1447429 Report No.: 57 **EA Project File:** Date: March 26, 2012 **EA Engineering, P.C.** Site No. 1-52-140 6712 Brooklawn Parkway, Suite 104 Contractor PM: AECOM - Walter Howard Syracuse, NY 13211-2158 NYSDEC PM: Jeffrey Dyber Construction Manager: AECOM - Kent Wagoner NYSDEC Division of Environmental Remediation Site Location: Albany St., Babylon, NY (Site No. 1-52-140) Air Monitoring: AECOM Health & Safety: AECOM Weather Conditions Pm General Description Sunny am Sunny **Temperature** 48 Pm am 56 Pm Wind Direction 19-22 mph NW am 23 mph NW **HEALTH & SAFETY:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No (X) NA () Were there any changes to the Health & Safety Plan? Were there any exceedances at the perimeter \*Yes ( ) No (X) NA () action level reported on this date? Were there any dust/odor issues reported or \*Yes ( ) observed on this date? No (X) NA () **WASTE HAULING:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No () NA (X) Were there any vehicles that did not display proper D.O.T. numbers and placards? \*Yes ( ) No () NA (X) Were there any vehicles which were not tarped? **Materials Removed From Site:** 

Disposal Facility: 110 Sand Company

Total Loads (on this date): 0
Total Loads (to date): 3

<sup>\*</sup>Actual (total weight) adjusted periodically based on weight tickets submitted by the disposal facilities.

Report No.: 57 EA Project File: 1447429 Date: March 26, 2012

## **Summary of Events:**

- On-site at 11:00, spoke with Kent Wagoner and Sam Rowe (AECOM) regarding planned work for the day. Layne Drilling (Layne) already onsite.
- Prior to the start of work, AECOM conducted health and safety meeting, discussed overall goals for day, and setup
  upwind and downwind air monitoring stations. Upwind station installed on corner of Beta Dr. and Benjoe Dr. and
  downwind station installed on Benjoe Dr., approximately 30-feet west of Albany Ave. Air monitoring was performed
  in accordance with the Contract Documents and AECOM's RAWP: Section 4.2 Dust Monitoring, Section 5.0 Air
  Monitoring Plan. No exceedances were recorded.
- Layne maintained poly under both drill rigs to prevent contamination of ground surface from drill rig fluids. At DDC-05, poly was also maintained along SCWA western fence line to act as a barrier to the sidewalk along Albany Ave. Traffic Controls and poly-lined fencing were maintained around DDC-07 exclusion zone.
- Over the weekend 20-ft of sand upheaved through the bottom of DDC-07 outer casing. Layne used a 6-inch diameter steel bailer to remove the material to 50.0-ft bgs. Tomorrow, Layne will continue drilling DDC-07.
- Layne began installing DDC-05 recirculation well (See RAWP Figure 2 for general DDC well construction). The well was constructed of 10-inch diameter Schedule 40 PVC. Centralizers were used to position the well in the borehole. The 12-ft long lower screen (Johnson HQ 0.020 slot) and 1-ft sump (blank casing) were set from 69.0' 82.0' bgs, with its bottom slot set near the surface of the clay aquitard (83.0' bgs). The 15-ft upper screen was screened from 13.0' 28.0' bgs to capture the approximate seasonal water table. Layne installed two, 2-inch diameter, Schedule 40 PVC piezometers, mounted on the outside of the DDC well. The deep piezometer (DDC-06-PD) was placed on the north side of DDC-05 and screened over the same interval as the lower DDC well screen. The shallow piezometer (DDC-06-PS) was placed on the south side of DDC-05 and screened over the same interval as the upper DDC well screen. Well construction activities were performed in accordance with AECOM's RAWP Section 2.3.1 Installation of DDC Wells. Tomorrow, Layne will begin placing annular materials at DDC-05.
- No concerns/complaints from residences were documented.
- Off-site at 12:00.

VISITORS TO SITE:		
NAME	Representing	Entered Exclusion/CRZ Zone
None		Yes () No ()

## PROJECT SCHEDULE:

- DDC well installation (16 January 18 April 2012).
- Replace DDC-06 piezometers (02 06 April 2012).
- Develop DDC wells (16 April 04 April 2012).
- DDC treatment system mobilization (02 April 2012).

