Study Area Characterization Work Plan Addendum Number 3
Additional Field Investigation Activities

Site Name and Location:	Study Area, Corning, NY
Order on Consent and Administrative Settlement:	NYSDEC Project ID 851046
Corning Incorporated Project Coordinator:	Mike Ford
NYSDEC Project Coordinator:	Gregory B. MacLean
Date:	March 20, 2015

Introduction

Weston Solutions, Inc. (WESTON®), on behalf of Corning Incorporated (Corning) has prepared this Study Area Characterization Work Plan Addendum Number 3 (Work Plan Addendum Number 3) for additional field investigation activities within the Study Area to supplement the approved Study Area Characterization Work Plan (Work Plan; Weston, June 2014) being implemented pursuant to the Order on Consent and Administrative Settlement between the New York State Department of Environmental Conservation (NYSDEC) and Corning (Order on Consent). The Study Area is bounded by Pyrex Street on the west, E. Pulteney Street on the north, Post Creek on the east and the Chemung River on the south.

The additional field investigation activities are being conducted to:

1. Determine the nature and extent of fill material containing ash, brick and/or glass encountered in samples collected at the Corning-Painted Post School District, Corning Christian Academy and Corning Memorial Stadium properties.

2. Assess the nature and extent of surface soil concentrations at the NYSDEC Subpart 375-6 Remedial Program Residential Soil Cleanup Objectives (Residential SCOs) in samples collected at the Corning-Painted Post School District property.

Sampling activities will be performed using the methods and procedures described in Section 4.2 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be analyzed for the constituents discussed below using the methodologies described in Section 4.2.6 and Appendix C (Quality Assurance Project Plan) of the Work Plan.

Upon approval by NYSDEC, work under this Work Plan Addendum Number 3 will be performed as a supplemental scope of work pursuant to Section III.B.1 of the Order on Consent.

Study Area Characterization Work Plan Addendum Number 3
Additional Field Investigation Activities
Study Area, Corning, NY
NYSDEC Project ID 851046
(continued)

I. Corning-Painted Post School District Property

Background:

In accordance with the Work Plan, 14 soil borings were advanced at the Corning-Painted Post School District Property between July 30, 2014 and August 12, 2014. Two (2) to four (4) soil samples were collected at each soil boring location. A total of 32 primary samples were collected at the Corning-Painted Post School District property.

In addition to the soil boring program, 20 surface and shallow soil sampling locations were sampled between July 30, 2014 and August 8, 2014. At each of these sampling locations a surface (0 to 2 in bgs) and shallow (2 to 24 in bgs) soil sample was collected where possible (i.e., auger refusal was not encountered above 24 in bgs).

Additional Sampling Activities:

The proposed additional field investigations include the installation and sampling of 12 soil borings and collection of three (3) surface soil samples at the Corning-Painted Post School District property. The locations of the soil borings and surface soil samples are illustrated on Figure 1, attached, and described below.

The additional sampling activities, proposed in Work Plan Addendum Number 3 at the Corning-Painted Post High School property will be performed under the access agreement between Corning and the Corning-Painted Post School District.

- Two (2) soil borings will be installed along the northern edge of the parking lot, east of soil boring CPPSB003, and one (1) soil boring will be installed along the western edge of the tennis courts at surface and shallow soil sample location CPPSS014 for horizontal delineation of the layer of fill material observed in the area of the new athletic fields.

  The soil borings will be advanced via Geoprobe to 15 ft bgs using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

  If a layer of fill material (non-native material containing ash, brick and/or glass with a thickness of greater than 1 inch) is encountered while drilling the borings, three (3) soil samples will be collected; one from the soil at 0 to 2 ft bgs excluding the sod layer, one from the layer of fill material that is observed, and one from the native material beneath the fill material. Samples will be analyzed for Target Analyte List

(TAL) metals plus mercury, Target Compound List (TCL) semi-volatile organic compounds (SVOCs) as listed in Table 4-3 of the Work Plan, and Toxicity Characteristic Leaching Procedure (TCLP) Resource Conservation Recovery Act (RCRA) metals.

