



# Memo

Date: January 20, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Investigation Activities  
109-125 Marbledale Road  
Tuckahoe, New York  
January 19, 2016

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Thursday January 19, 2017 site work. Site work on this day included site preparation work including installation of silt fencing.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along the east side of Marbledale Road across from the quarry area. The NYSDEC subcontractor is conducting CAMP monitoring (VOCs and Dust) for this work when they are conducting intrusive activities. NYSDEC's subcontractor was installing monitoring wells along the east side of Marbledale Road on this day. CAMP data collected by NYSDEC's subcontractor is not included in these summaries.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES is conducting CAMP monitoring during the site preparation activities in preparation for the start of the remediation activities. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Thursday 19, 2017, neither water nor foam were required. There were no visible dusts or noticeable odors released from the work activities for this event.

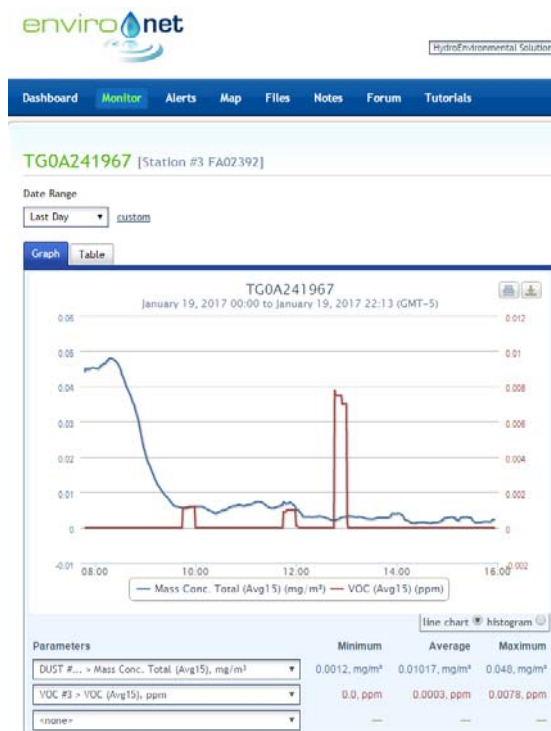
HDR staff was on-site on Thursday, January 19, 2017 to observe site preparation and CAMP monitoring activities. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five CAMP stations during site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

Below is a summary table for the 01/19/2017 CAMP monitoring event.

**Date: 01/19/17**

<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	0.05
<b>Max. 15-min. Ave.</b>	0.01	0.19	0.18	0.13	0.47
<b>Overall Ave.</b>	0.00	0.06	0.09	0.06	0.23
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0012	0.0000	0.0070	0.0055	0.0015
<b>Max. 15-min. Ave.</b>	0.0480	0.0499	0.0522	0.0550	0.0513
<b>Overall Ave.</b>	0.0102	0.0094	0.0152	0.0168	0.0113

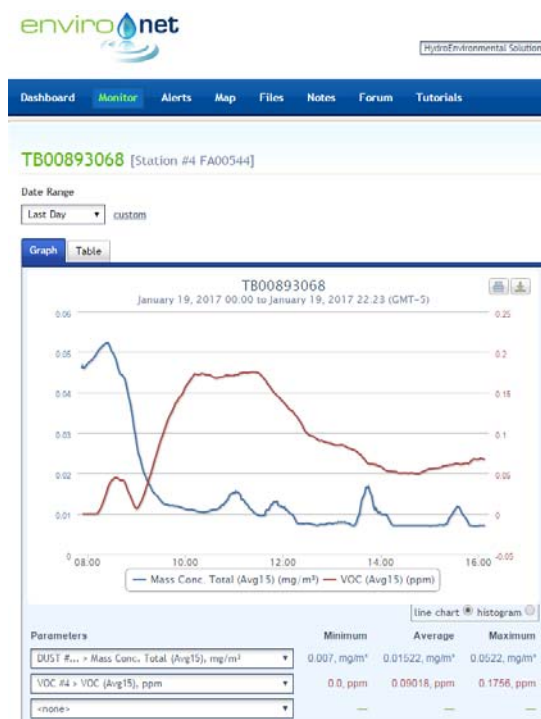
## Environet CAMP Data Summary Graphs



01/19/17 – Station #3 (Upwind)



01/19/17 – Station #1 (Downwind)



01/19/17 – Station #4 (Downwind)



01/19/17 – Station #2 (Near Buildings)

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01/19/17 – Station #5 (Morgan Street)



# Memo

Date: January 23, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Investigation Activities  
109-125 Marbledale Road  
Tuckahoe, New York  
January 20, 2016

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Friday January 20, 2017 site work. Site work on this day included site preparation work including installation of silt fencing.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along the east side of Marbledale Road across from the quarry area. The NYSDEC subcontractor is conducting CAMP monitoring (VOCs and Dust) for this work when they are conducting intrusive activities. NYSDEC's subcontractor completed their well installation activities on Thursday and were demobilizing the drilling equipment on this day. CAMP data collected by NYSDEC's subcontractor is not included in these summaries.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES is conducting CAMP monitoring during the site preparation activities in preparation for the start of the remediation activities. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Friday 20, 2017, neither water nor foam were required. There were no visible dusts or noticeable odors released from the work activities for this event.

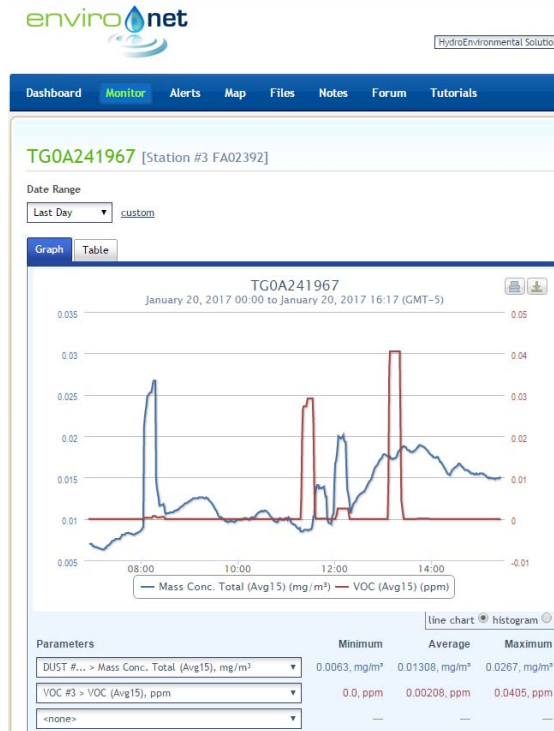
NYSDEC staff was on-site for a short time on Friday, January 20, 2017 to observe the drilling equipment demobilization activities for their drilling subcontractor. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five CAMP stations during site activities. 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 01/20/2017 CAMP monitoring event.

**Date: 01/20/17**

<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	0.05
<b>Max. 15-min. Ave.</b>	0.04	0.10	0.16	0.10	0.26
<b>Overall Ave.</b>	0.00	0.06	0.09	0.05	0.21
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0063	0.0095	0.0090	0.0000	0.0071
<b>Max. 15-min. Ave.</b>	0.0267	0.0222	0.0244	0.0269	0.0210
<b>Overall Ave.</b>	0.0131	0.0148	0.0174	0.0190	0.0142

## Environet CAMP Data Summary Graphs



01/20/17 – Station #3 (Upwind)



01/20/17 – Station #1 (Downwind)



01/20/17 – Station #4 (Downwind)



01/20/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (01/20/17)  
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01/19/17 – Station #5 (Morgan Street)





# Memo

Date: January 24, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Investigation Activities  
109-125 Marbledale Road  
Tuckahoe, New York  
January 23, 2016

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Monday January 23, 2017 site work. The site contractor conducted site preparation work on this day including installation of silt fencing and installation of a gravel truck entrance at the southern entrance to the site.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along the east side of Marbledale Road across from the quarry area. The NYSDEC subcontractor is conducting CAMP monitoring (VOCs and Dust) for this work when they are conducting intrusive activities. NYSDEC's subcontractor was not conducting any work in the area on this day. CAMP data collected by NYSDEC's subcontractor is not included in these summaries.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES is conducting CAMP monitoring during the site preparation activities in preparation for the start of the remediation activities. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Monday 23, 2017, neither water nor foam were required. There were no visible dusts or noticeable odors released from the work activities for this event.

HDR staff was on-site on Monday, January 23, 2017 to observe the site preparation activities. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five CAMP stations during site 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 01/23/2017 CAMP monitoring event.

