HALEY ALDRICH

www.haleyaldrich.com

CONFIDENTIAL SETTLEMENT COMMUNICATION
NOT ADMISSIBLE IN THIS OR ANY OTHER PROCEEDING

REPORT ON

FORMER OUTFALL 001/1A (CGW)
TIOGA AVENUE BCP SITE #C851031
CORNING, NEW YORK

by Haley & Aldrich of New York
Rochester, New York

for New York State Department of Environmental Conservation
Avon, New York

File No. 33123-032
February 2016

HALEY & ALDRICH OF NEW YORK
200 Town Centre Drive
Suite 2
Rochester, NY 14623
585.359.9000

12 February 2016
File No. 33123-032

CONFIDENTIAL SETTLEMENT COMMUNICATION
INADMISSIBLE IN THIS OR ANY OTHER PROCEEDING

New York State Department of Environmental Conservation
Region 8, Division of Hazardous Waste Remediation
6274 East Avon Lima Road
Avon, New York 14414

Attention: Mr. Timothy Schneider, P.E.

Subject: Report on Former Outfall 001/1A (CGW)
Tioga Avenue BCP Site #C851031, Corning, New York

Dear Mr. Schneider:

On behalf of Corning Incorporated, Haley and Aldrich of New York is submitting this report documenting activities associated with Former Outfall 001/1A (CGW) at the Tioga Avenue BCP Site #C851031. Outfall 001/1A (CGW) was removed from operation in 1977 and was removed from the Pressware facility SPDES permit in April 1979 finalizing operational closure of the Outfall. Removal of the associated former Outfall 001/1A (CGW) inflow pipes and two steel framed ports at a nearby structure has been undertaken in accordance with the Tioga Avenue BCP Site Management Plan (SMP) dated January 2012, revised April 3, 2012, the Work Plan dated June 30, 2015 and the Work Plan Addendum #1 dated July 14, 2015 as approved by the New York State Department of Environmental Conservation on August 4, 2015.

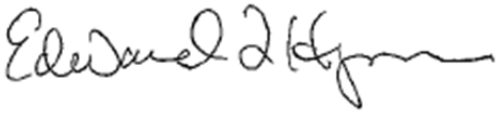
The field work was completed on December 8, 2015. This Report documents the work performed at the former Outfall 001/1A (CGW) inflow pipes and a nearby structure. This Report also provides analytical results of material testing performed during the project and final conditions.

CONFIDENTIAL SETTLEMENT COMMUNICATION
INADMISSIBLE IN THIS OR ANY OTHER PROCEEDING

Corning is providing this documentation of activities for the structures as required by the Work Plan and associated Addendum #1. Please contact Mr. Michael Ford of Corning Incorporated with any questions or comments regarding the project and this Report.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

James E. Siegfried, P.E.
Senior Project Manager



Edward L. Hynes
Vice President

Enclosures

Cc: Michael Ford, P.E., Corning Incorporated

G:\Projects\33123\032 2015 Services\Outfall 1A Closure & Asphalt Repair Projects\Outfall 1A Construction Phase\Report\Draft Report\TIOGA 2016_0212_HANY_Outfall001_ClosureRpt_Final.docx

Executive Summary

A drainage structure was discovered during implementation of the Tioga Avenue Redevelopment Project in May 2013 that required further investigation under the Tioga Avenue BCP Site Management Plan (SMP). This structure consists of a previously permitted and now closed concrete vault with inlet and outlet pipe connections beneath a metal plate identified as former Outfall 001/1A (CGW). This report documents removal of inflow pipes to the former Outfall 001/1A (CGW). Field work began October 16, 2015 and was completed on December 8, 2015. Haley & Aldrich of New York (Haley & Aldrich) as the Qualified Environmental Professional (QEP) provided on-Site construction observation services, sampling and analytical services, and engineering during construction services to Corning Incorporated (Corning) during the course of these activities.