If no layer of fill material is encountered in the borings, two (2) soil samples will be collected per boring; one from the soil at 0 to 2 ft bgs excluding the sod layer, and one sample of the native material at depth. Samples will be analyzed for the constituents of potential concern (COPCs) as defined in the Work Plan (arsenic, cadmium, and lead) plus mercury.

- At the request of NYSDEC, two (2) soil borings will be installed in the north western parking lot near the entrance to the Corning-Painted Post High School to investigate the subsurface soils in this area.

  The soil borings will be advanced via Geoprobe to 15 ft bgs using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

  If a layer of fill material is encountered while drilling the borings, up to three (3) soil samples will be collected; one from the soil at 0 to 2 ft bgs where present or from the 2-foot interval immediately beneath the defined, newly placed, soil/asphalt cover; one from the layer of fill material that is observed; and one from the native material beneath the fill material. Samples will be analyzed for TAL metals plus mercury, SVOCs and TCLP metals.

  If no layer of fill material is encountered in the borings, up to two (2) soil samples will be collected per boring; one from the soil at 0 to 2 ft bgs where present or from the 2-foot interval immediately beneath the defined, newly placed, soil/asphalt cover, and one from the native material at depth. Samples will be analyzed for COPCs (arsenic, cadmium, and lead) as defined in the Work Plan plus mercury.

- One (1) soil boring will be installed in the vicinity of soil boring CPPSB008 to delineate the vertical extent of soils greater than Residential SCOs, excluding iron.

  The soil boring will be advanced via Geoprobe to 16 ft bgs using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

One soil sample will be collected from the native soil, at a depth of approximately 8 to 10 ft bgs, and analyzed for COPCs (arsenic, cadmium, and lead) as defined in the Work Plan. One soil sample will also be collected from the native soil at a deeper depth of approximately 14 to 16 ft bgs, sent to the laboratory and held. If the preliminary analytical results of the sample collected from approximately 8 to 10 ft bgs are above the Residential SCOs, then the deeper sample will be analyzed.

- One (1) soil boring will be installed in the vicinity of soil boring CPPSB010 to delineate the vertical extent of soils greater than Residential SCOs, excluding iron.

  The soil boring will be advanced via Geoprobe to 20 ft using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

  One soil sample will be collected from the native soil at a depth of approximately 14 to 16 ft bgs and analyzed for COPCs (arsenic, cadmium, and lead) as defined in the Work Plan and SVOCs. One soil sample will also be collected from the native soil at a depth of approximately 18 to 20 ft bgs, sent to the laboratory and held. If the preliminary analytical results of the sample collected from approximately 14 to 16 ft bgs are above the Residential SCOs, then the deeper sample will be analyzed.

- At the request of NYSDEC, four (4) soil borings will be installed approximately 25 to 50 feet from soil boring CPPSB010 in each direction to delineate the horizontal extent of soils greater than Residential SCOs, excluding iron.

  The soil borings will be advanced via Geoprobe to 16 ft using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

  Soil cores retrieved from the interval of 2.5 to 11 ft bgs of each soil boring will be screened using a photoionization detector (PID), and one (1) sample will be collected for volatile organic compound (VOC) analysis from each soil boring where PID readings are the highest or at approximately 7 ft bgs, if all PID readings are at background levels.

  In addition, two (2) soil samples will be collected from each soil boring and analyzed for SVOCs; one from the interval of 2.5 to 11 ft bgs; and one from the interval of 11 to 16 ft bgs.

- One (1) soil boring will be installed in the vicinity of soil boring CPPSB014 to delineate the vertical extent of soils greater than Residential SCOs, excluding iron in the vicinity of soil borings CPPSB013 and CPPSB014.

  The soil boring will be advanced to 20 ft using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

  One soil sample will be collected from the native soil at a depth of approximately 16 to 18 ft bgs and analyzed for COPCs (arsenic, cadmium, and lead) as defined in the approved Work Plan. One soil sample will also be collected from the native soil at a depth of approximately 18 to 20 ft bgs, sent to the laboratory and held. If the preliminary analytical results of the sample collected from approximately 16 to 18 ft bgs are above the Residential SCOs, then the deeper sample will be analyzed.