**Date: 01/23/17**

<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	0.06
<b>Max. 15-min. Ave.</b>	0.02	0.07	0.13	0.06	0.22
<b>Overall Ave.</b>	0.00	0.05	0.09	0.04	0.19
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0000	0.0000	0.0050	0.0039	0.0021
<b>Max. 15-min. Ave.</b>	0.0073	0.0241	0.0403	0.0286	0.0044
<b>Overall Ave.</b>	0.0023	0.0053	0.0088	0.0082	0.0090

## Environet CAMP Data Summary Graphs



01/23/17 – Station #3 (Upwind)



01/23/17 – Station #1 (Downwind)



01/23/17 – Station #4 (Downwind)



01/23/17 – Station #2 (Near Buildings)



01/23/17 – Station #5 (Morgan Street)



# Memo

Date: January 27, 2017

Project: BCP Site # C360143

To: Village of Tuckahoe

From: John Guzewich, HDR

Subject: Summary of CAMP Results During Site Preparation Activities  
109-125 Marbledale Road  
Tuckahoe, New York  
January 26, 2016

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Thursday January 26, 2017 site work. The site contractor continued with site preparation work on this day including stump and brush removal activities.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. The NYSDEC subcontractor conducts CAMP monitoring (VOCs and Dust) they are conducting intrusive activities. NYSDEC's subcontractor was not conducting any work in the area on this day. CAMP data collected by NYSDEC's subcontractor is not included in these summaries.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES is conducting CAMP monitoring during the site preparation tasks in preparation for the start of the remediation activities. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Thursday 26, 2017, neither water nor foam were required. There were no visible dusts or noticeable odors released from the work activities for this event.

During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five CAMP stations during site 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 01/26/2017 CAMP monitoring event.

**Date: 01/26/17**

<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	0.01	0.00	0.00
<b>Max. 15-min. Ave.</b>	0.02	0.08	0.15	0.14	0.08
<b>Overall Ave.</b>	0.00	0.04	0.07	0.05	0.02
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0056	0.0070	0.0000	0.0105	0.0041
<b>Max. 15-min. Ave.</b>	0.0296	0.0351	0.0360	0.0522	0.0309
<b>Overall Ave.</b>	0.0176	0.0193	0.0226	0.0265	0.0165

## Environet CAMP Data Summary Graphs



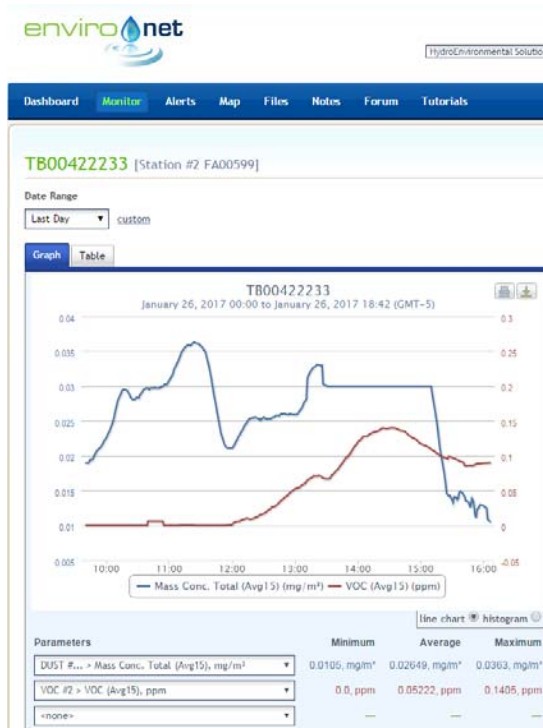
01/26/17 – Station #3 (Upwind)



01/26/17 – Station #1 (Downwind)



01/26/17 – Station #4 (Downwind)



01/26/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (01/26/17)  
January 27, 2017

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01/26/17 – Station #5 (Morgan Street)





## Memo

Date: January 31, 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  
January 30, 2016

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Monday January 30, 2017 site work. The environmental consultant advanced direct push borings to collect additional soil samples. The soil samples were submitted for analysis required for proper off-site disposal. There were no site preparation activities at the site on this day.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. The NYSDEC subcontractor conducts CAMP monitoring (VOCs and Dust) when they are conducting intrusive activities. NYSDEC's subcontractor was not conducting any work in the area on this day. CAMP data collected by NYSDEC's subcontractor is not included in these summaries.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES conducted CAMP monitoring during shallow soil boring activities on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew Ave. for this monitoring event.

It should be noted that one of the downwind stations (#1) had a battery malfunction on this day and was not able to collect data. Corrective action was pursued with the equipment rental company and this station will be available for subsequent monitoring events. The other downwind station (Sta. #4) was placed immediately downwind of the soil boring activities.

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 30, 2017, neither water nor foam were required. There were no visible dusts or noticeable odors released from the work activities for this event.

During this monitoring event there were no exceedances of the CAMP alert triggers at any of the four operating CAMP stations during site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

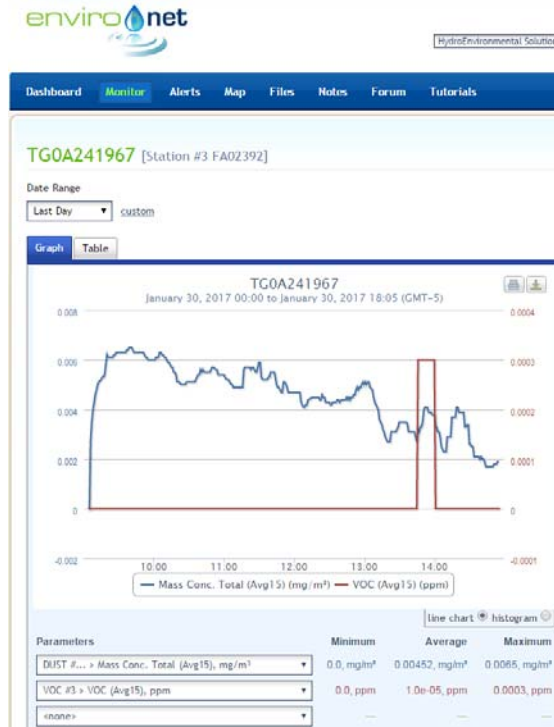
Below is a summary table for the 01/30/2017 CAMP monitoring event.

**Date: 01/30/17**

<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
<b>Max. 15-min. Ave.</b>	0.00	-	0.07	0.12	0.06
<b>Overall Ave.</b>	0.00	-	0.05	0.08	0.04
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0000	-	0.0059	0.0000	0.0045
<b>Max. 15-min. Ave.</b>	0.0065	-	0.0107	0.0115	0.0095
<b>Overall Ave.</b>	0.0045	-	0.0071	0.0091	0.0058

\* Station #1 was not operational for this CAMP monitoring event.

## Environet CAMP Data Summary Graphs



01/30/17 – Station #3 (Upwind)

Monitoring Station #1 was not operational for this event.  
01/30/17 – Station #1 (Downwind)



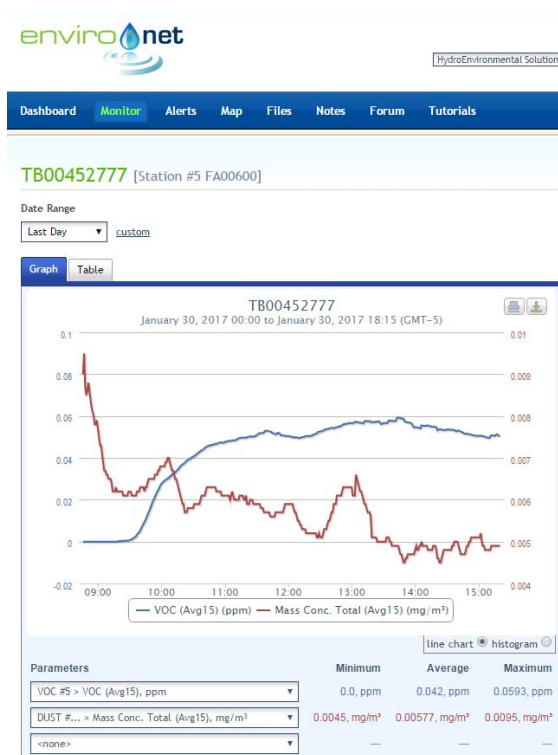
01/30/17 – Station #4 (Downwind)



01/30/17 – Station #2 (Near Buildings)

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Summary of CAMP Results (01/30/17)  
January 31, 2017

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01/30/17 – Station #5 (Morgan Street)



# Memo

Date: February 01, 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  
January 31, 2016

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Tuesday January 31, 2017 site work. The environmental consultant advanced direct push borings to collect additional soil samples. There were some site preparation activities at the site which included relocation of brush piles and installation of protection fencing around monitoring wells on this day.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. The NYSDEC subcontractor conducts CAMP monitoring (VOCs and Dust) when they are conducting intrusive activities. NYSDEC's subcontractor was not conducting any work in the area on this day. CAMP data collected by NYSDEC's subcontractor is not included in these summaries.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES conducted CAMP monitoring during shallow soil boring activities on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Tuesday January 31, 2017, neither water nor foam were required. There were no visible dusts or noticeable odors released from the work activities for this event.