Corning completed investigation, characterization, and removal of piping entering former Outfall 001/1A (CGW) and also the removal of steel framed ports in a nearby structure in accordance with the Tioga Avenue BCP Site Management Plan (SMP) dated January 2012 as revised on March 29, 2012 and approved by NYSDEC on April 3, 2012; and the Work Plan For the Characterization and Removal of Former Outfall 001/1A (CGW) and Associated Inlet Piping and Two Nearby Industrial Structures (the "Work Plan") dated June 30, 2015 and the Work Plan Addendum #1 dated July 14, 2015 that was approved by the New York State Department of Environmental Conservation (NYSDEC) on August 4, 2015. The former outflow pipe has been fitted with a removable plug and left in place as requested by NYSDEC on July 7, 2015. The Outfall structure box was also left in place.

During the October to December 2015 field work, all inflow pipes to former Outfall 001/1A (CGW) were removed. In addition, the two nearby steel framed ports were determined to be access ways into a subsurface concrete Industrial Structure. Further investigation of the Industrial Structure did not identify any penetrations in the concrete, or any other piping connections, including any connections to the former Outfall 001/1A (CGW) structure. The Industrial Structure contained water-saturated run of bank gravel placed during demolition activities conducted in 2007 summarized in the Project Documentation Report, Tioga Avenue Demolition, Fallbrook, GMS & Related Facilities, dated February 22, 2008. No evidence of contaminants were observed through field screening. The ports were removed and the Industrial Structure was closed in accordance with the SMP.

The NYSDEC Project Manager was notified of the project start date and of progress of work on an ongoing (daily) basis. During the project, NYSDEC representatives were on-Site October 19, 20, 21, 26, 27, 29, and November 3, 4 to observe the work. NYSDEC requested splitting of selected samples collected during removal of the former Outfall 001/1A (CGW) pipes as per the Work Plan which was facilitated by Haley & Aldrich personnel, who coordinated and monitored the work on behalf of Corning. Backfilling and surface restoration activities occurred subsequent to testing as per the approved Work Plan and with concurrence of the NYSDEC Project Manager.

Analytical testing of pipe contents and of soil below excavated piping was completed and is documented in this report including the analytical testing results of the split samples obtained by NYSDEC. Consistent with the approved Work Plan, the analytical testing program included total constituent analysis of: Analysis of Target Analyte List (TAL) metals (including mercury); and analysis of PCBs. Additional analyte (VOCs) were not analyzed based on field screening (elevated readings on either a 10.6eV or 11.7eV

photoionization detector/PID were not observed) in accordance with the approved Work Plan and the SMP.

Corning requested, and NYSDEC provided, copies of the analytical reports for the split samples analyzed by NYSDEC. These samples were initially analyzed by the TCLP analytical method for RCRA 8 metals and subsequently for TAL metals including mercury. Results of both the Corning and NYSDEC data sets are presented in this report. The TCLP results obtained by NYSDEC were less than hazardous waste characterization thresholds with PCBs reported as not detected.

1. Background and Purpose

A drainage structure was discovered during implementation of the Tioga Avenue Redevelopment Project in May 2013. New York State Department of Environmental Conservation (NYSDEC) required further investigation of this structure under the Tioga Avenue BCP Site Management Plan (SMP). This structure consists of a previously permitted and closed concrete vault with inlet and outlet pipe connections beneath a metal plate identified as former Outfall 001/1A (CGW). Based on historical records identified in NYSDEC files, the pipes within Outfall 001/1A (CGW) were formerly used to convey industrial wastewater, mainly comprised of compressor condensate and non-contact cooling water. The location of this structure on the BCP Site is shown on Figure 1. Results of the NYSDEC file review on use of this structure as a permitted outfall is described in the October 15, 2013 letter (included as Attachment A in the approved Work Plan) to NYSDEC that documented it was removed from operation in 1977 and was removed from the Pressware facility SPDES permit in April 1979 finalizing operational closure of the Outfall. The work documented in this Report is a component of the Corrective Measures Plan submitted to NYSDEC on December 4, 2013.

