)



04/19/17 - Station #4 (Downwind)



04/19/17 - Station #2 (Near Buildings)

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04/19/17 - Station #8 (Add'l Downwind)



04/19/17- Station #5 (Morgan Street)



## Memo

Date: April 24, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 20, 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 April 20, 2017 site work. On this day HES deployed four additional CAMP stations (one additional upwind station, two additional downwind stations, and one additional near building station) so that they would be able to effectively monitor work activities being conducted by the contractor at the northern and southern areas of the site. The micropile drilling subcontractor (EBC) continued with the load testing procedures for the micropiles they installed (non-intrusive work). SoilTesting was on site drilling borings in the hotel footprint area as part of the micropile installation activities. SiteWorks resumed excavation activities at the SA-4 area; 10 trucks were loaded out for disposal of the soils from SA-4 and several endpoint samples were collected for analysis. The SA-4 excavation was not completed on this day; six more trucks are scheduled for April 21, 2017 to complete the soil removal. SiteWorks continued grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future. In addition, SiteWorks continued backfilling the southeastern temporary detention basin to prepare it for RIC activities; soils removed from the grading activities were used to backfill this area. SiteWorks also conducted some off-site activities in Marbledale Road related to the installation of manholes for the site.

A NYSDEC representative (am) and an HDR representative (pm) were 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 was conducting micropile load testing procedures and SiteWorks conducted SA-4 excavation and truck loading activities and they also conducted grading activities as well as some backfilling activities in the southeast corner area of the site to get to the grade in this area at the appropriate elevations for the RIC activities in the future. SoilTesting was advancing borings in the hotel footprint area.

HES conducted the CAMP monitoring around the SA-4 excavation and truck loading activities, the hotel footprint drilling and hotel area grading activities, in the central-northern portion of the site and the backfilling activities and drilling activities in the southern portion of the site. Hand-held meters were also used to monitor in the area of the SA-4 excavation activities and the drilling activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of eight CAMP stations were deployed at the site on this day. Station #3, #1, #4, and #2 were positioned around the SA-4 area when SiteWorks was excavating and loading trucks as well as site the grading activities south of the SA-4 area. These four stations were shut down when work activities were completed in this area (~2:00 pm). Station #8, #6, #9, and #7 were positioned around the work activities conducted in the southern portion of the site. The on-site dust monitors were not turned on until ~08:30 when the rain tapered off. In addition, HES has 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 repositioned as needed based on the areas where the contractor was working.

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 the rain in the morning on this day, the surface soils were damp and the contractor did not need to wet down the site. There was no noticeable visible dust leaving the site during this monitoring event. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to site work activities.



CAMP Station #4, located downwind of the SA-4 excavation area, registered an initial elevated 1-minute dust concentration at 8:24 pm of 0.154 mg/m<sup>3</sup> when it was turned on after the rain slowed down. This “caused” a maximum 15-min average of 0.154 mg/m<sup>3</sup> during this interval. 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. See the table below showing the 1-minute dust concentrations at Station #4 from when it was turned on; the subsequent dust measurements after the first 1-minute reading were typical of the readings on this day in the morning. 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 (for both dust and VOCs) provided by Environet do not include a full 15 minutes worth of data for the average values.

TB00893068: Station #4 (Add'l Downwind Location)		
Date / Time	1-Minute Reading (mg/m <sup>3</sup> )	15-Minute Average (mg/m <sup>3</sup> )
4/20/2017 8:24	0.154	0.154
4/20/2017 8:25	0.026	0.09
4/20/2017 8:26	0.029	0.0697
4/20/2017 8:27	0.023	0.058
4/20/2017 8:28	0.023	0.051
4/20/2017 8:29	0.023	0.0463
4/20/2017 8:30	0.023	0.043
4/20/2017 8:31	0.021	0.0402
4/20/2017 8:32	0.023	0.0383
4/20/2017 8:33	0.022	0.0367
4/20/2017 8:34	0.021	0.0353
4/20/2017 8:35	0.021	0.0341
4/20/2017 8:36	0.021	0.0331
4/20/2017 8:37	0.02	0.0321
4/20/2017 8:38	0.02	0.0313
4/20/2017 8:39	0.019	0.0223
4/20/2017 8:40	0.019	0.0219
4/20/2017 8:41	0.019	0.0212
4/20/2017 8:42	0.018	0.0209
4/20/2017 8:43	0.019	0.0206
4/20/2017 8:44	0.019	0.0203

The contractor completed the segregation of the source materials (antiperspirant spray cans and jars of antiperspirant cream) from the dirt and debris that were in the roll-offs during the previous week; the source materials were placed in drums as requested by the disposal facility. The contractor is making arrangements for the drums to be picked up for disposal.