HDR staff was on-site on Tuesday, January 31, 2016 to observe drilling and CAMP monitoring activities. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five operating CAMP stations during site activities that were caused by the site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

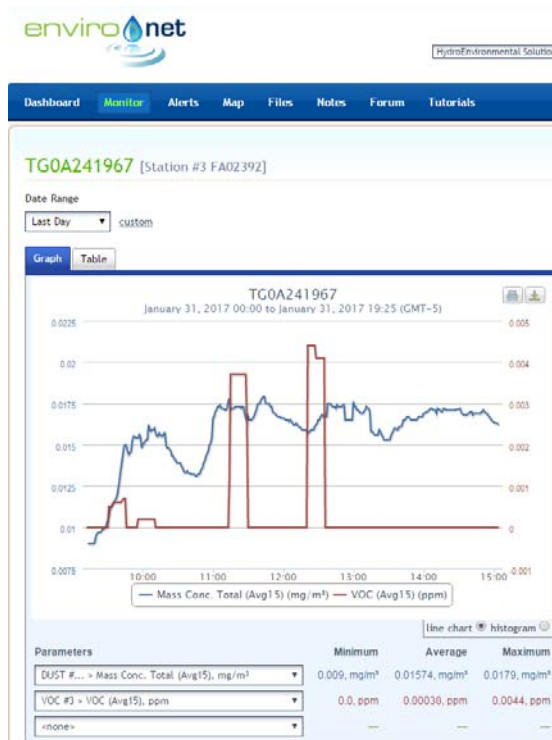
It should be noted that the Dust concentration at Station # 2 was elevated for the first reading at 0905. This was caused by the meter startup procedures, not site activities. HES began soil boring activities at approximately 1000.

Below is a summary table for the 01/31/2017 CAMP monitoring event.

**Date: 01/31/17**

<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>	0.00	0.12	0.13	0.03	0.14
<b>Overall Ave.</b>	0.00	0.08	0.08	0.01	0.10
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0090	0.0000	0.0130	0.0107	0.0090
<b>Max. 15-min. Ave.</b>	0.0179	0.0440	0.0293	0.5820	0.0235
<b>Overall Ave.</b>	0.0157	0.0192	0.0195	0.0269	0.0178

## Environet CAMP Data Summary Graphs



01/31/17 – Station #3 (Upwind)



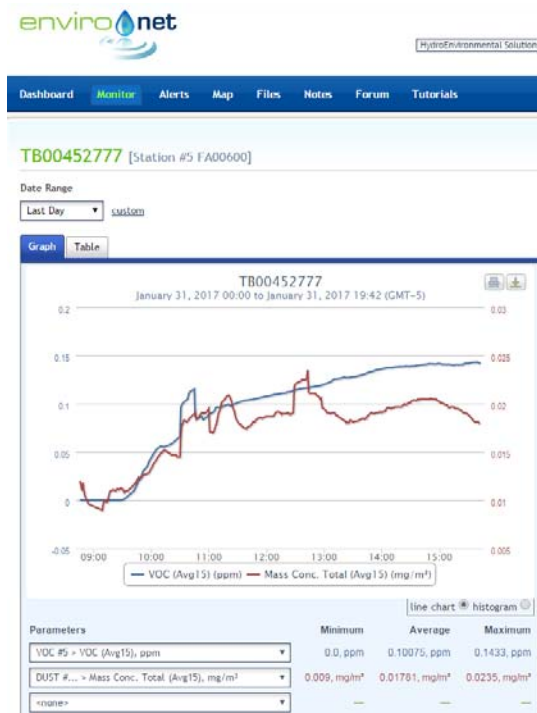
01/31/17 – Station #1 (Downwind)



01/31/17 – Station #4 (Downwind)



01/31/17 – Station #2 (Near Buildings)



01/31/17 – Station #5 (Morgan Street)





# Memo

Date: February 02, 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  
February 01, 2016

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Wednesday February 01, 2017 site work. The environmental consultant advanced direct push borings to collect additional soil samples. Site preparation activities at the site included removal of brush piles on this day.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. The NYSDEC subcontractor conducts CAMP monitoring (VOCs and Dust) when they are conducting intrusive activities. NYSDEC's subcontractor was conducting off-site soil vapor investigation work on this day. CAMP data collected by NYSDEC's subcontractor is not included in these summaries.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES conducted CAMP monitoring during shallow soil boring activities on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Wednesday February 01, 2017, neither water nor foam were required. There were no visible dusts or noticeable odors released from the work activities for this event.

During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five operating CAMP stations during site activities that were caused by the site 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 02/01/2017 CAMP monitoring event.

**Date: 02/01/17**

<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	0.01	0.00	0.00	0.00
<b>Max. 15-min. Ave.</b>	0.00	0.17	0.20	0.02	0.05
<b>Overall Ave.</b>	0.00	0.13	0.09	0.07	0.09
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0010	0.0072	0.0144	0.0000	0.0065
<b>Max. 15-min. Ave.</b>	0.0221	0.0320	0.0420	0.0237	0.0207
<b>Overall Ave.</b>	0.0121	0.0151	0.0214	0.0190	0.0128

## Environet CAMP Data Summary Graphs



02/01/17 – Station #3 (Upwind)



02/01/17 – Station #1 (Downwind)



02/01/17 – Station #4 (Downwind)



02/01/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/01/17)  
February 02, 2017

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02/01/17 – Station #5 (Morgan Street)



# Memo

Date: February 10, 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  
February 08, 2016

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Wednesday February 08, 2017 site work. The remediation contractor began excavation activities at the SA-2 area.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. There were no "off-site" work activities by NYSDEC's subcontractor on this day.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-2 area on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Wednesday February 08, 2017, neither water nor foam were required. There were no visible dusts released from the work activities for this event. HDR and NYSDEC representatives were on site on Wednesday, February 08, 2017 to observe the excavation and CAMP monitoring activities. 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.

Today the wind direction at the site shifted several times during the day. HES moved the Upwind and Downwind CAMP stations three times to account for the wind direction shifts after the CAMP stations were initially set up.

Excavation and soil hauling activities began at 0830 and the last truck left the site at 1500 (15 truck loads in total for the day). The initial 5 trucks were loaded between 0830 and 1000, 2 trucks were loaded between 1115 and 1145, and 8 trucks were loaded between 1300 and 1500.

It was noted that there were slight to moderate "landfill" or "decaying debris" odors on occasion at the edge of the excavation when the excavator dug into the deeper material (below about 8 feet). These odors dissipated in the excavation work area when the excavator stopped working.

HDR noted the Downwind CAMP Station # 4 was reading 0.3 ppm at 1215 when the contractor was taking a break, waiting for additional trucks to arrive. The nearby Downwind Station #1 was reading 0.0 ppm. HES moved the Station #1 over to the Downwind Station #4 location, as well as their mobile PID to take side-by-side readings. The mobile and Station #1 PIDs both read 0.0 ppm while the Station #4 unit read 0.3 ppm, indicating the Downwind Station #4 was reading slightly higher background concentrations at that time.

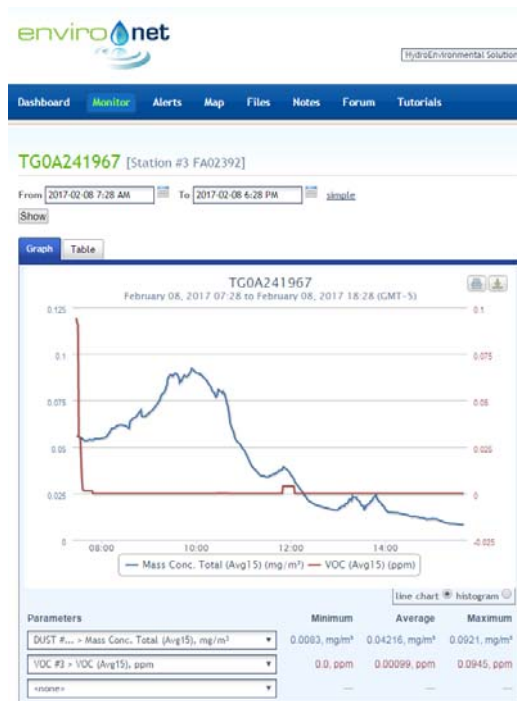
Initially the dust concentrations at all of the stations were up near 0.08 to 0.1 mg/m<sup>3</sup>. This was likely due to the ground fog and humid air conditions in the morning. The dust readings at all of the stations decreased during the day as the ground fog lifted and the humidity decreased.