1.1 PREVIOUS INVESTIGATION AT OUTFALL 001/1A (CGW) (CGW)

In 2014 a drilling and sampling program was performed at Outfall 001/1A (CGW) to evaluate subsurface conditions beneath the structure for possible presence of substances of concern associated with the Site. The scope of the investigation, and the sampling and analytical protocol were developed and implemented as described in email communications between NYSDEC and Haley & Aldrich on May 15 and 21, 2013. Sampling and analytical results were compared with the NYSDEC criteria for protecting groundwater resources. The results were discussed during meetings with NYSDEC on April 9 and May 20, 2015.

A boring program was undertaken on May 21, 2013 under observation of a Haley & Aldrich geologist and the NYSDEC BCP project manager. One soil boring designated “Plated Structure” (reference used for Outfall 001/1A (CGW) was conducted in the approximate center of plated structure to assess underlying soil conditions. This boring was advanced using direct push methods below the plated structure with a Geoprobe from which soil samples were obtained continuously for classification and field screening visually and by photoionization detector (10.6/11.7 eV PID) for indications of soil impact consistent with the SMP. This exploration program including field observations, sample protocol and analytical results are summarized as follows:

- Prior to drilling, the plated structure was cleaned by removal of a small amount of a mixture of glass cullet and grey material from the bottom of Outfall 001/1A (CGW). These materials were loose and consolidated and not observed to have any oil staining or odors or any elevated PID readings. An approximate 5-gallon bucket sized quantity of this material was removed and segregated. It was sampled June 3, 2013 for appropriate off-Site disposal and the results indicated that it could be disposed of at the Steuben County Landfill based on characterization sampling showing this material to be non-hazardous.

- The borehole designated “plated structure” was advanced to an approximate depth of 13.7 feet below the bottom of the plated structure. Conditions observed consisted of brown silty gravel soil

that were dry except for residual water introduced during coring through the bottom of the structure prior to Geoprobe boring. There were no indications of oily staining, odors or any elevated PID readings in any of the continuous soil samples obtained. A small amount of black material was observed just below the bottom of the concrete.

- Based on conditions observed and samples screened during drilling, the soil sample from the depth interval containing the black material described above (5.7 to 6.2 feet) was submitted for analysis of arsenic and lead by EPA Method 6010B and polychlorinated biphenyls (PCBs) by EPA Method 8081. All three compounds were detected (arsenic-8.0 parts per million/ppm, lead-160 ppm, PCB-2.8 ppm). All of these results are below the corresponding NYSDEC Groundwater Protection Soil Cleanup Objectives (6 NYCRR 375-6).

1.2 CHARACTERIZATION AND REMOVAL OF FORMER OUTFALL 001/1A (CGW) INLET PIPING AND NEARBY INDUSTRIAL STRUCTURE

Corning Incorporated completed investigation, characterization, and removal of piping entering former Outfall 001/1A (CGW). In addition it also undertook the removal of two steel framed ports at a nearby industrial structure in Corning, NY. Corning Incorporated is providing documentation of this work in accordance with the Tioga Avenue BCP Site Management Plan (SMP) dated January 2012 as revised on March 29, 2012 and approved by NYSDEC on April 3, 2012, the Work Plan dated June 30, 2015 and the Work Plan Addendum #1 dated July 14, 2015 (the "Work Plan").

The associated pipes observed to enter the Outfall vault were excavated and removed in their entirety on BCP property. One pipe was cut and plugged with concrete at the boundary line in accordance with the Work Plan and the area was restored to its former condition. A pipe that exits the east side of the vault was temporarily plugged fitted with a removable plug and left in place as requested by NYSDEC on July 7, 2015. and the Outfall 001/1A (CGW) concrete vault was left in place in accordance with Work Plan Addendum #1 (see Figure 2).

An Industrial Structure was also investigated and closed as shown on Figure 1. The metal framework around two openings in the structure was removed and the concrete slab separating them was demolished and removed. Approximately 1288 gallons of precipitation water that had entered the structure through an adjacent uncovered opening was removed and gravel fill material was excavated to a depth of 7.5 ft. The excavated area was backfilled and a reinforced concrete slab was placed for final closure.