- Three (3) surface soil samples (0 to 2 in bgs) will be collected at locations within the courtyard at the Corning-Painted Post High School, in the vicinity of surface soil sample CPPSS002, using the methods described in Section 4.2.4 and Appendix D (Standard Operating Procedures) of the Work Plan. All samples will be analyzed for COPCs (i.e., lead, cadmium and arsenic). Where ash, brick, or glass pieces are observed in the soils, samples will be analyzed for TAL metals plus mercury, TCLP metals, and SVOCs.

Corning Memorial Stadium Property

Background:

In accordance with the Work Plan, three (3) soil borings were advanced at the Corning Memorial Stadium Property on August 8, 2014. Two (2) to three (3) soil samples were collected at each boring location. A total of seven (7) primary samples were collected at the Corning Memorial Stadium property.

In addition to the soil boring program, 16 surface and shallow soil sampling locations were sampled between August 1 and August 5, 2014. At each of these locations a surface (0 to 2 in bgs) and shallow (2 to 24 in bgs) soil sample was collected where possible (i.e., auger refusal was not encountered above 24 in bgs).

During the August 2014 sampling activities at surface and shallow sampling location CMSSS011 at the Corning Memorial Stadium Property, ash was encountered. The ash

was encountered in the last half inch of the shallow soil sampling interval, from 23.5 to 24 inches bgs. As directed by NYSDEC during sampling activities a hand auger was used to advance to a depth of 29 inches bgs where the ash appeared to end and a sample of the layer of fill material was collected from 24 to 29 inches bgs.

Analytical data for soil samples collected on August 4, 2014 indicate concentrations of arsenic, cadmium, and lead above the Residential SCOs at 0 to 2 in bgs at sample location CMSSS012. Based on the Corning-Painted Post School District Soil Depth Map provided to Corning by NYSDEC on January 22, 2015, this area was re-graded and cover material was placed in this area as part of the Corning-Painted Post High School expansion project. The re-grading work was performed following the collection of this sample, therefore no additional work is proposed at sample location CMSSS012.

The athletic field at the Corning Memorial Stadium property is an engineered surface constructed of synthetic turf materials. Samples were not collected beneath the engineered surface during the previous sampling activities in order to preserve the integrity of the field. The Corning-Painted Post School District intends to re-surface the athletic field area at the Corning Memorial Stadium during the summer of 2015. As requested by the NYSDEC, an investigation of the subsurface soil conditions at the athletic field will be performed prior to the construction activities.

Additional Sampling Activities:

The proposed additional field investigations include the installation and sampling of ten (10) soil borings at the Corning Memorial Stadium property. The locations of the soil borings are illustrated in Figure 2, attached, and described below.

The additional sampling activities, proposed in Work Plan Addendum Number 3 at the Corning Memorial Stadium will be performed under the existing access agreement between Corning and the City of Corning.

- Nine (9) soil borings will be installed in the athletic field area to investigate the potential presence of a layer of fill material containing ash, brick, and/or glass in the subsurface soils beneath the engineered surface. A layer of fill material is defined as non-native material containing ash, brick, and/or glass with a thickness of greater than 1 inch.

  The soil borings will installed via Geoprobe to 15 ft bgs using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan.

Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

If a layer of fill material is encountered while drilling the borings, up to three (3) soil samples will be collected; one from the soil below the engineered surface at 0 to 2 ft bgs if present, one from the layer of fill material that is observed; and one from the native material beneath the layer of fill material. Samples will be analyzed for TAL metals plus mercury, SVOCs and TCLP metals.

If no layer of fill material is encountered in the borings, up to two (2) soil samples will be collected per boring; one from the soil below the engineered surface at 0 to 2 ft bgs if present and one of the native material at depth. Samples will be analyzed for COPCs (arsenic, cadmium, and lead) as defined in the Work Plan plus mercury.

- One (1) soil boring will be installed in the vicinity of surface sample CMSSS011 to delineate the vertical extent of the layer of fill material encountered during shallow soil sampling activities.