Below is a summary table for the 04/20/2017 CAMP monitoring event.

**Date: 04/20/17**

CAMP Data	Upwind (Sta. 3) *	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.03	0.05	0.02	0.23
Overall Ave.	0.00	0.00	0.03	0.00	0.10
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0031 *	0.0206	0.0107	0.0180	0.0231
Max. 15-min. Ave.	0.0031 *	0.0435	0.1540 **	0.0648	0.0495
Overall Ave.	0.0031 *	0.0312	0.0242	0.0349	0.0317

**Date: 04/20/17**

CAMP Data	Add'l Downwind (Sta. 8)	Add'l Downwind (Sta. 6)	Add'l Downwind (Sta. 9)	Add'l Buildings (Sta. 7)
<b>VOCs (ppm)</b>				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.18	0.00	0.21	0.25
Overall Ave.	0.04	0.00	0.06	0.01
<b>Dust (mg/m<sup>3</sup>)</b>				
Min. 15-min. Ave.	0.0201	0.0171	0.0257	0.0231
Max. 15-min. Ave.	0.0567	0.0448	0.0653	0.0543
Overall Ave.	0.0370	0.0302	0.0404	0.0370

\* 15-minute dust exceedance at Station #4 was caused by the startup of the meter, not site activities.

\* It appears that the dust monitor at Station #3 malfunctioned because it read the same reading for the entire monitoring event.

## Environet CAMP Data Summary Graphs



04/20/17 - Station #3 (Upwind)



04/20/17 - Station #1 (Downwind)



04/20/17 - Station #4 (Downwind)



04/20/17 - Station #2 (Near Buildings)

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04/20/17 - Station #8 (Add'l Upwind)



04/20/17 - Station #6 (Add'l Downwind)



04/20/17 - Station #9 (Add'l Downwind)



04/20/17 - Station #7 (Add'l Near Building)

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HydroEnvironmental Solutions



04/20/17- Station #5 (Morgan Street)



## Memo

Date: April 24, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Work  
109-125 Marbledale Road  
Tuckahoe, New York  
April 21, 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 April 21, 2017 site work. On this day HES deployed three additional CAMP stations (additional downwind stations) so they would be able to effectively monitor work activities being conducted by the contractor at the northern and southern areas of the site. The micropile drilling subcontractor (EBC) continued with the load testing procedures for the micropiles they installed (non-intrusive work); they began dismantling some of their load testing equipment on this day. SoilTesting was on site drilling borings in the hotel footprint area as part of the micropile installation activities. SiteWorks resumed excavation activities at the SA-4 area; 6 trucks were loaded out for disposal and the remaining endpoint samples were collected for analysis. The SA-4 excavation was completed on this day and SiteWorks began backfilling the excavation area with soils removed during grading activities. In addition, SiteWorks loaded 4 trucks with impacted materials that have been encountered recently during grading activities and determined to be unsuitable for reuse at the site. These soils were stockpiled on plastic and covered in the northern portion of the site. SiteWorks continued grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future including backfilling of the southeastern temporary detention basin to prepare it for RIC activities. 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 was conducting micropile load testing procedures and SiteWorks conducted SA-4 excavation, truck loading, and backfilling activities and they also conducted grading activities in the hotel footprint area as well as some backfilling activities in the southeast corner area for the RIC activities in the future. As mentioned, SiteWorks also loaded out 4 trucks for disposal of soils that were recently encountered during grading activities that were not considered suitable for reuse at the site. SoilTesting continued advancing borings in the hotel footprint area.