# **ISSUES PENDING:**

None

# **ITEMS OF CONCERN:**

None

Site Representative: Robert Peterson

Date: 26 March 2012 Fobut Februson

1447429 Report No.: 58 **EA Project File:** Date: March 27, 2012 **EA Engineering, P.C.** Site No. 1-52-140 6712 Brooklawn Parkway, Suite 104 Contractor PM: AECOM - Walter Howard Syracuse, NY 13211-2158 NYSDEC PM: Jeffrey Dyber Construction Manager: AECOM - Kent Wagoner NYSDEC Division of Environmental Remediation Site Location: Albany St., Babylon, NY (Site No. 1-52-140) Air Monitoring: AECOM Health & Safety: AECOM Weather Conditions Pm General Description Sunny am Sunny **Temperature** 30 50 Pm am Pm Wind Direction 18-22 mph W am 18-22 mph W **HEALTH & SAFETY:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No (X) NA () Were there any changes to the Health & Safety Plan? Were there any exceedances at the perimeter \*Yes ( ) No (X) NA () action level reported on this date? Were there any dust/odor issues reported or \*Yes ( ) NA () observed on this date? No (X) **WASTE HAULING:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No () NA (X) Were there any vehicles that did not display proper D.O.T. numbers and placards? \*Yes ( ) No () NA (X) Were there any vehicles which were not tarped? **Materials Removed From Site:** 

**Disposal Facility: 110 Sand Company** 

Total Loads (on this date): 0 Total Loads (to date): 3

<sup>\*</sup>Actual (total weight) adjusted periodically based on weight tickets submitted by the disposal facilities.

Report No.: 58 EA Project File: 1447429 Date: March 27, 2012

# **Summary of Events:**

• On-site at 07:00, spoke with Kent Wagoner and Sam Rowe (AECOM) regarding planned work for the day. Layne Drilling (Layne) and Les Pennington (Wasatch) already onsite.

- Prior to the start of work, AECOM conducted health and safety meeting, discussed overall goals for day, and setup
  upwind and downwind air monitoring stations. Upwind station installed on corner of Beta Dr. and Benjoe Dr. and
  downwind station installed on Benjoe Dr., approximately 30-feet west of Albany Ave. Air monitoring was performed
  in accordance with the Contract Documents and AECOM's RAWP: Section 4.2 Dust Monitoring, Section 5.0 Air
  Monitoring Plan. No exceedances were recorded.
- Layne maintained poly under both drill rigs to prevent contamination of ground surface from drill rig fluids. At DDC-05, poly was also maintained along SCWA western fence line to act as a barrier to the sidewalk along Albany Ave. Traffic Controls and poly-lined fencing were maintained around DDC-07 exclusion zone.
- Layne continued drilling DDC-07 (Refer to AECOMs Revised RAWP Figure 1, Submittal No. 02686-002A) using dual rotary/air rotary techniques. Layne advanced the boring and outer casing to 78.0-feet bgs (Gardiners Clay estimated at 85.1-feet bgs). Water was added to the borehole during drilling operations to increase drilling efficiency. Water was obtained from the fire hydrant located on the corner of Albany Ave. and 45<sup>th</sup> Street. All drill cuttings and water generated during drilling were returned to the surface within the annulus between the drill string and outer casing. Cuttings and water were discharged to a poly lined roll-off. Water will be pumped from the roll-off to a weir tank for settling once water accumulates. All makeup water will be returned to DDC-06 well. All drill cuttings (fine-medium sands) were logged by Wasatch. Drilling activities were performed in accordance with Section 02686 Re-Circulation Wells of the Contract Documents. Tomorrow, Layne will advance boring to target depth (85-feet bgs) and clear sediment from borehole.
- Layne began installing annular materials at DDC-05 (See RAWP Figure 2 for general DDC well construction). Ricci #1 sand filter pack was placed appropriate to the lower and upper screens (lower screen: 69' 82' bgs; upper screen: 13' 28'). #1 Sand was extended 5-feet above both screens to prevent bentonite from enter well screens. Between the screens, the borehole annulus was filled with three to four feet long bentonite seals placed at 32, 46, 64 feet bgs, separated by two, 10 foot long sections of choker sand (#00 sand). Layne gradually removed 24" outer casing as annular material was added to borehole. Approximately 65-feet of casing were removed. Annular materials were placed in accordance with AECOM's RAWP Section 2.3.1 Installation of DDC Wells and Figure 2 General DDC Well Construction). Tomorrow, Layne will finish placing annular materials at DDC-05.