  The soil boring will installed via Geoprobe to 15 ft bgs using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

  If a layer of fill material is encountered deeper than 29 in bgs while drilling the boring, two (2) soil samples will be collected; one from the layer of fill material that is observed; and one from the native material beneath the layer of fill material. Samples will be analyzed for TAL metals plus mercury, SVOCs and TCLP metals.

  If a layer of fill material is not encountered deeper than 29 in bgs in the boring, one (1) soil sample will be collected of the native material at depth. Samples will be analyzed for COPCs (arsenic, cadmium, and lead) as defined in the Work Plan plus mercury.

Corning Christian Academy Property

Background:

In accordance with the Work Plan, two (2) soil borings were advanced at the Corning Christian Academy Property on August 29, 2014. Two (2) soil samples were collected at each boring location. A total of four (4) primary samples were collected at the Corning Christian Academy property.

In addition to the soil boring program, 14 surface and shallow soil sampling locations were sampled between July 29 and August 7, 2014. At each of these locations a surface (0 to 2 in bgs) and shallow (2 to 24 in bgs) soil sample was collected where possible (i.e., auger refusal was not encountered above 24 in bgs).

Analytical data for soil samples collected on July 29, 2014 indicate a concentration of arsenic above the Residential SCOs at 2 to 24 in bgs at sample location CCASS005. In accordance with the NYSDEC-approved Study Area Characterization Work Plan Addendum Number 1, four (4) soil borings were installed around sample location CCASS005 on December 18, 2014.

Additional Sampling Activities:

The proposed additional field investigations include the installation and sampling of three (3) soil borings at the Corning Christian Academy property. The locations of the soil borings are illustrated in Figure 3, attached, and described below.

Written consent to access from the Christian Corning Academy will be needed prior to conducting the additional field investigation activities.

If a layer of fill material containing ash, brick, and/or glass is encountered during the soil borings, up to four (4) additional soil borings will be installed, at the locations shown on Figure 3 attached to determine the horizontal extent of the fill material.

The soil borings will installed via Geoprobe to 15 ft bgs using methods described in Section 4.2.3 and Appendix D (Standard Operating Procedures) of the Work Plan. Samples will be collected from the soil borings using a 2-inch diameter, 4-foot-long, macrocore sampler in accordance with Section 4.2.3 of the Work Plan.

If a layer of fill material is encountered while drilling the borings, three (3) soil samples will be collected; one from the shallow soils at 2 to 24 in bgs, one from the layer of fill material that is observed; and one from the native material beneath the layer of fill material. Samples will be analyzed for TAL metals plus mercury, SVOCs and TCLP metals.

If no layer of fill material is encountered in the borings, two (2) soil samples will be collected per boring; one from the shallow soils at 2 to 24 in bgs, and one of the native material at depth. Samples will be analyzed for COPCs (arsenic, cadmium, and lead) as defined in the Work Plan plus mercury.

Schedule

The characterization activities described in this Work Plan Addendum 3 will be scheduled following receipt of NYSDEC's approval of Work Plan Addendum 3. The schedule will be coordinated with the activities in the athletic fields at the Corning-Painted Post School District Property and the Corning Memorial Stadium. The anticipated project schedule is provided in Figure 4, attached.

John Sontag, Jr.
Senior Project Manager

Corning Boulevard

CPPSS001
CPPSS002
CPPSS003
CPPSS004
CPPSS005
CPPSS006
CPPSS007
CPPSS008
CPPSS013
CPPSS014
CPPSS015
CPPSS016
CPPSS017
CPPSS018
CPPSS019
CPPSS020
CPPSS021
CPPSS022
CPPSS023
CPPSS024

CPPSB001
CPPSB002
CPPSB003
CPPSB004
CPPSB005
CPPSB006
CPPSB007
CPPSB008
CPPSB009
CPPSB010
CPPSB011
CPPSB012
CPPSB013
CPPSB014

Legend

- Corning-Painted Post School District Property
- Parcels
- School Addition
- Former School
- Parking Lot
- Surface Soil Sampling Locations
- Soil Borings
- Proposed Surface Soil Sampling Locations
- Proposed Soil Borings