HES conducted the CAMP monitoring around the SA-4 excavation, truck loading, and backfilling activities, the hotel footprint drilling and hotel area grading activities in the central-northern portion of the site, the truck loading activities in the northern portion of the site and the backfilling activities and drilling activities in the southern portion of the site. Hand-held meters were also used to monitor in the area of the SA-4 excavation activities and the drilling activities. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of seven CAMP stations were deployed at the site on this day. Station #3, #1, #4, #2, and #6 were positioned around the SA-4 area when SiteWorks was excavating and loading trucks as well as site the grading activities south of the SA-4 area. Station #8 and #9, were positioned downwind from the backfilling and drilling activities in the southern portion of the site. In addition, HES has 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 seven on-site monitoring stations were repositioned as needed based on the areas where the contractor was working.

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 the rain recently, the surface soils were damp and the contractor did not need to wet down the site. There was no noticeable visible dust leaving the site during this monitoring event. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures due to site work activities.



The contractor completed the segregation of the source materials (antiperspirant spray cans and jars of antiperspirant cream) from the dirt and debris that were in the roll-offs during the previous week; the source materials were placed in drums as requested by the disposal facility. The contractor is making arrangements for the drums to be picked up for disposal.

Below is a summary table for the 04/21/2017 CAMP monitoring event.

**Date: 04/21/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.14	0.09	0.13	0.26
Overall Ave.	0.00	0.03	0.07	0.06	0.18
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0016	0.0022	0.0000	0.0000	0.0034
Max. 15-min. Ave.	0.0164	0.0530	0.0238	0.0248	0.0196
Overall Ave.	0.0067	0.0208	0.0069	0.0091	0.0091

**Date: 04/21/17**

CAMP Data	Add'l Downwind (Sta. 6)	Add'l Downwind (Sta. 8)	Add'l Downwind (Sta. 9)
<b>VOCs (ppm)</b>			
Min. 15-min. Ave.	0.00	0.00	0.00
Max. 15-min. Ave.	0.05	0.04	0.13
Overall Ave.	0.01	0.01	0.07
<b>Dust (mg/m<sup>3</sup>)</b>			
Min. 15-min. Ave.	0.0000	0.0000	0.0064
Max. 15-min. Ave.	0.0390	0.0294	0.0270
Overall Ave.	0.0159	0.0158	0.0134

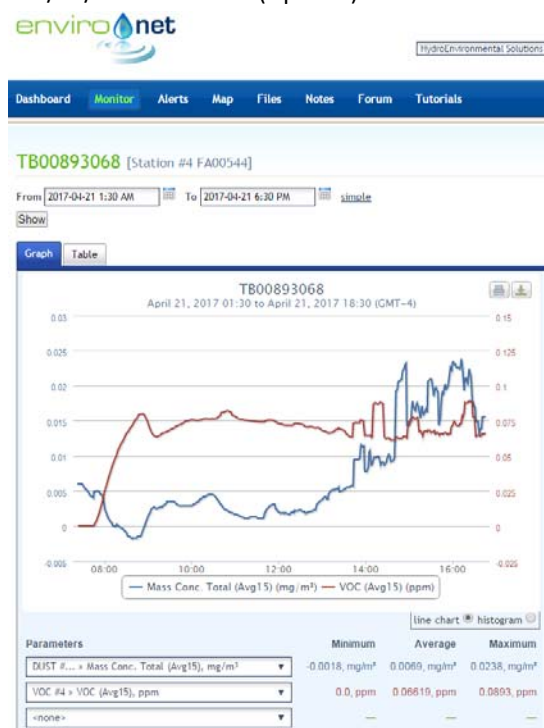
## Environet CAMP Data Summary Graphs



04/21/17 - Station #3 (Upwind)



04/21/17 - Station #1 (Downwind)



04/21/17 - Station #4 (Downwind)



04/21/17 - Station #2 (Near Buildings)

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04/21/17 - Station #6 (Add'l Downwind)



04/21/17 - Station #8 (Add'l Downwind)



04/21/17 - Station #9 (Add'l Downwind)



04/21/17 - Station #5 (Morgan Street)



# Memo

Date: April 27, 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  
April 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 Monday April 24, 2017 site work. SiteWorks continued grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future and they moved some of the soils as well as concrete and stockpiled both separately in the northern portion of the site for reuse in the future (soils) and to be trucked offsite (concrete). SoilTesting resumed drilling activities in the southern portion of the site in the building footprint. 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, SiteWorks conducted grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future and stockpiled this soil in the northern portion of the site for future reuse.

