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ENVIRONMENT

Mr. Greg MacLean
New York State Department of Environmental Conservation (NYSDEC)
Division of Environmental Remediation
Bureau of Program Management
625 Broadway, 12th Floor
Albany, NY 12233-7012

Subject:
Work Plan
Corning Study Area – Offsite OU5
NYSDEC Site No. 851046
Contract No. D007618-32

Date:
August 21, 2015

Contact:
James P. Bryson, P.G.

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00266427.0000

Dear Mr. MacLean:

This work plan provides a summary of the work to be conducted during the Site Characterization of the Corning Study Area – Offsite Expansion Area (Study Area Operable Unit 5 [OU5]) located in the city of Corning, Steuben County, New York (site). The site, which is one of five operable units associated with the Study Area (New York State Department of Environmental Conservation [NYSDEC] Site No. 851046), contains 109 residential lots. The site is bounded by I-86 to the north, Pyrex Street and I-86 to the east, Centerway (NYS Route 414) to the west, and the Guthrie Corning Centerway medical facility (130 Centerway) and East Pulteney Street to the south. The site is a residential neighborhood but may have previously been used for disposal of fill containing ash, brick, and glass.

Under a Consent Order with the NYSDEC, Corning Incorporated is investigating the presence of ash, brick, and glass (target fill) in an adjacent neighborhood (Study Area OU1). The characterization work completed to date in Study Area OU1 has identified the presence of target fill extending to the site boundaries at East Pulteney Street and Pyrex Street near the intersection with Houghton Circle (Figure 1). The Site Characterization activities described in this work plan involve investigation of properties to the north and west of Study Area OU1. Based on the Study Area OU1 investigation results, the primary contaminants of concern at the site are metals including arsenic, barium, cadmium, lead, chromium, and mercury.

A Study Area Characterization Work Plan (Weston Solutions, Inc. 2014a) and two work plan addenda have been prepared on behalf of Corning Incorporated for work performed in Study Area OU1. The scope of work presented below for the Offsite

Expansion Area (Study Area OU5) will be conducted in general conformance with Weston Solutions' Study Area Characterization Work Plan and Study Area Characterization Work Plan Addendum Number 2 (Weston Solutions, Inc. 2015).

Site Characterization Activities

The Site Characterization activities will be conducted within the City of Corning (City) right-of-ways and on residential properties where owners have provided access. The proposed sampling methodologies may be adjusted in the field based upon a variety of factors including field conditions, selected subcontractor equipment and other necessary adjustments. The NYSDEC will be notified of any proposed significant changes or deviations from the approved Work Plan (including any proposed use of investigation methodologies other than those described below) and NYSDEC approval will be obtained prior to implementation. Minor field adjustments or the addition of sampling locations that do not affect the project objectives will be discussed verbally with the NYSDEC, confirmed by subsequent email and/or documented in the field notes, and ultimately noted in the investigation summary report. The sampling and excavation locations will recorded using a global positioning system (GPS) device with sub-meter accuracy. A Community Air Monitoring Plan (CAMP) will be implemented during ground intrusive activities to provide a measure of protection for the downwind community from potential airborne contaminant releases. The properties where owners have granted access to date and the proposed right-of-way borings and trenches are shown on the attached Figure 1. The investigation activities will include the subtasks and methods detailed below.

Surface Soil and Vegetable Garden Sampling – Decontaminated hand tools will be used to collect up to four surface soil samples at each residential property where it is requested by the owner from a depth of 0 to 2 inches below the bare ground surface, or 0 to 2 inches beneath any sod or ground cover, if present. Soils will be collected directly into laboratory-prepared glassware. After sampling is complete, any removed ground cover will be replaced. Soil samples collected for laboratory analyses from or adjacent to material containing target fill will be analyzed for Target Analyte List (TAL) metals, Toxicity Characteristic Leaching Procedure (TCLP) Resource Conservation and Recovery Act (RCRA) 8 metals, and Target Compound List (TCL) SVOCs. Soil samples collected from material with no evidence of ash, brick, or glass will be analyzed only for TAL metals. Surface soil sampling locations will be biased towards areas of bare soil, high traffic areas, gardens (as addressed

below), playgrounds, and areas where the property owner indicates target fill has been observed.