Annular Material	Depth (feet bgs)
#1 Sand (Lower Screen Filter Pack)	64 – 82
Bentonite	60 – 64
#00 Sand	50 – 60
Bentonite	46 – 50
#00 Sand	36 – 46
Bentonite	32 – 36
#1 Sand (Upper Screen Filter Pack)	8 – 32

- No concerns/complaints from residences were documented.
- Off-site at 17:00.

Report No.: 58 EA Project File: 1447429 Date: March 27, 2012

**VISITORS TO SITE:** 

NAME Representing Entered Exclusion/CRZ Zone

None Yes () No ()

**PROJECT SCHEDULE:** 

- DDC well installation (16 January 18 April 2012).
- Replace DDC-06 piezometers (02 06 April 2012).
- Develop DDC wells (16 April 04 April 2012).
- DDC treatment system mobilization (02 April 2012).

# **ISSUES PENDING:**

None

# **ITEMS OF CONCERN:**

• None

Site Representative: Robert Peterson

Date: 27 March 2012 Robert February

1447429 Report No.: 59 **EA Project File:** Date: March 28, 2012 **EA Engineering, P.C.** Site No. 1-52-140 6712 Brooklawn Parkway, Suite 104 Contractor PM: AECOM - Walter Howard Syracuse, NY 13211-2158 NYSDEC PM: Jeffrey Dyber Construction Manager: AECOM - Kent Wagoner NYSDEC Division of Environmental Remediation Site Location: Albany St., Babylon, NY (Site No. 1-52-140) Air Monitoring: AECOM Health & Safety: AECOM Weather Conditions **Rain Showers** Рm General Description Sunny am **Temperature** 47 59 Pm am Pm Wind Direction 12-14 mph S am 14-15 mph SW **HEALTH & SAFETY:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No (X) NA () Were there any changes to the Health & Safety Plan? Were there any exceedances at the perimeter \*Yes ( ) No (X) NA () action level reported on this date? Were there any dust/odor issues reported or \*Yes ( ) observed on this date? No (X) NA () **WASTE HAULING:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No () NA (X) Were there any vehicles that did not display proper D.O.T. numbers and placards? \*Yes ( ) No () NA (X) Were there any vehicles which were not tarped? **Materials Removed From Site:** 

**Disposal Facility: 110 Sand Company** 

Total Loads (on this date): 0 Total Loads (to date): 3

<sup>\*</sup>Actual (total weight) adjusted periodically based on weight tickets submitted by the disposal facilities.

Report No.: 59 EA Project File: 1447429 Date: March 28, 2012

# **Summary of Events:**

 On-site at 07:00, spoke with Kent Wagoner and Sam Rowe (AECOM) regarding planned work for the day. Layne Drilling (Layne) and Les Pennington (Wasatch) already onsite.