HES conducted the CAMP monitoring around the hotel footprint drilling and hotel area grading activities as well as the soil stockpiling activities in the northern portion of the site. Hand-held meters (PID and FID) were also used to monitor in the area of the hotel footprint and grading activities near SA-3. 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 area of 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 has 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 were repositioned as needed based on the areas where the contractor was working.

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 on the site due to recent rain and the current overcast/humid conditions. Therefore, wetting of the soils was not necessary on this day; there was no noticeable dust leaving the site during this monitoring event.

An HDR representative was on site on Monday April 24, 2017 to observe the grading and stockpiling activities, and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five operating CAMP stations on-site.

Additional inhalers and cosmetic debris were uncovered in the soils around the SA-3 area during grading activities. These source materials and co-mingled soils were segregated, stockpiled on plastic and covered with plastic; this source material will be taken off site for disposal at a later date.

Below is a summary table for the 04/24/2017 CAMP monitoring event.

**Date: 04/24/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.00	0.06	0.02	0.25
Overall Ave.	0.00	0.00	0.04	0.00	0.08
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0015	0.0022	-0.0046	0.0080	0.0033
Max. 15-min. Ave.	0.0480	0.0490	0.0390	0.0545	0.0466
Overall Ave.	0.0156	0.0198	0.0157	0.0292	0.0179

## Environet CAMP Data Summary Graphs



4/24/2017 – Station #1 (Downwind)



4/24/2017 – Station #2 (Near Buildings)



4/24/2017 – Station #3 (Upwind)



4/24/2017 – Station #4 (Downwind)



Marbledale Road BCP Site  
Summary of CAMP Results (04/24/17)  
April 27, 2017

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4/24/2017 – Station #5 (Morgan Street)





# Memo

Date: April 27, 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  
April 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 Monday April 25, 2017 site work. SiteWorks conducted direct load-out of concrete in the northern area which was monitored by Station #2 acting as both downwind and intersection of nearest building. SoilTesting arrived onsite in the southern area at 09:00. A CAMP setup was setup to capture this work, but was broken down after SoilTesting ended work at 11:00 due to heavy rain conditions. 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 conducted no intrusive soil disturbance, nonetheless a downwind station was setup between the concrete activities and the nearest buildings in order to monitor dust migration in the vicinity.

HES conducted the CAMP monitoring around the hotel footprint drilling, and hand-held meters were also used to monitor in the area of the hotel footprint. 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 area of the site work activities to collect particulate (Dust) and volatile organic compound (VOC) measurements. A total of five CAMP stations were deployed at the site on this day. In addition to the four onsite stations, 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.

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 were completely saturated by the ongoing rain with intermittent periods of heavy downpours. There was no noticeable dust leaving the site during this monitoring event.

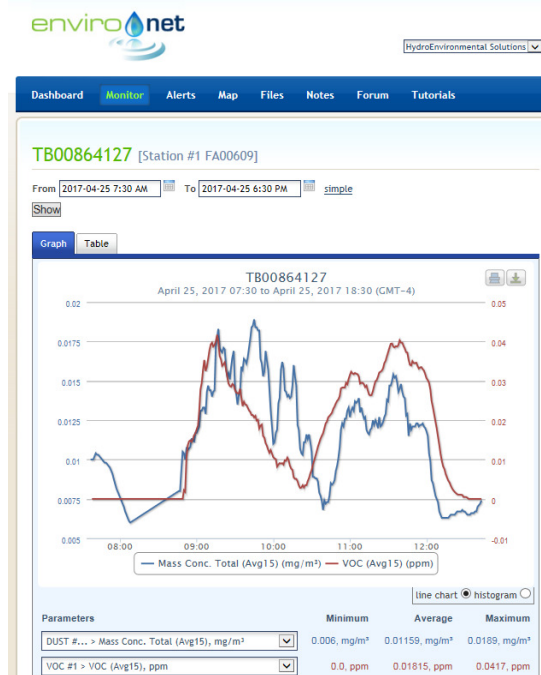
An HDR representative was on site on Tuesday April 25, 2017 to observe site activities which were cut short due to weather conditions.

Below is a summary table for the 04/25/2017 CAMP monitoring event.