At properties where gardens are present, composite soil samples will be collected to test for TAL metals. Gardens 50 sq. ft. or smaller will have one composite sample collected, ones 50 to 500 sq. ft. will have two composite samples collected and gardens between 500 and 2,000 sq. ft. will have three composite samples collected. Any gardens that may exist that are larger than 2000 sq. ft. will have a sampling plan developed for approval by the NYSDEC representative on site and NYSDEC Project Manager. A large garden (approximately 80'x80'/6,400 sqft) is located on Clara St. Due to its size, this garden will be treated as four smaller gardens (40'x40'/1,600 sqft). Two composite samples will be collected from each of these quadrants.

Each garden soil sample will be a composite made up of soil from between 5 and 7 sampled locations within the garden with consideration of sampling made in regards to maintaining two feet of distance between the garden boundary and any building foundation or any highly trafficked area. Each sub sample will be collected from a depth of 0 to 12 inches but not including any present ground cover. In the event that a property has multiple gardens smaller than 50 sq. ft., one composite sample will be collected, its contents to be a mix of sub samples collected from both gardens. As part of sampling, a description of the garden including crops present, use of fertilizers or pesticides, soil qualities, and soil provenance will be recorded. The sampling of gardens only includes those bearing consumable crops. Soil from flower beds, raised beds and potted plants will not be sampled.

Geophysical Survey – A geophysical survey of portions of the site will be conducted using ground penetrating radar (GPR) and electromagnetic (EM) techniques to provide a line of evidence for subsurface utility clearance in advance of direct push sampling and test pit excavation activities. Several phases will be necessary to complete the geophysical survey. The initial phase includes a geophysical survey of the direct push sampling locations and test pit locations in the City of Corning's Right of Ways (ROWs). The remaining two phases will include the residential parcels where access has been granted.

Test Pit Excavation – An excavator will be mobilized to the site to dig test pits to facilitate the assessment of the presence and extent of target fill. A rubber-tire backhoe will be used to excavate test pits in the approximate locations shown on the attached figure to depths of up to eight feet below grade. Excavated soils will be described and logged by a qualified geologist. Native soils not exhibiting evidence of

target fill will be staged on polyethylene sheeting adjacent to each test pit. Excavated soils showing evidence of target fill will be containerized before being transported to a waste storage area. Two or more soil samples will be collected from each test pit location depending on observations and findings. In test pits where a layer of target fill material is encountered, one soil sample will be collected from a depth of 0 to 2 feet below grade, one or more soil samples will be collected from each five linear feet of the zone of observed fill, and one soil sample will be collected from native material beneath the fill. In test pits where no layer of target fill is encountered, one soil sample will be collected from a depth of 0 to 2 feet below grade and one soil sample will be collected from native material at depth. Soil samples collected for laboratory analysis from or adjacent to material containing target fill will be analyzed for TAL metals, TCLP RCRA 8 metals, and TCL SVOCs. Soil samples collected from the shallowest intervals, not showing evidence of target fill, and from material with no evidence of target fill will be analyzed only for TAL metals. After sampling is complete, excavated soils not exhibiting evidence of target fill material will be backfilled and compacted into the hole up to ground surface in the same order it was removed. Target fill material removed from test pits will be placed in containers and characterized for subsequent disposal at a permitted landfill by the excavation subcontractor. If needed, certified-clean soil will be used to backfill the test pit.

Direct-Push Soil Sampling – Direct push sampling methods will be used to advance soil borings in the City ROWs and on residential properties. The objectives of the direct-push borings are to assess the nature and extent of target fill.

Direct-Push Soil Sampling in City Right of Ways:

A direct-push rig will be used to advance soil borings in the approximate locations shown on the attached figure to depths of up to 16 feet below grade. Soils will be collected in 4-foot long Macro-Core tubes and will be described and logged by a qualified geologist. An average of three soil samples will be collected for laboratory analysis from each soil boring depending on observations and findings. In soil borings where a layer of target fill material is encountered, one soil sample will be collected from a depth of 0 to 2 feet below grade, one soil sample will be collected from each five-foot interval of the zone of observed fill, and one soil sample will be collected from native material beneath the fill. In soil borings where no layer of target fill is encountered, one soil sample will be collected from a depth of 0 to 2 feet below grade and one soil sample will be collected from native material at depth.

After sampling is complete, removed soils not exhibiting evidence of a layer of target fill will be backfilled into the hole in the same order it was removed. Target fill material removed from soil borings will be containerized in UN-approved 55-gallon drums and characterized for subsequent disposal at a permitted landfill. Investigation-derived waste will be temporarily stored at a location approved by the City pending characterization and proper disposal. The ground surface at each boring location will be restored to match the original surface condition.