- Prior to the start of work, AECOM conducted health and safety meeting, discussed overall goals for day, and setup
  upwind and downwind air monitoring stations. Upwind station installed on corner of Beta Dr. and Benjoe Dr. and
  downwind station installed on Benjoe Dr., approximately 30-feet west of Albany Ave. Air monitoring was performed
  in accordance with the Contract Documents and AECOM's RAWP: Section 4.2 Dust Monitoring, Section 5.0 Air
  Monitoring Plan. No exceedances were recorded.
- Layne maintained poly under both drill rigs to prevent contamination of ground surface from drill rig fluids. At DDC-05, poly was also maintained along SCWA western fence line to act as a barrier to the sidewalk along Albany Ave. Traffic Controls and poly-lined fencing were maintained around DDC-07 exclusion zone.
- Layne finished drilling DDC-07 (Refer to AECOMs Revised RAWP Figure 1, Submittal No. 02686-002A) using dual rotary/air rotary techniques. Layne advanced the boring and outer casing to 85.0-feet bgs and encountered Gardiners Clay. Depth of clay aquitard was confirmed by Wasatch. Water was added to the borehole during drilling operations to increase drilling efficiency. Water was obtained from the fire hydrant located on the corner of Albany Ave. and 45<sup>th</sup> Street. All drill cuttings and water generated during drilling were returned to the surface within the annulus between the drill string and outer casing. Cuttings and water were discharged to a poly lined roll-off. Water will be pumped from the roll-off to a weir tank for settling once water accumulates. All makeup water will be returned to DDC-06 well. All drill cuttings (fine-medium sands) were logged by Wasatch. Drilling activities were performed in accordance with Section 02686 Re-Circulation Wells of the Contract Documents. Tomorrow, Layne will begin installing annular materials.
- Layne finished installing annular materials at DDC-05 (See RAWP Figure 2 for general DDC well construction). Ricci #1 sand filter pack was placed appropriate to the lower and upper screens (lower screen: 69' 82' bgs; upper screen: 13' 28'). #1 Sand was extended 5-feet above both screens to prevent bentonite from enter well screens. Between the screens, the borehole annulus was filled with three to four feet long bentonite seals placed at 32, 46, 64 feet bgs, separated by two, 10 foot long sections of choker sand (#00 sand). Layne gradually removed 24" outer casing as annular material was added to borehole. Annular materials were placed in accordance with AECOM's RAWP Section 2.3.1 Installation of DDC Wells and Figure 2 General DDC Well Construction).

Annular Material	Depth (feet bgs)
#1 Sand (Lower Screen Filter Pack)	64 – 82
Bentonite	60 – 64
#00 Sand	50 - 60
Bentonite	46 – 50
#00 Sand	36 – 46
Bentonite	32 – 36
#1 Sand (Upper Screen Filter Pack)	8 – 32
Bentonite	4 – 8
#1 Sand	0 – 4

- Layne cut DDC-05 and associated piezometers at grade. Well head assembly will be installed above ground due to shallow groundwater elevations at this location. A housing structure will be placed over the well head assembly.
- No concerns/complaints from residences were documented.
- Off-site at 16:30.

Report No.: 59 EA Project File: 1447429 Date: March 28, 2012

VISITORS TO SITE:

NAME Representing Entered Exclusion/CRZ Zone

None Yes () No ()

# **PROJECT SCHEDULE:**

- DDC well installation (16 January 18 April 2012).
- Replace DDC-06 piezometers (02 06 April 2012).
- Develop DDC wells (16 April 04 April 2012).
- DDC treatment system mobilization (02 April 2012).

# **ISSUES PENDING:**

None

# **ITEMS OF CONCERN:**

None

Site Representative: Robert Peterson

Date: 28 March 2012 Robert Peterson

Report No.: 59 EA Project File: 1447429 Date: March 28, 2012

# **Photographs**



View of DDC-05, associated piezometers, and treatment air lines.



Layne mobilizing rig to install DDC-06 piezometers (7-ft east of DDC-06).

1447429 Report No.: 60 **EA Project File:** Date: March 29, 2012 **EA Engineering, P.C.** Site No. 1-52-140 6712 Brooklawn Parkway, Suite 104 Contractor PM: AECOM - Walter Howard Syracuse, NY 13211-2158 NYSDEC PM: Jeffrey Dyber Construction Manager: AECOM - Kent Wagoner NYSDEC Division of Environmental Remediation Site Location: Albany St., Babylon, NY (Site No. 1-52-140) Air Monitoring: AECOM Health & Safety: AECOM Weather Conditions General Description **Partly Cloudy** Pm **Overcast** am **Temperature** 43 57 Pm am Pm Wind Direction 13 mph NNW am 13 mph NNW **HEALTH & SAFETY:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No (X) NA () Were there any changes to the Health & Safety Plan? Were there any exceedances at the perimeter \*Yes ( ) No (X) NA () action level reported on this date? Were there any dust/odor issues reported or \*Yes ( ) NA () observed on this date? No (X) **WASTE HAULING:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No () NA (X) Were there any vehicles that did not display proper D.O.T. numbers and placards? \*Yes ( ) No () NA (X) Were there any vehicles which were not tarped? **Materials Removed From Site:** 

**Disposal Facility: 110 Sand Company** 

Total Loads (on this date): 0 Total Loads (to date): 3

<sup>\*</sup>Actual (total weight) adjusted periodically based on weight tickets submitted by the disposal facilities.