The field work was completed on December 8, 2015. The work area has been restored to its original condition including areas of the site cover that have been restored in kind with low permeable cover materials as specified in the SMP.

2. Summary of the Work

2.1 DATES OF WORK AND KEY PARTICIPANTS

The NYSDEC granted conditional approval of the Work Plan on July 7, 2015. Corning addressed the contingent items through Addendum #1 to the Work Plan issued July 14, 2015 and approved by NYSDEC on August 4, 2015. On August 28, 2015, Corning provided notification to the NYSDEC of Start of Field Construction Work. Field work began October 16, 2015 as described below. The Contractor completed final restoration activities and demobilization on December 8, 2015.

The key participants in the work were:

- Owner: Corning Incorporated, Corning, NY
- Contractor: Ontario Specialty Contracting (OSC), Buffalo, NY
- Engineer/QEP: Haley & Aldrich of New York (Haley & Aldrich), Rochester, NY

Representatives from the NYSDEC were present on-Site October 19, 20, 21, 26, 27, 29, and November 3, 4 during much of the pipe investigation and removal and during investigation of the nearby industrial structure. NYSDEC was also apprised by Haley & Aldrich of the work status on a near daily basis during the investigation portions of the work when a Department representative was not on-Site. NYSDEC was also consulted regarding findings and concurrence was gained prior to start of any backfill and restoration activities.

2.2 PRELIMINARY ACTIVITIES

2.2.1 Ground Penetrating Radar (GPR) Survey

On October 16, 2015, Ontario Specialty Contracting, Haley & Aldrich, and New York Leak Detect (NYLD) conducted an investigation to locate and physically identify in the field a series of pipes known to enter and exit Outfall 001/1A (CGW). The Contractors removed the steel cover over the Outfall 001/1A (CGW) vault and five (5) pipes were observed inside the vault. NYLD used Ground Penetrating Radar (GPR) equipment to detect and mark the piping from the vault outward. In each case, the NYLD operator followed the signal trace produced from the underground pipes until the signal was no longer detected or the pipe crossed over the BCP boundary line onto the adjacent property (see Figure 1).

The following pipes were marked starting from locations observed inside the vault

- North Wall- two steel pipes were marked from the north wall of the vault
  - (1) - 6 in. pipe was marked out from the north wall approximately 9.0 ft. north.
  - (1) - 4 in. pipe was marked out from the north wall approximately 11.2 ft. to the BCP north boundary line. The pipe mark out was not continued north of the BCP boundary line.

- East Wall- (1) - 8 in. diameter steel pipe was marked out from the east wall of the vault to the BCP boundary line. The pipe mark out was not continued east of the BCP boundary line.

- South Wall- (1) - 6 in. diameter steel pipe was marked out from the south wall approximately 11.7 ft. south.

- West Wall- (1) - 6in. clay tile pipe was observed to extend through the west wall of the vault. The pipe was not detected west of the vault wall.

2.2.2 Surveying

The Ground Penetrating Radar Survey performed by NYLD indicated piping associated with Outfall 001/1A (CGW) extended past the north BCP Property Line. To confirm the property line location, Weiler Associates of Horseheads, New York surveyed the Corning Incorporated-World Kitchen property north of the former Outfall 001/1A (CGW) on October 20, 2015. The mark out was used by the Contractor to identify the location of the World Kitchen LLC property line and the corresponding BCP boundary line during work activities.

2.3 PIPE INVESTIGATION AND REMOVAL ACTIVITIES

Refer to Figure 2 for a detail of the Outfall 001/1A (CGW) structure and associated pipes. For the purposes of the work conducted under this Work Plan, the pipes were assigned a number in the field by Haley & Aldrich from 01-06 for clarity in description and documentation of sampling. This numbering system had no association with any previous Corning operations or historical drawings.