Below is a summary table for the 02/08/2017 CAMP monitoring event.

**Date: 02/08/17**

<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	0.01	0.00	0.00
<b>Max. 15-min. Ave.</b>	0.09	0.17	0.33	0.11	0.28
<b>Overall Ave.</b>	0.00	0.13	0.22	0.04	0.04
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0083	0.0051	0.0133	0.0113	0.0040
<b>Max. 15-min. Ave.</b>	0.0921	0.0851	0.0926	0.1037	0.1027
<b>Overall Ave.</b>	0.0422	0.0403	0.0487	0.0501	0.0402

## Environet CAMP Data Summary Graphs



02/08/17 – Station #3 (Upwind)



02/08/17 – Station #1 (Downwind)



02/08/17 – Station #4 (Downwind)



02/08/17 – Station #2 (Near Buildings)



Marbledale Road BCP Site  
Summary of CAMP Results (02/08/17)  
February 10, 2017

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02/08/17 – Station #5 (Morgan Street)



# Memo

Date: February 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  
February 13, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Monday February 13, 2017 site work. The remediation contractor completed excavation activities at the SA-2 area on this day.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. However, there were no "off-site" work activities by NYSDEC's subcontractor on this day.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-2 area on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Monday February 13, 2017, neither water nor foam were required. There were no visible dusts released from the work activities for this event. HDR and NYSDEC representatives were on site on Monday, February 13, 2017 to observe the excavation and CAMP monitoring activities. 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.

Today the wind direction at the site shifted several times during the day. HES moved the Upwind and Downwind CAMP stations three times to account for the wind direction shifts after the CAMP stations were initially set up.

Excavation and soil hauling activities began at 0830 and the last truck left the site at 1015 (6 truck loads in total for the day). During the remainder of the day, the contractor removed snow from areas where they are planning to conduct work in the future.

Winds were sometimes gusty on this day; however, there were no noticeable dusts leaving the work area as the soils were moist from the recent snowfall. There were no noticeable odors from the excavation area during excavation and truck loading activities on this day.

HDR noted the Downwind CAMP Station #4 was reading 0.3 ppm when the CAMP stations were first started up prior to excavation activities on this day. The nearby Downwind Station #1 was reading 0.0 ppm; in addition, the mobile PID was reading 0.0 ppm when it was placed next to the Station #4. The PID at Station #4 was reading 0.3 ppm during the last monitoring event (02-08-17) as well when there were no excavation activities and the other PIDs were reading 0.0 ppm. HES switched the mobile PID unit with the PID unit that was in CAMP Station #4 and recalibrated the PID that was reading background above 0.0 ppm. As shown on the graph, the PIDs were switched out at about 0930. After recalibration, the PID unit (now the mobile unit) was reading the same as the other PIDs (0.0 ppm) when it was compared with them side-by-side.

As mentioned previously, the wind conditions were rather gusty on this day; however, the dust concentrations at the CAMP stations remained low for the duration of the monitoring event.

Below is a summary table for the 02/13/2017 CAMP monitoring event.

**Date: 02/13/17**

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	0.01	0.00	0.00
Max. 15-min. Ave.	0.00	0.00	0.23	0.12	0.19
Overall Ave.	0.00	0.00	0.04	0.08	0.14
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0031	0.0029	0.0091	0.0085	0.0057
Max. 15-min. Ave.	0.0073	0.0211	0.0269	0.0176	0.0120
Overall Ave.	0.0051	0.0069	0.0148	0.0134	0.0081

## EnviroNet CAMP Data Summary Graphs



02/13/17 – Station #3 (Upwind)



02/13/17 – Station #1 (Downwind)



02/13/17 – Station #4 (Downwind)



02/13/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/13/17)  
February 14, 2017

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02/13/17 – Station #5 (Morgan Street)



# Memo

Date: February 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  
February 14, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Tuesday February 14, 2017 site work. The remediation contractor conducted site preparation activities including removal and stockpiling of topsoil from a few locations and removal and stockpiling of on-site soils (from non-source area locations) to be used for backfilling the SA-2 excavation.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. However, there were no "off-site" work activities by NYSDEC's subcontractor on this day.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-2 area on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Tuesday February 14, 2017, neither water nor foam were required. There were no visible dusts released from the work activities for this event. HDR and NYSDEC representatives were on site on Tuesday, February 14, 2017 to observe the topsoil removal and stockpiling activities, backfill soil removal and

stockpiling activities, and CAMP monitoring activities. 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.

Below is a summary table for the 02/14/2017 CAMP monitoring event.

**Date: 02/14/17**

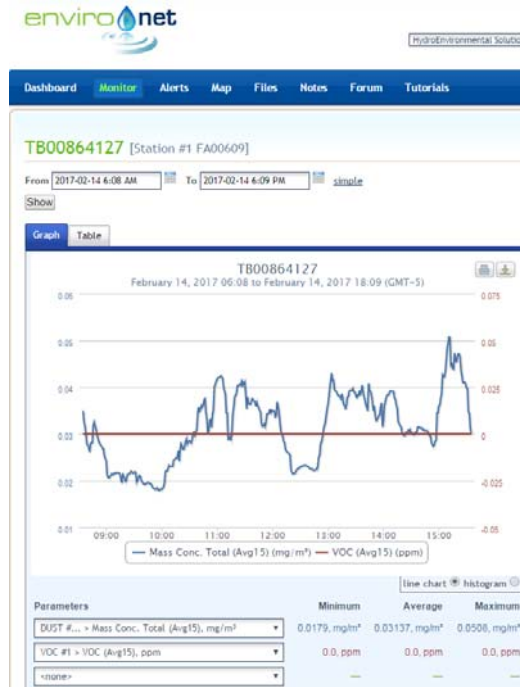
<b>CAMP Data</b>	<b>Upwind (Sta. 3)</b>	<b>Downwind (Sta. 1)</b>	<b>Downwind (Sta. 4)</b>	<b>Buildings (Sta. 2)</b>	<b>Morgan Str. (Sta. 5)</b>
<b>VOCs (ppm)</b>					
<b>Min. 15-min. Ave.</b>	0.00	0.00	0.00	0.00	0.00
<b>Max. 15-min. Ave.</b>	0.22	0.00	0.00	0.27	0.18
<b>Overall Ave.</b>	0.01	0.00	0.00	0.08	0.14
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0131	0.0179	0.0000	0.0000	0.0146
<b>Max. 15-min. Ave.</b>	0.0309	0.0508	0.0467	0.1173	0.0315
<b>Overall Ave.</b>	0.0210	0.0314	0.0312	0.0371	0.0228



## EnviroNet CAMP Data Summary Graphs



02/14/17 – Station #3 (Upwind)



02/14/17 – Station #1 (Downwind)



02/14/17 – Station #4 (Downwind)



02/14/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/14/17)  
February 15, 2017

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02/14/17 – Station #5 (Morgan Street)



## Memo

Date: February 16, 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  
February 15, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Wednesday February 15, 2017 site work. The remediation contractor began backfilling the SA-2 excavation. In addition, they conducted site preparation activities including removal and stockpiling of topsoil from a few locations and removal and stockpiling of on-site soils (from non-source area locations) to be used for backfilling the SA-2 excavation.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. However, there were no "off-site" work activities by NYSDEC's subcontractor on this day.

### DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-2 area on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Wednesday February 15, 2017, neither water nor foam were required. There were no visible dusts released from the work activities for this event. An HDR representative was on site on Wednesday, February 15,

2017 to observe the topsoil removal and stockpiling activities, backfill soil removal and stockpiling activities, SA-2 excavation backfilling activities, and CAMP monitoring activities. 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.

Below is a summary table for the 02/15/2017 CAMP monitoring event.