NOTES:
Base Imagery: ESRI, DigitalGlobe, GeoEye Mapping Service, 2011
Coordinate System: NAD 1983 State Plane New York Central Feet
Datum: NAD83. Units: Feet

Study Area
Corning NY

N

0 150 300 Feet

0 30 60 90 Meters

WESTON SOLUTIONS

Workplan Addendum 3 - Figure 1
Sample Locations and
Proposed Sample Locations
Corning-Painted Post
School District Property

Source File: Sample_locs_proposed_locs_A1.MXD

3/18/2015

CMSSS001
CMSSB001
CMSSS002
CMSSS003
CMSSS004
CMSSS005
CMSSS006
CMSSS007
CMSSS008
CMSSS009
CMSSS010
CMSSS011
CMSSS012
CMSSB002
CMSSS013
CMSSS014
CMSSS015
CMSSS016
CMSSB003

Legend

- Memorial Stadium Property
- Parcels
- Surface Soil Sampling Locations
- Soil Borings
- Proposed Soil Borings

NOTES:
Base Imagery: ESRI, DigitalGlobe, GeoEye Mapping Service, 2011
Coordinate System: NAD 1983 State Plane New York Central Feet
Datum: NAD83. Units: Feet

Study Area
Corning NY

N

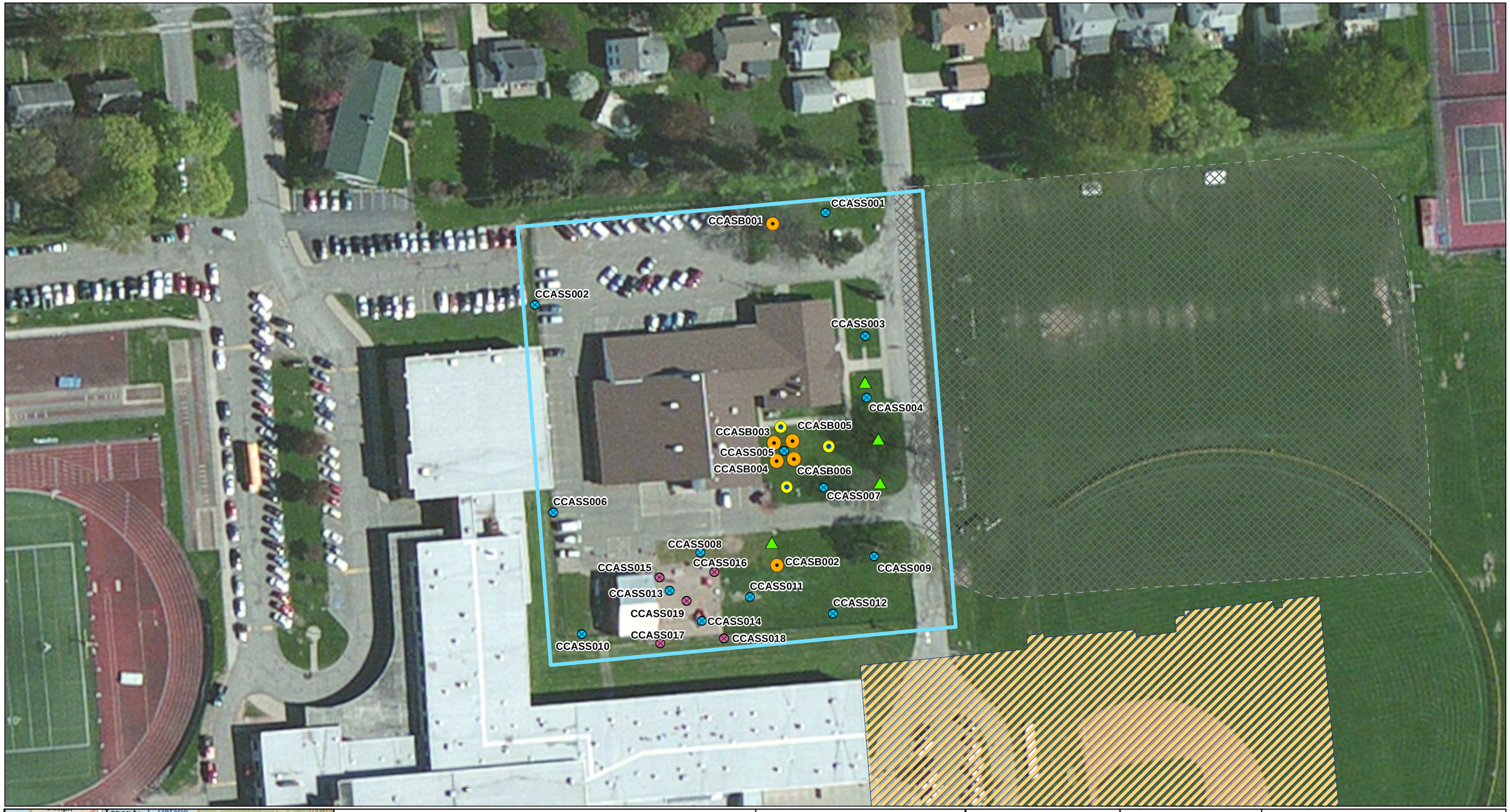
0 75 150 Feet

0 10 20 30 Meters

Workplan Addendum 3 - Figure 2
Sample Locations and
Proposed Sample Locations
Memorial Stadium Property

Source File: Sample_locs_proposed_locs_A3.MXD

3/18/2015



Legend

- Corning Christian Academy Property
- School Addition
- Parking Lot
- Verify Existing Cover
- Surface Soil Sampling Locations
- Soil Borings
- Proposed Soil Borings
- Potential Additional Soil Borings

NOTES:
Base Imagery: ESRI, DigitalGlobe, GeoEye
Mapping Service, 2011
Coordinate System: NAD 1983 State Plane New York Central Feet
Datum: NAD83. Units: Feet

Study Area
Corning NY

N

0 75 150 Feet

0 10 20 30 Meters

Workplan Addendum 3 - Figure 3
Sample Locations and
Proposed Sample Locations
Corning Christian Academy Property

Source File: Sample_locs_proposed_locs_A2.MXD

3/18/2015

CHARACTERIZATION WORK PLAN ADDENDUM No. 3 SCHEDULE (Updated 3/20/2015)[1]

		WEEKS																															
TASK	EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Corning-Painted Post School District Property	Utility Clearances																																				
	Soil Boring & Surface Soil Sampling																																				
	Sample Analysis & Validation																																				