**Date: 04/25/17**

<b>CAMP Data</b>	<b>Upwind (Sta. 3)</b>	<b>Downwind (Sta. 1)</b>	<b>Downwind (Sta. 4)</b>	<b>Buildings (Sta. 2)</b>	<b>Morgan Str. (Sta. 5)</b>
<b>VOCs (ppm)</b>					
<b>Min. 15-min. Ave.</b>	0.00	0.00	0.00	0.00	0.01
<b>Max. 15-min. Ave.</b>	0.00	0.04	0.07	0.22	0.20
<b>Overall Ave.</b>	0.00	0.01	0.04	0.04	0.17
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0033	0.0060	-0.0001	0.0000	0.0047
<b>Max. 15-min. Ave.</b>	0.0115	0.0189	0.0097	0.0837	0.0112
<b>Overall Ave.</b>	0.0065	0.0116	0.0048	0.0182	0.0066

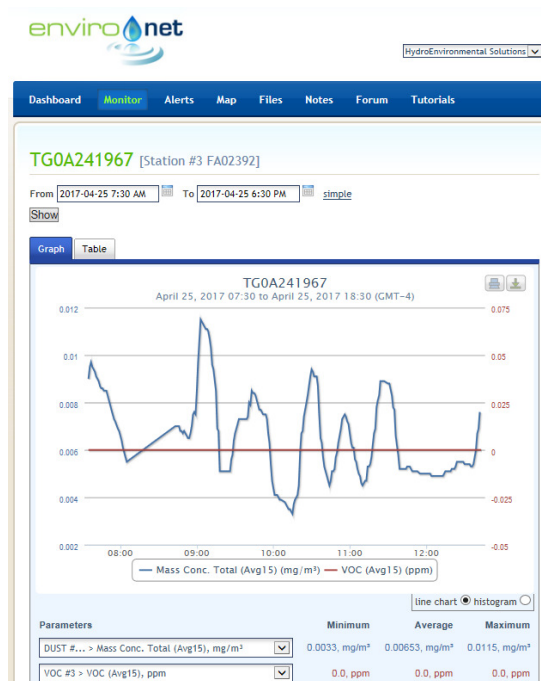
## Environet CAMP Data Summary Graphs



4/25/2017 – Station #1 (Downwind)



4/25/2017 – Station #2 (Near Buildings)



4/25/2017 – Station #3 (Upwind)



4/25/2017 – Station #4 (Downwind)

Marbledale Road BCP Site  
Summary of CAMP Results (04/25/17)  
April 27, 2017

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4/25/2017 – Station #5 (Morgan Street)



# Memo

Date: April 27, 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  
April 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 Wednesday April 26, 2017 site work. The micropile drilling subcontractor (EBC) was onsite to move equipment, but conducted no intrusive work. SiteWorks continued grading activities in the area of the hotel to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future and they moved some of the soils they removed and stockpiled this soil in the northern portion of the site for reuse. SoilTesting was onsite to resume soil drilling within the building footprint. 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 conducted no intrusive work, but SiteWorks continued grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future and stockpiled this soil in the northern portion of the site for future reuse.

HES conducted the CAMP monitoring around the hotel footprint drilling and hotel area grading activities as well as the soil stockpiling activities in the northern portion of the site. Hand-held meters were also used to monitor in the area of the hotel footprint and grading activities. 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 has 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 were repositioned as needed based on the areas where the contractor was working.

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 saturated due to ongoing rain over the previous few days. There was no noticeable visible dust leaving the site during this monitoring event.

A NYSDEC representative was on site on Wednesday April 26, 2017 to observe the site activities in the hotel footprint area, the grading and stockpiling activities, and monitoring activities in and around the site. Due to moderate to heavy rain, the dust tracks were turned off immediately upon setup of the CAMP stations, but were turned on an hour later after the rain subsided. Recalibration of Station #4 was required around 10:30 due to a negative reading; after which the dust tracker was functioning properly.

For 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 04/26/2017 CAMP monitoring event.