2.3.1 Pipe 01 Investigation and Removal

Pipe 01 was investigated and removed on October 20, 2015. The Contractor marked a proposed trench excavation approximately 2.5 ft. wide x 15.0 ft. long section on the concrete pad located above the line. The concrete surface was cut using a walk-behind concrete/asphalt saw. The concrete was removed using a track mounted excavator and transferred to the construction and demolition material (C&D) staging area located adjacent to the north wall of the Batch House used by World Kitchen. The concrete was placed on and covered with poly sheeting. Prior to and during excavation, the soils under the pipes were screened for Volatile Organic Compounds (VOC's) using 10.6 eV and 11.7 eV Photoionization Detectors (PID'S) based on SMP requirements. All readings were non-detect for VOC's. Additionally, there was no visual or olfactory evidence of contamination or pipe breakage. The pipe was uncovered at 2.5 ft. below ground surface. Excavated soils were transferred to the Soil Staging Area and placed on and covered with poly sheeting. At 11.7 ft. south of the south vault wall, the pipe turned to the southwest for approximately 2.0 ft. where it was observed to end. The south end of the pipe was soil-filled and appeared to have been cut and abandoned. The pipe was observed to be intact, with no visible holes or breaks. Prior to removal, the pipe ends were sealed with tape to prevent spillage of materials from the interior of the pipe. The pipe was removed from the excavation and transferred to the Pipe Staging Area where it was placed on and covered with poly sheeting. The pipe opening in the vault wall was sealed with mortar. No indications of visual contamination or elevated PID readings were noted in the soils underlying the piping at the base of the excavation.

The residual material contained inside the pipe was collected and sampled by Haley & Aldrich for Target Analyte List (TAL) Metals (includes Mercury) and PCBs based on the Work Plan requirements. The pipe was noted to have approximately 0.5 inches of sandy silty material in the bottom of the pipe with a

small amount of soil in the open (south) end from the surrounding backfill when it was cut and abandoned. The pipe was stood on end in the staging area and hit with a hammer to loosen and remove as much of the pipe contents as practical. The contents pile was noted to have pipe scale and a few glass fragments which were segregated to the extent practical. The pipe contents pile was then blended to provide a uniform mixture and the sample was collected for submittal to ESC Lab Sciences. PID readings of the pipe contents were non-detect and there were no other visual or olfactory indications of contamination of the material.

The trench excavations were backfilled and compacted in 0.5 ft. lifts to within 0.5 ft. of existing ground surface. Rebar was installed in the excavation and doweled into the existing concrete sidewalls and 3,000 psi concrete was placed and finished to ground surface. NYSDEC was present during removal and sampling of the pipe.

2.3.2 Pipe 02 Investigation and Removal

Pipe 02 was investigated and removed on October 20, 2015. The Contractor marked a proposed trench excavation approximately 2.8 ft. wide x 15.0 ft. long section on the concrete pad located above the line. The Contractor used a walk-behind concrete/asphalt saw to cut the concrete surface. The concrete was removed using a track mounted excavator and transferred to the C&D Staging Area located adjacent to the north wall of the Batch House used by World Kitchen. The concrete was placed on and covered with poly sheeting. Prior to and during excavation, the underlying soils were screened for Volatile Organic Compounds (VOC's) using a 10.6 eV and 11.7 eV Photoionization Detectors (PID'S) based on SMP requirements. All readings were non-detect for (VOC's). Additionally, there was no visual or olfactory evidence of contamination or pipe breakage. During the excavation, two abandoned fencepost foundations were removed from the excavation exposing the 6 in. steel pipe (Pipe 02) at approximately 2.8 ft. below ground surface. The remaining soil around the pipe was removed using hand shovels and the Contractor removed a 9.0 ft. length of piping from the excavation. Upon removal of the pipe from the excavation, a steel tee was observed connected to the north end of the piping. The west facing opening of the tee was sealed with a steel flange plate bolted to the body of the tee. The east facing opening of the tee was open and partially soil filled.