Direct-Push Soil Sampling on Residential Properties:

A direct-push rig will be used to advance two soil borings to depths of up to 16 feet below grade as described above on each residential property where the owner has requested sampling. Soils will be collected in 4-foot long Macro-Core tubes and will be described and logged by a qualified geologist. Up to five soil samples will be collected from each soil boring depending on observations and findings. In soil borings where a layer of target fill material is encountered, one soil sample will be collected from intervals of 0 to 2 feet and 2 to 4 feet below grade, one soil sample will be collected from each two-foot interval of the zone of observed fill, and one soil sample will be collected from native material beneath the fill. Additional borings with similar sampling schemes will be completed around initial borings encountering target fill to assess the extent. Modifications to the sampling scheme for adjacent soil borings to assess the extent of a layer of target fill material may be made in the field with NYSDEC concurrence. In soil borings where no layer of target fill is encountered, one soil sample each will be collected from intervals of 0 to 2 feet and 2 to 4 feet below grade, and one soil sample will be collected from native material at depth if greater than 4 feet below grade.

After sampling is complete, removed soils not exhibiting evidence of a layer of target fill will be backfilled into the hole in the same order it was removed. Target fill material removed from soil borings will be containerized in UN-approved 55-gallon drums and characterized for subsequent disposal at a permitted landfill. Investigation-derived waste will be temporarily stored at a location approved by the City pending characterization and proper disposition. The ground surface at each boring location will be restored to match the original surface condition.

Direct-Push Soil Sampling Soil Sample Analysis:

Soil samples collected for laboratory analysis from or adjacent to material containing target fill will be analyzed for Target Analyte List (TAL) metals, TCLP RCRA 8

metals, and Target Compound List (TCL) SVOCs. Soil samples collected from the shallowest intervals, not showing evidence of target fill, and from material with no evidence of target fill will be analyzed only for TAL metals. One duplicate, matrix spike, and matrix spike duplicate will be analyzed for every 20 environmental samples.

Investigation-Derived Waste - Investigation derived waste (IDW), consisting of soil cuttings, solid waste (decontamination materials, personal protective equipment, plastic, etc.), target fill, and decontamination water generated during the Site Characterization will be contained in properly labeled containers and staged at a City of Corning approved secure location. The waste will be properly characterized to meet the disposal facility requirements before being removed by a qualified IDW contractor for disposal.

Task 3 – Final Report

Laboratory analytical data produced during the Site Characterization will be validated by a third-party data validator in accordance with DER-10 Appendix 2B Data Usability Summary Report requirements. Soil analytical data from samples collected during the Site Characterization will be entered into the NYSDEC's EQuIS database. Data summary reports will be prepared for each property where environmental samples are collected and will be provided to the property owner within 30 days after validation is complete.

Site Characterization Report – Following the completion of the above tasks, a DER-10-compliant Site Characterization Report will be prepared to present the results of the Site Characterization activities. The goals of the Site Characterization are to delineate the extent of fill present at the boundaries of the Study Area, to identify and delineate other areas of fill in the OU5 Expansion Study Area if present, and to evaluate the potential for exposure to contaminants of concern associated with this fill. The Site Characterization Report will include the site background, field procedures and methodology, findings, and conclusions based on the data collected. The report will also include tabulated and graphical presentations of the field and analytical data, and copies of the analytical laboratory reports. The Site Characterization Report will discuss if the data collected during the Site Characterization is sufficient for the site to be reclassified, indicates a Remedial Investigation and/or Interim Remedial Actions are warranted, or indicates the Site Characterization should be continued.

Schedule

The anticipated schedule for the project is presented below:

Task	Start Date	Anticipated End Date
1 – Preliminary Activities	June 2015	August 2015
2 – Investigation		
Residential Owner Notification	June 2015	July 2015
Surface Soil Sampling	August 2015	November 2015
Geophysical Survey	August 2015	November 2015
Test Pit Excavation	August 2015	September 2015
Direct-Push Soil Sampling	August 2015	November 2015
Investigation-Derived Waste	October 2015	December 2015
3 – Final Report		
Data Management and Validation	August 2015	January 2016
Site Characterization Report	December 2015	February 2016

Please contact one of the undersigned at (518) 250-7300 if you have any questions concerning this letter.