**Date: 04/26/17**

<b>CAMP Data</b>	<b>Upwind (Sta. 3)</b>	<b>Downwind (Sta. 1)</b>	<b>Downwind (Sta. 4)</b>	<b>Buildings (Sta. 2)</b>	<b>Morgan Str. (Sta. 5)</b>
<b>VOCs (ppm)</b>					
<b>Min. 15-min. Ave.</b>	0.00	0.00	0.00	0.00	0.00
<b>Max. 15-min. Ave.</b>	0.06	0.08	0.09	0.30	0.21
<b>Overall Ave.</b>	0.00	0.01	0.04	0.09	0.08
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0000	0.0021	-0.0023	0.0004	0.0001
<b>Max. 15-min. Ave.</b>	0.0089	0.0163	0.0060	0.0137	0.0147
<b>Overall Ave.</b>	0.0023	0.0082	0.0022	0.0066	0.0040

## Environet CAMP Data Summary Graphs



4/26/2017 – Station #1 (Downwind)



4/26/2017 – Station #2 (Near Buildings)



4/26/2017 – Station #3 (Upwind)



4/26/2017 – Station #4 (Downwind)



Marbledale Road BCP Site  
Summary of CAMP Results (04/26/17)  
April 27, 2017

Page 4



4/26/2017 – Station #5 (Morgan Street)



# Memo

Date: April 28, 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  
April 27, 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, April 27, 2017 site work. The micropile drilling subcontractor (EBC) was onsite to move and maintain equipment, but conducted no intrusive work. SiteWorks continued grading activities in the area of the hotel pad to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future and they moved some of the soils they removed and stockpiled this soil in the northern portion of the site for reuse. Additionally, stockpiles of soil not suitable for reuse were loaded onto trucks and taken offsite for recycling. 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 conducted no intrusive work, but SiteWorks continued grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future and stockpiled this soil in the northern portion of the site for future reuse.

HES conducted the CAMP monitoring around the hotel footprint drilling and hotel area grading activities as well as the soil stockpiling activities in the northern portion of the site. Hand-held meters were also used to monitor in the area of the hotel footprint and grading activities. 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 five CAMP stations were deployed at the site on this day. In addition, HES has an off-site CAMP monitoring station west of the site between the site and the Waverly Early Childhood Center. On this day, HES positioned an additional CAMP station south (downwind) of the soil stockpiling area in the northern portion of the site where soils were being loaded into trucks and removed from the site. 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 repositioned as needed based on the areas where the contractor was working.

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 saturated due to ongoing rain over the previous few days. There was no noticeable visible dust leaving the site during this monitoring event.

A NYSDEC representative was on site on Wednesday April 26, 2017 to observe the site activities in the hotel footprint area, the grading and stockpiling activities, and monitoring activities in and around the site. Due to humidity and moderate rain, the dust tracks were not turned on until the afternoon (about 1pm).

For 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 04/26/2017 CAMP monitoring event.

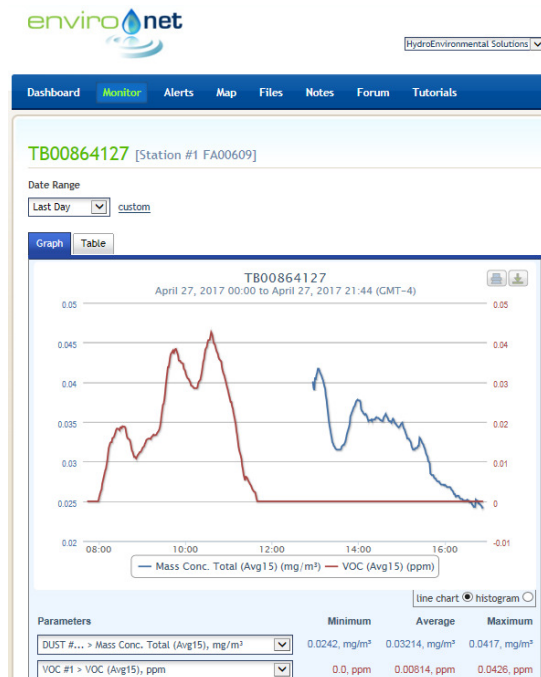
**Date: 04/27/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
VOCs (ppm)					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.04	0.04	0.15	0.34	0.06
Overall Ave.	0.00	0.01	0.06	0.09	0.03
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0316	0.0242	0.0129	0.0293	0.0243
Max. 15-min. Ave.	0.0459	0.0417	0.0612	0.0656	0.0852
Overall Ave.	0.0388	0.0321	0.0325	0.0386	0.0499