**Date: 02/15/17**

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.	0.05	0.00	0.00	0.12	0.22
Overall Ave.	0.00	0.00	0.00	0.05	0.13
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0435	0.0000	0.0000	0.0000	0.0153
Max. 15-min. Ave.	0.0778	0.0749	0.0839	0.1017	0.0771
Overall Ave.	0.0613	0.0578	0.0657	0.0731	0.0573

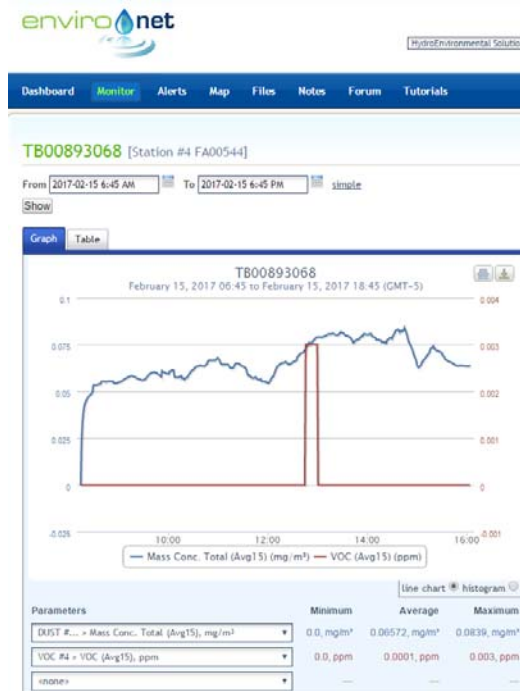
## Environet CAMP Data Summary Graphs



02/15/17 – Station #3 (Upwind)



02/15/17 – Station #1 (Downwind)



02/15/17 – Station #4 (Downwind)



02/15/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/15/17)  
February 16, 2017

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02/15/17 – Station #5 (Morgan Street)



# Memo

Date: February 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  
February 16, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Thursday February 16, 2017 site work. The remediation contractor continued backfilling the SA-2 excavation. In addition, they conducted site preparation activities including removal and stockpiling of topsoil from a few locations and removal and stockpiling of on-site soils (from non-source area locations) to be used for backfilling.

It should be noted that NYSDEC's subcontractor is continuing with their "off-site" work along Marbledale Road in the area of the quarry. However, there were no "off-site" work activities by NYSDEC's subcontractor on this day.

## DATA EVALUATION AND INTERPRETATIONS

In accordance with the RAWP, a CAMP is required during site activities involving soil disturbance activities. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-2 area on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Thursday February 16, 2017, neither water nor foam were required. There were no visible dusts released from the work activities for this event. An HDR representative was on site on Thursday, February 16,

2017 to observe the topsoil removal and stockpiling activities, backfill soil removal and stockpiling activities, SA-2 excavation backfilling activities, and CAMP monitoring activities. 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.

It should be noted that the Dust monitor at Station #2 was operating in the morning for this monitoring event; however, it was not transmitting data to the mode until just before noon as shown on the graph. HES conducted hourly checks during the morning interval and the spot check dust concentrations were as follows:

- 0800 - 0.0110 mg/m<sup>3</sup>
- 0900 - 0.0210 mg/m<sup>3</sup>
- 1000 - 0.0340 mg/m<sup>3</sup>
- 1100 - 0.0100 mg/m<sup>3</sup>

Below is a summary table for the 02/16/2017 CAMP monitoring event.

**Date: 02/16/17**

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	0.00	0.09	0.28
Overall Ave.	0.00	0.00	0.00	0.06	0.21
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0059	0.0000	0.0080	0.0161
Max. 15-min. Ave.	0.0095	0.0126	0.0329	0.0900	0.0241
Overall Ave.	0.0054	0.0085	0.0171	0.0122	0.0198



## Environet CAMP Data Summary Graphs



02/16/17 – Station #3 (Upwind)



02/16/17 – Station #1 (Downwind)



02/16/17 – Station #4 (Downwind)



02/16/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/16/17)  
February 17, 2017

Page 4



02/16/17 – Station #5 (Morgan Street)



# Memo

Date: February 22, 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  
February 17, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Friday February 17, 2017 site work. The remediation contractor began excavation activities at the Source Area 3 (SA-3) location.

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. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-3 area on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Friday February 17, 2017, neither water nor foam were required for odors or vapors emanating from the excavation area. However, during the excavation activities, a large number of buried small aerosol spray cans (labeled antiperspirant spray) were encountered on the north and part of the east sidewalls of the excavation area. As a precaution, excavation activities in this area were halted and the open excavation was sprayed with the vapor and odor suppressant foam and covered with plastic while the contractor determines an appropriate method of handling and disposal for the antiperspirant spray cans (source material).

Based on the age of the antiperspirant cans it is assumed that the cans likely contained chlorofluorocarbons (CFCs or the DuPont brand name Freon) since that was a common propellant for spray aerosols (including antiperspirants) prior to 1978 when the United States banned the use of CFCs as propellants in aerosol sprays. After discovering the antiperspirant cans in the SA-3 excavation, the contractor advanced a test pit about 5 feet east of the SA-3 excavation limits (nearest the building) and determined the discarded aerosol cans were not present in the test pit at the same depth they were uncovered in the SA-3 excavation area (~8 ft below grade).

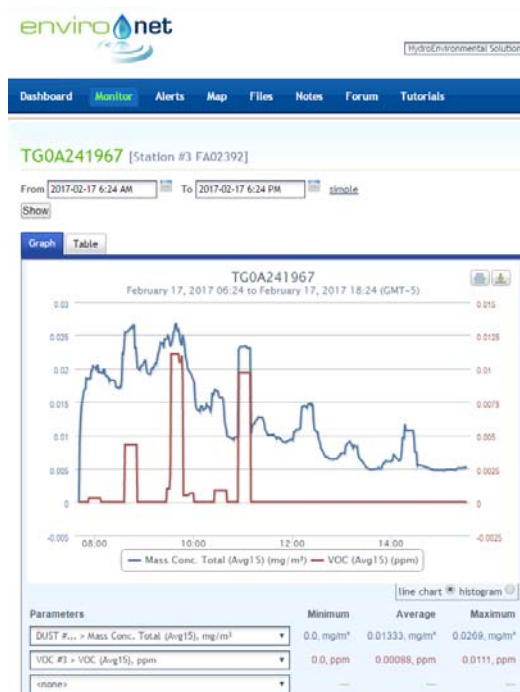
There were no visible dusts released from the work activities during this monitoring event. A NYSDEC representative was on site on Friday, February 17, 2017 to observe the SA-3 excavation activities and monitoring activities in and around the work area. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the five operating CAMP stations during site activities. 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 02/17/2017 CAMP monitoring event.

**Date: 02/17/17**

<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>	0.01	0.00	0.00	0.17	0.28
<b>Overall Ave.</b>	0.00	0.00	0.00	0.10	0.20
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0000	0.0000	0.0133	0.0135	0.0089
<b>Max. 15-min. Ave.</b>	0.0269	0.0516	0.0425	0.0920	0.0241
<b>Overall Ave.</b>	0.0133	0.0178	0.0213	0.0226	0.0149

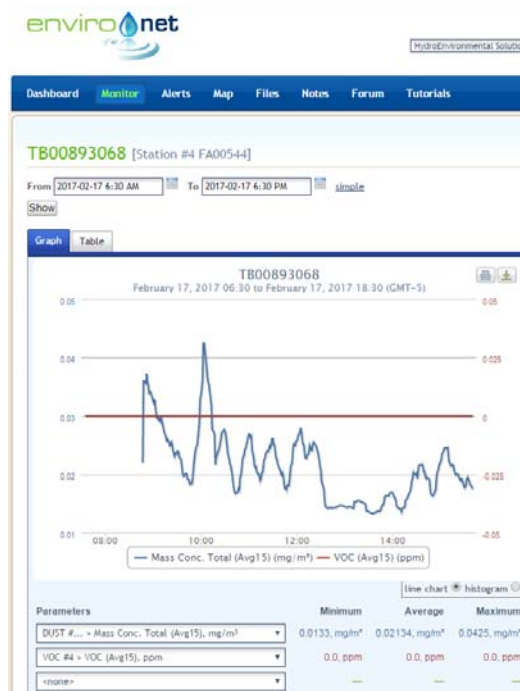
## Environet CAMP Data Summary Graphs



02/17/17 – Station #3 (Upwind)



02/17/17 – Station #1 (Downwind)



02/17/17 – Station #4 (Downwind)



02/17/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/17/17)  
February 22, 2017

Page 4



02/17/17 – Station #5 (Morgan Street)



# Memo

Date: February 22, 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  
February 21, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Tuesday February 21, 2017 site work. The remediation contractor resumed the Source Area 3 (SA-3) excavation activities and investigation of the extent of aerosol spray cans (source material) that were encountered on 2/17/2017. The soil that was removed from SA-3 on this day was manually screened to remove source material from the soil (aerosol spray cans labeled antiperspirant spray, small plastic jars of “cosmetic cream”, and a few small empty roll-on antiperspirant containers). It is possible that the jars of “cosmetic cream” are antiperspirant cream since the containers were found with the antiperspirant spray cans and roll-on antiperspirant containers; however, up to this point no labels have been found on the jars containing the cream to verify the type of cream it is. The screened soil was stockpiled on plastic for removal from the site. The source materials were segregated and placed in a 20-yard roll-off for future disposal. In addition, the contractor conducted general site preparation activities including cleaning up and consolidation of piles of vegetation debris in the northern section of the site that were generated during the site vegetation clearing activities conducted previously.