Sincerely,

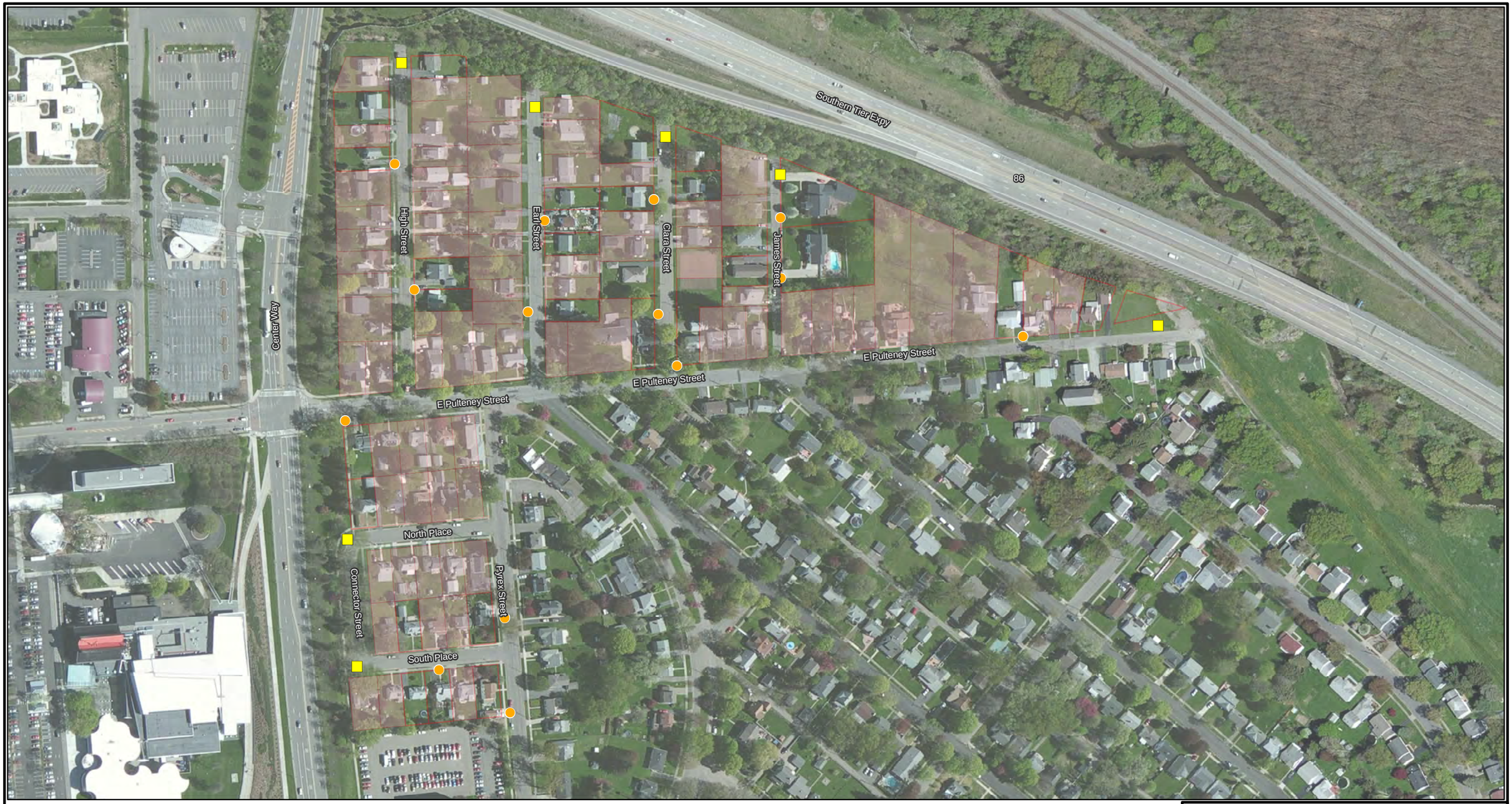
ARCADIS of New York, Inc.

Mark A. Flusche, PHG
Senior Hydrogeologist

James P. Bryson, P.G.
Principal Geologist

Copies:
Melissa A. Doroski - NYSDOH

Attachments:
Figure 1



0 335 670 1,340 Feet

Legend

- Proposed Soil Boring
- Proposed Test Pit
- Access to Property
- No Response/No Access to Property

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CORNING SITE #851046
OPERABLE UNIT 5 - EXPANSION AREA

SITE CHARACTERIZATION

SITE PLAN

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FIGURE
1