	Data Report for School District[2]																																				
Corning Memorial Stadium Property	Utility Clearances																																				
	Soil Boring Sampling																																				
	Sample Analysis & Validation																																				
	Data Report for City of Corning[2]																																				
Corning Christian Academy Property	Utility Clearances																																				
	Soil Boring Sampling																																				
	Sample Analysis & Validation																																				
	Data Report for City of Corning[2]																																				

Notes:

1 - Schedule will be coordinated with activities in the athletic fields at the Corning-Painted Post School District property and the Corning Memorial Stadium.

2 - Assumed 2 weeks for NYSDEC review of submittals.

Work Plan Addendum 3 - Figure 4
Schedule

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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March 25, 2015

Michael Ford, P.E.
Corning Incorporated
HP-ME-03-83
Corning, New York 14831

Re: Study Area Characterization Work Plan Addendum Number 3 - Additional Field Investigation Activities;
Study Area, Project No. 851046
Corning (C), Steuben (Co)

Dear Mr. Ford:

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has reviewed the Study Area Characterization Work Plan Addendum Number 3 - Additional Field Investigation Activities dated March 20, 2015. This document is hereby approved with the following stipulations:

1) During all ground intrusive activity, the Community Air Monitoring Program in Appendix B to the Site Characterization Work Plan must be adhered to.

2) At the Corning Christian Property, additional soil borings are to be installed as necessary under this consent for access in order to define the extent of the layer of fill containing ash, brick, and/or glass.

If you should have any questions regarding this letter, please contact me at (585) 226-5356 or greg.maclean@dec.ny.gov.

Sincerely,

Gregory B. MacLean

Gregory B. MacLean, P.E.
Project Manager
Division of Environmental Remediation

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