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. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-3 area on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew 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. On Tuesday February 21, 2017, neither water nor foam were required for odors or vapors emanating from the excavation area. There were no visible dusts released from the work activities for this event. A NYSDEC representative was on site on Tuesday, February 21, 2017 to observe the SA-3 excavation activities, other site work, and monitoring activities in and around the work areas. 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.

Below is a summary table for the 02/21/2017 CAMP monitoring event.

**Date: 02/21/17**

<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>	0.01	0.00	0.01	0.11	0.24
<b>Overall Ave.</b>	0.00	0.00	0.00	0.05	0.16
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0075	0.0095	0.0101	0.0110	0.0081
<b>Max. 15-min. Ave.</b>	0.0166	0.0401	0.0438	0.0256	0.0279
<b>Overall Ave.</b>	0.0120	0.0174	0.0228	0.0188	0.0141



## Environet CAMP Data Summary Graphs



02/21/17 – Station #3 (Upwind)



02/21/17 – Station #1 (Downwind)



02/21/17 – Station #4 (Downwind)



02/21/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/21/17)  
February 22, 2017

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02/21/17 – Station #5 (Morgan Street)



# Memo

Date: February 23, 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  
February 22, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Wednesday February 22, 2017 site work. The remediation contractor initiated excavation activities in Source Area 4 (SA-4). At a certain point when they excavated to about 5-6 feet they encountered what appeared to be some cosmetic products and garbage; at this point the contractor decided to halt excavation activities at SA-4 and moved north to Source Area 10 (SA-10) to excavate as they had trucks scheduled to haul soils off site for disposal. Stockpiled soils from the SA-3 excavation (segregated from the source materials) that were generated on February 21 were loaded onto trucks and hauled off for disposal along with soils from SA-4 and SA-10 on this day. The contractor conducted test pits within Source Area 6 (SA-6) and Source Area 9 (SA-9) to the target depths to determine if there were source materials in these locations that would require segregation activities. After verifying there were no source materials in these two areas, the test pits were backfilled. These two areas are scheduled for excavation on February 23.

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. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-3, SA-4, and SA-10 areas and the test pits conducted at SA-6 and SA-9 on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew Ave. for this monitoring event. The four onsite monitoring stations were repositioned as needed based on the excavation 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 February 22, 2017, neither water nor foam were required for odors or vapors emanating from the excavation areas or the test pit areas. There were no visible dusts released from the work activities during this monitoring event. A NYSDEC representative was on site on Wednesday, February 22, 2017 to observe the SA-3, SA-4, and SA-10 excavation activities, test pit activities, and monitoring activities in and around the work areas. The excavation areas were covered with plastic at the end of the day. 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.

Below is a summary table for the 02/22/2017 CAMP monitoring event.

**Date: 02/22/17**

<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	0.02	0.19	0.11	0.23
<b>Overall Ave.</b>	0.00	0.00	0.01	0.04	0.14
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0000	0.0000	0.0000	0.0000	0.0260
<b>Max. 15-min. Ave.</b>	0.0596	0.0792	0.0756	0.0796	0.0716
<b>Overall Ave.</b>	0.0331	0.0454	0.0475	0.0502	0.0447

## Environet CAMP Data Summary Graphs



02/22/17 – Station #3 (Upwind)



02/22/17 – Station #1 (Downwind)



02/22/17 – Station #4 (Downwind)



02/22/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/22/17)  
February 23, 2017

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02/22/17 – Station #5 (Morgan Street)



# Memo

Date: February 26, 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  
February 23, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Thursday February 23, 2017 site work. The remediation contractor conducted excavation activities in Source Area 10 (SA-10) and Source Area 6 (SA-6). These two areas were excavated to their target depths; end point samples were collected and the excavation areas were backfilled. Excavation activities at Source Area 9 (SA-9) were also initiated. In addition, the contractor conducted additional excavation activities at the north side of the Source Area 3 (SA-3) excavation in an attempt to determine the extent of aerosol spray cans (source material) that were initially encountered in this area on 2/17/2017. A total of 21 trucks of soil were loaded and sent off site for disposal on this day. 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 during the course of the day to account for the above-described work and locations of intrusive work. When a given source area was completed or not being worked on, it was reported to have been covered and monitored periodically with the hand-held air monitoring instruments that are employed in and around the active work areas.

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. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-10, SA-6, SA-9, and SA-3 areas on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellevue Ave. for this monitoring event. The four onsite monitoring stations



were repositioned as needed based on the excavation 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, odors, or VOCs from site activities. On Thursday February 23, 2017, neither water nor foam were required. There were no visible dusts released from the work activities during this monitoring event with the exception of a short duration around 1345. Based on discussions with NYSDEC and HES, a skid steer rig was moving up and down the "road" running north and south along the center of the site. It appears that the "road" began to dry out, causing visible dust to be released into the air in the vicinity of the skid steer rig as it moved along. HES and NYSDEC observed the visible dust and the skid steer rig operator was instructed to stop operating the rig. According to the NYSDEC inspector and HES, the visible dust subsided quickly after the skid steer rig stopped operating. During this interval the downwind CAMP stations at the perimeter of the work area did not measure dust concentrations requiring corrective measures.

A NYSDEC representative was on site on Thursday, February 23, 2017 to observe the SA-10, SA-6, SA-9, and SA-3 excavation activities, and monitoring activities in and around the work areas. The excavation areas were covered with plastic at the end of the day. 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.

It was noted that all of the CAMP dust monitors were showing elevated dust readings during the morning interval (including the upwind station [Sta. #3] and the off site station [Sta. #5]) compared with the data from previous recent monitoring events. The graphs of the 15-minute average dust concentrations show all of the stations were registering increasing concentrations during the morning interval, with decreasing levels especially around 1100. Dust monitors often over-read dust concentrations in humid weather conditions. It is likely that humid weather and moist ground conditions (morning fog) were causing all of the Dust monitors at the site to read elevated concentrations of dust; when the moisture lifted and the ground began to dry the readings at all of the stations decreased at about the same time. The two downwind stations (Sta. #1 and Sta. #4) and the "near building" station (Sta. #2) were not reading greater than  $100 \mu\text{g}/\text{m}^3$  above the upwind station at any time during this monitoring event. The highest 15-minute average concentration at downwind Station #4 was  $155 \mu\text{g}/\text{m}^3$  recorded at about 1040; at this same time, the Upwind Station (Sta. #3) was reading  $86 \mu\text{g}/\text{m}^3$ . The other three stations were reading similar concentrations during this same interval.



Below is a summary table for the 02/23/2017 CAMP monitoring event.

**Date: 02/23/17**

<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>	0.02	0.02	0.00	0.15	0.24
<b>Overall Ave.</b>	0.00	0.00	0.00	0.06	0.12
<b>Dust (mg/m<sup>3</sup>)</b>					
<b>Min. 15-min. Ave.</b>	0.0375	0.0442	0.0000	0.0531	0.0442
<b>Max. 15-min. Ave.</b>	0.0959	0.1163	0.1546	0.1260	0.1174
<b>Overall Ave.</b>	0.0620	0.0742	0.0830	0.0825	0.0706

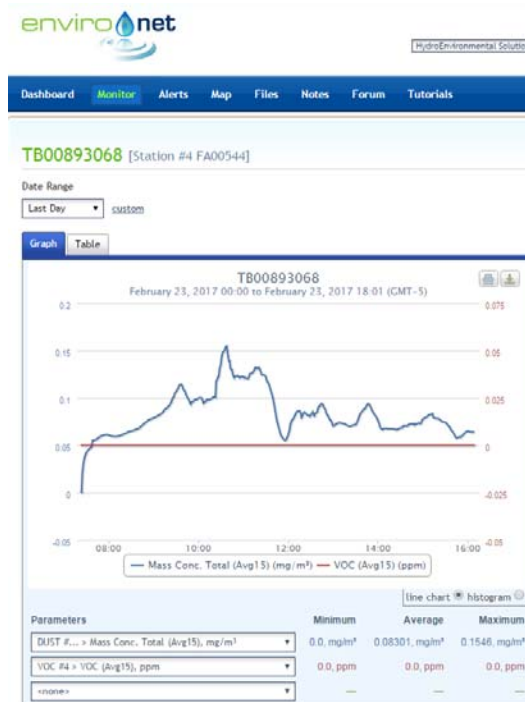
## Environet CAMP Data Summary Graphs



02/23/17 – Station #3 (Upwind)