Report No.: 60 EA Project File: 1447429 Date: March 29, 2012

## **Summary of Events:**

- On-site at 07:00, spoke with Kent Wagoner and Sam Rowe (AECOM) regarding planned work for the day. Layne Drilling (Layne) and Les Pennington (Wasatch) already onsite.
- Prior to the start of work, AECOM conducted health and safety meeting, discussed overall goals for day, and setup
  upwind and downwind air monitoring stations. Upwind station installed on corner of Beta Dr. and Benjoe Dr. and
  downwind station installed on Benjoe Dr., approximately 30-feet west of Albany Ave. Air monitoring was performed
  in accordance with the Contract Documents and AECOM's RAWP: Section 4.2 Dust Monitoring, Section 5.0 Air
  Monitoring Plan. No exceedances were recorded.
- Layne maintained poly under both drill rigs to prevent contamination of ground surface from drill rig fluids. Traffic Controls and poly-lined fencing were maintained around DDC-07 exclusion zone.
- Layne began installing DDC-07 recirculation well (See RAWP Figure 2 for general DDC well construction). The well was constructed of 10-inch diameter Schedule 40 PVC. Centralizers were used to position the well in the borehole. The 12-ft long lower screen (Johnson HQ 0.020 slot) and 1-ft sump (blank casing) were set from 70.6' 83.6' bgs, with its bottom slot set near the surface of the clay aquitard. The 15-ft upper screen was screened from 14.0' 29.0' bgs to capture the approximate seasonal water table. Layne installed two, 2-inch diameter, Schedule 40 PVC piezometers, mounted on the outside of the DDC well. The deep piezometer (DDC-07-PD) was placed on the north side of DDC-07 and screened over the same interval as the lower DDC well screen. The shallow piezometer (DDC-07-PS) was placed on the south side of DDC-07 and screened over the same interval as the upper DDC well screen. Tomorrow, Layne will begin placing annular materials at DDC-07.
- Layne mobilized drill rig to DDC-06 to re-install piezometers. Piezometers will be placed approximately 7-feet east
  of DDC-06 as flush mounts. Layne advanced the boring and 6-inch outer casing to 82.0-feet bgs and encountered
  Gardiners Clay. Wasatch and EA confirmed depth of clay aquitard. Both the upper and lower piezometers will be
  installed in the same borehole. The well screens will be separated by a 15-foot long section of bentonite.
   Tomorrow, Layne will begin installing both piezometers and annular materials.
- No concerns/complaints from residences were documented.
- Off-site at 17:00.

VISITORS TO SITE:			
NAME	Representing	Entered Exclusion/CRZ Zone	
None		Yes ()	No ( )

### PROJECT SCHEDULE:

- DDC well installation (16 January 18 April 2012).
- Replace DDC-06 piezometers (02 06 April 2012).
- Develop DDC wells (16 April 04 April 2012).
- DDC treatment system mobilization (02 April 2012).

## **ISSUES PENDING:**

None

## **ITEMS OF CONCERN:**

• None

Site Representative: Robert Peterson

Date: 29 March 2012 Robert February

Report No.: 60 EA Project File: 1447429 Date: March 29, 2012

# **Photographs**



Drill rig mobilized for DDC-06 piezometer re-installation.



View of 6-inch outer diameter casing and drill string installing DDC-06 piezometer borehole.

Report No.: 60 EA Project File: 1447429 Date: March 29, 2012



Layne installing lower screen at DDC-07.