Excavated soils from the trench were transferred to the Soil Staging Area and placed on and covered with poly sheeting. The pipe was observed to be intact, with no visible holes or breaks. Before removal, the pipe ends were sealed with tape to prevent spillage of materials from the interior of the pipe. The pipe was removed from the excavation and transferred to the Pipe Staging Area where it was placed on, and covered with poly sheeting. The pipe opening in the vault wall was sealed with mortar. No indications of visual or olfactory contamination or elevated PID readings were noted in the soils underlying the piping at the base of the excavation. The Pipe 02 trench excavation was backfilled and compacted in 0.5 ft. lifts to within 0.5 ft. of existing ground surface. Rebar was installed in the excavation and doweled into the existing concrete sidewalls and 3,000 psi concrete was placed and finished to ground surface.

The residual material contained inside the pipe was collected and sampled by Haley & Aldrich for Target Analyte List (TAL) Metals (includes Mercury) and PCBs. NYSDEC was present during portions of excavation, removal and sampling of the pipe. The pipe was noted to have only a trace of sandy silty material in the bottom of the pipe with a small amount of soil in the open (north) end from the

surrounding backfill when it was cut and abandoned. The pipe was stood on end in the staging area and hit with a hammer to loosen and remove as much of the pipe contents as practical. The pipe contents pile noted to have pipe scale was segregated to the extent practical. No glass material was contained in the pipe contents. The contents pile was then blended to provide a uniform mixture and the sample was collected for submittal to ESC Lab Sciences. PID readings of the pipe contents were non-detect and there were no other visual or olfactory indications of contamination of the material.
During the Pipe 02 excavation, a 6-in. diameter pipe, (Pipe 04) was observed at the north end of the trench on the west side. The pipe end was soil filled. On October 2, 2015 the end of the pipe was sealed with mortar by the Contractor (see Pipe 04 Investigation and Removal for details below).

At the direction of the NYSDEC, a composite sample consisting of soil directly under the north end of Pipe 02 and under the east end of the newly discovered Pipe 04 was collected and sampled by Haley & Aldrich for Target Analyte List (TAL) Metals (includes Mercury) and PCBs to ESC Lab Sciences. No indications of visual or olfactory contamination or elevated PID readings were noted in the soils underlying the piping at the sample location. This sample is identified as Pipe 04 Trench.

2.3.3 Pipe 03 Investigation and Removal

Pipe 03 was investigated and removed on October 20, 2015. The pipe was located adjacent to Pipe 02 during the pipe locating activities performed by New York Leak Detect (NYLD). Immediately following the removal of Pipe 02, the Contractor used hand shovels inside the same excavation to locate and uncover the 4-in. diameter steel pipe. The pipe was located approximately 2.7 ft. below existing ground surface. During the hand excavation work, the excavated soils were screened for Volatile Organic Compounds (VOC's) using a 10.6 ev and 11.7 ev Photoionization Detectors (PID's) based on SMP requirements. All readings were non-detect for (VOC's). Additionally, there was no visual or olfactory evidence of contamination or pipe breakage. The pipe was uncovered to the north BCP boundary line. In accordance with the Work Plan, the pipe was cut and plugged with mortar at the BCP boundary line which was approved by World Kitchen prior to the start of the project. Prior to removal, the pipe ends were sealed with tape to prevent spillage of materials from the interior of the pipe. The Contractor removed an 11.2 ft. length of piping from the excavation including the portion of the pipe that extended into the Outfall 001 Vault. The pipe was observed to be intact, with no visible holes or breaks observed. The pipe was transferred to the Pipe Staging Area where it was placed on, and covered with poly sheeting. The pipe opening in the vault wall was sealed with mortar. No indications of visual or olfactory contamination or elevated PID readings were noted in the soils underlying the piping at the base of the excavation.

The residual material contained inside the pipe was collected and sampled by Haley & Aldrich for Target Analyte List (TAL) Metals (includes Mercury) and PCBs. NYSDEC was present during portions of excavation, removal and sampling of the pipe. The pipe was noted to have approximately 0.5 inches of sandy silty material in the bottom of the pipe. The pipe was stood on end in the staging area and hit with a hammer to loosen and remove as much of the pipe contents as practical. No glass material was contained in the pipe contents. The pipe contents pile was noted to have pipe scale. The pipe scale was segregated and excluded from the subsequent sample to the extent practical. The contents pile was then blended to provide a uniform mixture and the sample was collected for submittal to ESC Lab Sciences. PID readings of the pipe contents were non-detect and there were no other visual or olfactory indications of contamination of the material.