02/23/17 – Station #1 (Downwind)



02/23/17 – Station #4 (Downwind)



02/23/17 – Station #2 (Near Buildings)

Marbledale Road BCP Site  
Summary of CAMP Results (02/23/17)  
February 26, 2017

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02/23/17 – Station #5 (Morgan Street)



## Memo

Date: February 27, 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  
February 24, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Friday February 24, 2017 site work. The remediation contractor conducted excavation activities in Source Area 8 (SA-8) and Source Area 9 (SA-9). The SA-8 area was excavated to the target depths; end point samples were collected and the excavation area was backfilled. Excavation activities at Source Area 9 (SA-9) were not completed; the excavation area was covered and fenced at the end of the day. The contractor conducted a test pit within Source Area 1 (SA-1) to the target depth to determine if there were source materials in this location that would potentially require segregation activities of source materials. After verifying there were no source materials in the test pit, it was backfilled and covered with plastic sheeting.

In addition, the contractor conducted excavation activities at the north side of Source Area 3 (SA-3) excavation. It was determined that the extent of aerosol spray cans (source material) at the north end of the excavation ended approximately 6 ft from the fence around the adjacent parking lot. This end wall was scraped down and the floor area at this end was excavated down to the target depth; a total of 5 end wall samples were collected along the north side and the east and west walls. The area along the north wall was then backfilled to prevent possible damage to the adjacent parking lot area to the north. The SA-3 excavation area was covered and fenced at the end of the day. A total of 12 trucks of soil were loaded and sent off site for disposal on Feb 24, 2017.

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 during the course of the day to account for the above-described work and locations of intrusive work. When a given source area was completed or not being worked on, it was covered and monitored periodically with the hand-held air monitoring instruments that are employed in and around the active work areas.

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. HES conducted CAMP monitoring during soil excavation and truck loading activities associated with the SA-8, SA-9, and SA-3 areas and the test pit conducted at SA-1 on this day. In accordance with the RAWP, four monitoring stations (upwind, two downwind, and a location between the work area and the nearest occupied building) are to be set up on-site to collect particulate (Dust) and volatile organic compound (VOC) measurements. In addition, HES has a 5<sup>th</sup> CAMP monitoring station off-site between the site and the Waverly Early Childhood Center. The CAMP station was situated on Morgan Street, near the intersection of Bellew Ave. for this monitoring event. The four onsite monitoring stations were repositioned as needed based on the excavation 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 Friday February 24, 2017, neither water nor foam were required for odors or vapors emanating from the excavation areas. There were no noticeable visible dusts released from the work activities during this monitoring event.

An HDR representative was on site on Friday, February 24, 2017 to observe the SA-8, SA-9, and SA-3 excavation activities, test pit activities, and monitoring activities in and around the work areas. The excavation areas were covered with plastic at the end of the day. 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.

It was noted that the upwind CAMP station registered an elevated dust concentration for a minute at 2:13 pm that caused a 15-min average of 0.4916 mg/m<sup>3</sup>. At the time of the elevated reading, Station #3 was positioned south of the SA-3 area where the contractor was excavating along the north wall of the excavation. There was no apparent reason for this elevated reading as there was no visible dust noted during this interval. It appears this was a very short duration event or possibly a meter malfunction because the concentrations immediately before and after this elevated reading were back down to typical dust concentrations that were observed on this day and during prior site work. See the table below showing the 1-minute concentrations around the time of the registered elevated concentration.

TG0A241967: Station #3 (Upwind Location)		
Date / Time	1-Minute Reading (mg/m <sup>3</sup> )	15-Minute Average (mg/m <sup>3</sup> )
2/24/2017 14:09	0.02	0.02
2/24/2017 14:10	0.02	0.02
2/24/2017 14:11	0.009	0.0193
2/24/2017 14:12	0.005	0.0183
2/24/2017 14:13	7.12	0.4916
2/24/2017 14:14	0.012	0.4911
2/24/2017 14:15	0.005	0.4901
2/24/2017 14:16	0.042	0.4915
2/24/2017 14:17	0.007	0.4907
2/24/2017 14:18	0.005	0.4897

It should be noted that the PID at the off-site station (Sta. #5) did not transmit data to the Environet site on this day.

HES was unable to get the FID to operate properly on this day for “at-hole” monitoring; the flame would not engage and stay lit. HES discussed the meter issues with the rental company and they are looking to exchange this unit with another one if HES meter troubleshooting is not successful to get the meter to become operational.

Currently there are three full 20-yd roll-offs 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; the contractor is waiting for direction and approval from their disposal facilities for the proper disposal of this source material. Source material from SA-3 that was not able to be placed in the roll-offs was placed on plastic sheeting inside the SA-3 excavation and covered with plastic. There were no PID readings around the site, including the covered roll-off containers or the SA-3 excavation area containing the source materials, at the end of the day.

NYSDEC received an odor complaint on Thursday February 23<sup>rd</sup>. from a location on Verdi Avenue adjacent to the northwest corner of the site. This afternoon, the NYSDEC project manager requested that HDR visit the property (with the owner’s permission) and take PID readings and also make odor observations. HDR went up to the property at approximately 3:00 pm with HES’ mobile PID; there were no PID readings above 0.0 ppm at the back of the property adjacent to the northern end of the site and there were no noticeable odors present.

Below is a summary table for the 02/24/2017 CAMP monitoring event.

**Date: 02/24/17**

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	*
Max. 15-min. Ave.	0.02	0.04	0.01	0.30	*
Overall Ave.	0.00	0.00	0.00	0.11	*
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0000	0.0000	0.0000	0.0045
Max. 15-min. Ave.	0.4916	0.0646	0.0525	0.0890	0.0354
Overall Ave.	0.0251	0.0254	0.0293	0.0320	0.0145

Note: \* The Station #5 PID was not transmitting VOC data to the Environet site for this CAMP monitoring event. HES noted the PID reading was 0.1 ppm at this station when it was shut down at the end of the day.

## EnviroNet CAMP Data Summary Graphs



02/24/17 – Station #3 (Upwind)



02/24/17 – Station #1 (Downwind)



02/24/17 – Station #4 (Downwind)



02/24/17 – Station #2 (Near Buildings)



Marbledale Road BCP Site  
Summary of CAMP Results (02/24/17)  
February 27, 2017

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02/24/17 – Station #5 (Morgan Street)



## Memo

Date: March 01, 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  
February 27, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Monday February 27, 2017 site work. On this day HES deployed two sets of CAMP stations 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 conducted excavation activities in the northern portion of the site including Source Area 9 (SA-9) and Source Area 7 (SA-7). The SA-9 area was excavated to the target depth; end point samples were collected and the excavation area was backfilled. Excavation activities at Source Area 9 (SA-7) were not completed; the excavation area was covered and fenced at the end of the day.

In the southern portion of the site, the contractor conducted a test pit within Source Area 1 (SA-1) to the target depth to determine if there were source materials in this location that would potentially require segregation activities of source materials. After verifying there were no source materials in the test pit, it was backfilled and covered with plastic sheeting. In addition, the contractor conducted excavation activities at Source Area 3 (SA-3) excavation. The SA-3 area was excavated to the target depth, the remaining end point samples were collected, and the excavation area was backfilled. A total of 15 trucks of soil were loaded and sent off site for disposal on February 27, 2017.

An 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. When a given source area was completed or not being worked on, it was covered and monitored periodically with the hand-held air monitoring instruments that are employed in and around the active work areas.

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 excavation and/or backfilling activities at two areas of the site simultaneously on this day; therefore, HES deployed an additional four CAMP stations to effectively monitor the work activities occurring at different portions of the site on this day. HES conducted CAMP monitoring during soil excavation, truck loading, and backfilling activities associated with the SA-9 and SA-8 areas at the northern area of the site with one set of CAMP stations and they conducted CAMP monitoring during soil excavation, truck loading, and backfilling activities associated with the SA-3 area and a test pit conducted in SA-1 in the southern portion of the site on this day. In accordance with the RAWP, 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 Bellew Ave. for this monitoring event. The eight onsite monitoring stations were repositioned as needed based on the excavation 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 February 27, 2017, neither water nor foam were required for odors or vapors emanating from the excavation areas. There were no noticeable visible dusts released from the work activities during this monitoring event.