**EA Project File:** 1447429 Report No.: 61 Date: March 30, 2012 **EA Engineering, P.C.** Site No. 1-52-140 6712 Brooklawn Parkway, Suite 104 Contractor PM: AECOM - Walter Howard Syracuse, NY 13211-2158 NYSDEC PM: Jeffrey Dyber Construction Manager: AECOM - Kent Wagoner NYSDEC Division of Environmental Remediation Site Location: Albany St., Babylon, NY (Site No. 1-52-140) Air Monitoring: AECOM Health & Safety: AECOM Weather Conditions Pm General Description Sunny am Sunny **Temperature** 40 Pm am 51 Pm Wind Direction 5-6 mph NW am 7-8 mph W **HEALTH & SAFETY:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes ( ) No (X) NA () Were there any changes to the Health & Safety Plan? Were there any exceedances at the perimeter \*Yes ( ) No (X) NA () action level reported on this date? Were there any dust/odor issues reported or \*Yes ( ) NA () observed on this date? No (X) **WASTE HAULING:** (\*If any box(s) below are checked "Yes", list the deviation under the "Items for Concern" section of this report). \*Yes (X) No () NA () Were there any vehicles that did not display proper D.O.T. numbers and placards? \*Yes (X) No () NA () Were there any vehicles which were not tarped? **Materials Removed From Site:** 

**Disposal Facility: 110 Sand Company** 

Total Loads (on this date): 1 Total Loads (to date): 4

<sup>\*</sup>Actual (total weight) adjusted periodically based on weight tickets submitted by the disposal facilities.

Report No.: 61 EA Project File: 1447429 Date: March 30, 2012

## **Summary of Events:**

- On-site at 07:00, spoke with Kent Wagoner and Sam Rowe (AECOM) regarding planned work for the day. Layne Drilling (Layne) and Les Pennington (Wasatch) already onsite.
- Prior to the start of work, AECOM conducted health and safety meeting, discussed overall goals for day, and setup
  upwind and downwind air monitoring stations. Upwind station installed on corner of Beta Dr. and Benjoe Dr. and
  downwind station installed on Benjoe Dr., approximately 30-feet west of Albany Ave. Air monitoring was performed
  in accordance with the Contract Documents and AECOM's RAWP: Section 4.2 Dust Monitoring, Section 5.0 Air
  Monitoring Plan. No exceedances were recorded.
- Layne maintained poly under both drill rigs to prevent contamination of ground surface from drill rig fluids. Traffic Controls and poly-lined fencing were maintained around DDC-07 exclusion zone.
- Layne began installing annular materials at DDC-07 (See RAWP Figure 2 for general DDC well construction). Ricci #1 sand filter pack was placed appropriate to the lower screen (70.6' 83.6' bgs). #1 Sand was extended 5-feet above the screen to prevent bentonite from entering well screen. Layne gradually removed 24" outer casing as annular material was added to borehole. Annular materials were placed in accordance with AECOM's RAWP Section 2.3.1 Installation of DDC Wells and Figure 2 General DDC Well Construction. Monday (02 April 2012), Layne will continue placing annular materials at DDC-07.
- Layne installed deep DDC-06 piezometer (DDC-06-PD). Piezometer was screened over the same interval as the lower DDC well screen (70.5' 82.5' bgs). #1 Sand filter pack was placed appropriate to the screened interval.
- Aarco Environmental transported DDC-07 roll-off to 110 Sand Company, Melville, NY for disposal. Waste manifest signed by Rob Peterson (EA) on behalf of NYSDEC. See above section "Waste Hauling" for additional details.
- No concerns/complaints from residences were documented.
- Off-site at 10:30.

VISITORS TO SITE:			
NAME	Representing	Entered Exclusion/CRZ Zone	
None		Yes () No ()	

### PROJECT SCHEDULE:

- DDC well installation (16 January 18 April 2012).
- Replace DDC-06 piezometers (02 06 April 2012).
- Develop DDC wells (16 April 04 April 2012).
- DDC treatment system mobilization (02 April 2012).

## **ISSUES PENDING:**

None

## ITEMS OF CONCERN:

• None

Site Representative: Robert Peterson

Date: 30 March 2012 Robert Peterson