**Date: 04/27/17**

<b>CAMP Data</b>	<b>Add'l Downwind (Sta. 9)</b>
<b>VOCs (ppm)</b>	
<b>Min. 15-min. Ave.</b>	0.00
<b>Max. 15-min. Ave.</b>	0.36
<b>Overall Ave.</b>	0.02
<b>Dust (mg/m<sup>3</sup>)</b>	
<b>Min. 15-min. Ave.</b>	0.0267
<b>Max. 15-min. Ave.</b>	0.0539
<b>Overall Ave.</b>	0.0394

## Environet CAMP Data Summary Graphs



4/27/2017 – Station #1 (Downwind)



4/27/2017 – Station #2 (Nearest Building)



4/27/2017 – Station #3 (Upwind)



4/27/2017 – Station #4 (Downwind)

Marbledale Road BCP Site  
Summary of CAMP Results (04/26/17)  
April 27, 2017

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4/27/2017 – Station #5 (Morgan Street)



4/27/2017 – Station #9 (Additional Downwind)

# Memo

Date: May 1, 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  
April 28, 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, April 28, 2017 site work. The micropile drilling subcontractor (EBC) was onsite to move and maintain equipment, but conducted no intrusive work. SiteWorks continued grading activities in the area of the hotel pad to get the area down to the required grade for the Rapid Impact Compaction (RIC) activities to be conducted in the future and they moved some of the soils they removed and stockpiled this soil in the northern portion of the site for reuse. 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 conducted no intrusive work, but SiteWorks continued grading activities to get to the appropriate elevations in the hotel area for the RIC activities in the future and stockpiled this soil in the northern portion of the site for future reuse.

HES conducted the CAMP monitoring around the hotel footprint drilling and hotel area grading activities as well as the soil stockpiling activities in the northern portion of the site. Hand-held meters were also used to monitor in the area of the hotel footprint and grading activities. 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 were repositioned as needed based on the areas where the contractor was working and as wind directions changed throughout the work 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. The surface soils remained saturated due to ongoing rain over the previous few days. There was no visible dust leaving the site during this monitoring event.

An HDR representative was on site on Friday April 28, 2017 to observe the site activities in the hotel footprint area, the grading and stockpiling activities, and monitoring activities in and around 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.

Below is a summary table for the 04/28/2017 CAMP monitoring event.

**Date: 04/28/17**

CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 9)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan 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	0.28	0.21	0.19	0.19
Overall Ave.	0.00	0.14	0.13	0.05	0.06
Dust (mg/m <sup>3</sup> )					
Min. 15-min. Ave.	0.0092	-0.0091	-0.001	0.0138	0.0098
Max. 15-min. Ave.	0.0840	0.0923	0.0685	0.0808	0.1860
Overall Ave.	0.0476	0.0415	0.0293	0.0489	0.0573

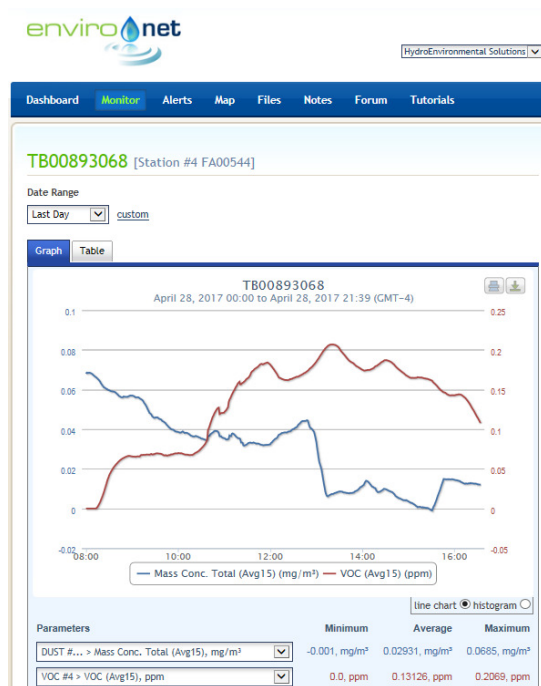
# Environet CAMP Data Summary Graphs



4/28/2017 Station #2 (Near building)



4/28/2017 Station #3 (Upwind)



4/28/2017 Station #4 (Downwind)



4/28/2017 Station #9 (Downwind)