A NYSDEC representative was on site on Monday, February 27, 2017 to observe the excavation activities, test pit activities, backfilling activities, and monitoring activities in and around the work areas. The excavation areas were covered with plastic at the end of the day. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the nine operating CAMP stations during site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

It should be noted that the PID at one of the downwind stations in the southern area (Sta. #4) did not transmit data to the Environet site until approximately 1100 (transfer cable was not hooked up). HES collected hourly readings at this station as follows:

- 0830; 0.0 ppm
- 0930; 0.0 ppm
- 1030; 0.0 ppm

HES was unable to get the FID to operate properly on this day for “at-hole” monitoring; the flame would not engage and stay lit. HES discussed the meter issues with the rental company and they are scheduled to exchange the malfunctioning unit with another one.

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; the contractor is waiting for direction and approval from their disposal facilities for the proper disposal of this source material. There were no PID readings around the site, including the covered roll-off containers containing the source materials, at the end of the day.

Below is a summary table for the 02/27/2017 CAMP monitoring event.

**Date: 02/27/17**

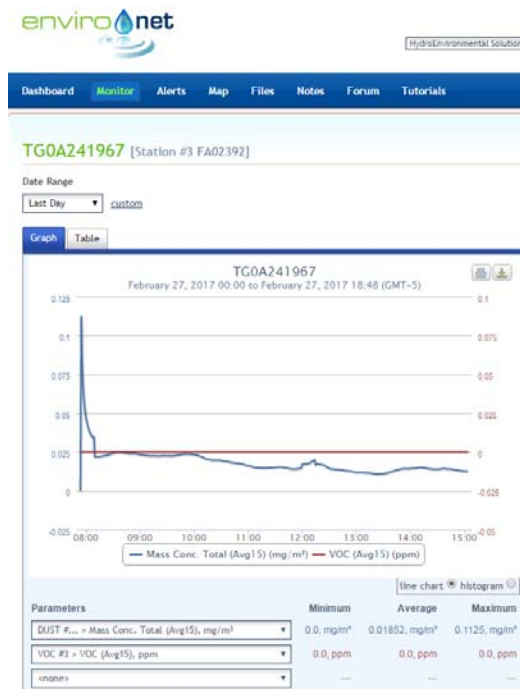
CAMP Data	Upwind (Sta. 3)	Downwind (Sta. 1)	Downwind (Sta. 4)	Buildings (Sta. 2)	Morgan Str. (Sta. 5)
<b>VOCs (ppm)</b>					
Min. 15-min. Ave.	0.00	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.00	0.00	0.00	0.30	0.26
Overall Ave.	0.00	0.00	0.00	0.11	0.16
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0000	0.0000	0.0000	0.0000	0.0154
Max. 15-min. Ave.	0.1125	0.0475	0.0761	0.0890	0.0610
Overall Ave.	0.0185	0.0278	0.0394	0.0320	0.0242

Note: \* The Station #4 PID was not transmitting VOC data to the Environet site until approximately 1100 for this CAMP monitoring event.

**Date: 02/27/17**

CAMP Data	Upwind (Sta. 7)	Downwind (Sta. 6)	Downwind (Sta. 9)	Buildings (Sta. 8)
<b>VOCs (ppm)</b>				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.24	0.25	0.05	0.29
Overall Ave.	0.06	0.05	0.02	0.05
<b>Dust (mg/m<sup>3</sup>)</b>				
Min. 15-min. Ave.	0.0197	0.0000	0.0075	0.0231
Max. 15-min. Ave.	0.0514	0.1013	0.0635	0.0640
Overall Ave.	0.0295	0.0392	0.0299	0.0377

## Environet CAMP Data Summary Graphs



02/27/17 - Station #3 (Upwind)



02/27/17 - Station #1 (Downwind)



02/27/17 - Station #4 (Downwind)



02/27/17 - Station #2 (Near Buildings)

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02/27/17 - Station #7 (Upwind)



02/27/17 - Station #6 (Downwind)



02/27/17 - Station #9 (Downwind)



02/27/17 - Station #8 (Near Buildings)

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02/27/17 - Station #5 (Morgan Street)





## Memo

Date: March 01, 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  
February 28, 2017

This memorandum was prepared by HDR to provide a review of the Community Air Monitoring Plan (CAMP) implementation during Tuesday February 28, 2017 site work. On this day HES deployed two sets of CAMP stations 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 conducted excavation activities in the northern portion of the site at Source Area 7 (SA-7). The SA-7 area was excavated to the target depth; end point samples were collected and the excavation area was backfilled.

In the southern portion of the site, the contractor began excavation activities in Source Area 1 (SA-1). Based on discussions between NYSDEC and NYSDOH, HES and the contractor, excavation activities in this area were not conducted within 20 feet of the property fence line. NYSDEC and NYSDOH have requested additional measures be taken when there are excavation activities that are within 20 feet of the property fence where the public has access (along Marbledale Road). Excavation activities at SA-1 were not completed; the excavation area was covered and fenced at the end of the day. A total of 15 trucks of soil were loaded and sent off site for disposal on February 28, 2017.

An 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. When a given source area was completed or not being worked on, it was covered and monitored periodically with the hand-held air monitoring instruments that are employed in and around the active work areas.

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 excavation and/or backfilling activities at two areas of the site simultaneously on this day; therefore, HES deployed an additional four CAMP stations to effectively monitor the work activities occurring at different portions of the site on this day. HES conducted CAMP monitoring during soil excavation, truck loading, and backfilling activities associated with SA-7 at the northern area of the site with one set of CAMP stations and they conducted CAMP monitoring during soil excavation, and truck loading activities associated with the SA-1 area in the southern portion of the site on this day with another set of CAMP stations. In accordance with the RAWP, 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. Since the contractor was working in the southern portion of the site at SA-1 that is near the property fence, the off-site CAMP station was positioned near the end of Hall Avenue, near the intersection with Morgan Street for this monitoring event. The eight onsite monitoring stations were repositioned as needed based on the excavation 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 Tuesday February 28, 2017, neither water nor foam were required for odors or vapors emanating from the excavation areas. There were no noticeable visible dusts released from the work activities during this monitoring event.

A NYSDEC representative was on site on Tuesday, February 28, 2017 to observe the excavation activities, backfilling activities, and monitoring activities in and around the work areas. The excavation areas were covered with plastic at the end of the day. During this monitoring event there were no exceedances of the CAMP alert triggers at any of the nine operating CAMP stations during site activities. None of the dust or VOC concentrations approached the action levels requiring a work stoppage or corrective measures.

The FID was not used during this monitoring event; HES incorrectly thought the FID was not required for monitoring since the contractor was not working in areas where elevated concentrations of Freon were detected in the soil gas samples during previous investigations. The FID will be used for all subsequent excavation activities involving SAs for at-hole monitoring.

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; the contractor is waiting for direction and approval from their disposal facilities for the proper disposal of this source material. There were no PID readings around the site, including the covered roll-off containers containing the source materials, at the end of the day.

Below is a summary table for the 02/28/2017 CAMP monitoring event.

**Date: 02/28/17**

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.	0.12	0.05	0.02	0.22	0.24
Overall Ave.	0.01	0.00	0.00	0.01	0.13
<b>Dust (mg/m<sup>3</sup>)</b>					
Min. 15-min. Ave.	0.0092	0.0109	0.0187	0.0000	0.0000
Max. 15-min. Ave.	0.0409	0.0625	0.0494	0.0547	0.0420
Overall Ave.	0.0181	0.0278	0.0328	0.0335	0.0189

**Date: 02/28/17**

CAMP Data	Upwind (Sta. 7)	Downwind (Sta. 6)	Downwind (Sta. 9)	Buildings (Sta. 8)
<b>VOCs (ppm)</b>				
Min. 15-min. Ave.	0.00	0.00	0.00	0.00
Max. 15-min. Ave.	0.09	0.00	0.20	0.23
Overall Ave.	0.02	0.00	0.11	0.07
<b>Dust (mg/m<sup>3</sup>)</b>				
Min. 15-min. Ave.	0.0141	0.0095	0.0029	0.0153
Max. 15-min. Ave.	0.0810	0.0373	0.0513	0.0413
Overall Ave.	0.0235	0.0195	0.0226	0.0246

## Environet CAMP Data Summary Graphs



02/28/17 - Station #3 (Upwind)



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02/28/17 - Station #7 (Upwind)



02/28/17 - Station #6 (Downwind)



02/28/17 - Station #9 (Downwind)



02/28/17 - Station #8 (Near Buildings)

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