The trench excavation was backfilled and compacted in 0.5 ft. lifts to within 0.5 ft. of existing ground surface. Rebar was installed in the excavation and doweled into the existing concrete sidewalls and 3000 psi concrete was placed and finished to ground surface.

2.3.4 Pipe 04 Investigation and Removal

Pipe 04 was investigated and removed on October 27, 2015. The Contractor marked a proposed trench excavation approximately 2.5 ft. wide x 12.0 ft. long on the asphalt surface located above the line. The Contractor used a walk-behind concrete/asphalt saw to cut the asphalt surface. The asphalt was removed using a track mounted excavator and transferred to the C&D Staging Area located adjacent to the north wall of the Batch House used by World Kitchen. The asphalt was placed on and covered with poly sheeting. Prior to and during excavation, the underlying soils were screened for Volatile Organic Compounds (VOC's) using a 10.6 eV and 11.7 eV Photoionization Detectors (PID'S) based on SMP requirements. All readings were non-detect for (VOC's). Additionally, there was no visual or olfactory evidence of contamination. The 6-in. steel line was located approximately 1.8 ft. below ground surface. The remaining soil around the pipe was removed using hand shovels to 12 ft. west, where the pipe was observed to end. Prior to removal, the pipe ends were sealed with tape to prevent spillage of materials from the interior of the pipe. The Contractor removed an 11.3 ft. length of piping from the excavation. Excavated soils from the trench were transferred to the Soil Staging area and placed on and covered with poly sheeting. The pipe was observed to be intact, with no visible holes or breaks observed. The pipe was transferred to the Pipe Staging Area where it was placed on, and covered with poly sheeting.

The residual material contained inside the pipe was collected and sampled by Haley & Aldrich for Target Analyte List (TAL) Metals (includes Mercury) and PCBs. The pipe was noted to have approximately 0.5 inches of sandy silty material in the bottom of the pipe and the west end was filled with soil from the surrounding backfill when it was cut and abandoned. The pipe was stood on end in the staging area and hit with a hammer to loosen and remove as much of the pipe contents as practical. No glass material was contained in the pipe contents. The pipe contents pile was noted to have pipe scale which was segregated and excluded from the subsequent sample to the extent practical. The contents pile was then blended to provide a uniform mixture and the sample was collected for submittal to ESC Lab Sciences. PID readings of the pipe contents were non-detect and there were no other visual or olfactory indications of contamination of the material. NYSDEC was present during excavation, removal and sampling of the pipe. NYSDEC also obtained a split sample of the material from the pipe for analysis. Restoration of the trench included backfill and compaction of suitable excavated trench spoils, placement and compaction of imported approved Item 4 gravel to a depth of approximately 5-6 inches below finished grade and placement of a minimum of 4 inches of asphalt binder course followed by 1.5 inches of asphalt top course to support the heavy forklift traffic in the area.

2.3.5 Pipe 05 Investigation

Pipe 05 was investigated on October 26, 2015 but not removed due to direction given by NYSDEC. The section of the 8-in. steel pipe located inside the vault was cut with a torch. The cut pipe section was transferred to the Pipe Staging Area where it was placed on, and covered with poly sheeting.

A sample was collected from the interior of the pipe within the first two feet from the structure wall. The interior of the pipe was not readily visible due to its low location in the Outfall 001/1A (CGW) box, however, it was estimated that the pipe contained less than 0.5 inches of material in the bottom. The sample collected was a silty sand material and pipe scale was present. No glass material was contained in the pipe contents. The sample was collected for submittal to ESC Lab Sciences. PID readings of the pipe contents were non-detect and there were no other visual or olfactory indications of contamination of the material. The NYSDEC also collected a split sample of this material at the same time as the sample obtained by Haley & Aldrich.
Following delivery of this sample to the laboratory, it was learned that the samples obtained at the Pipe 05 and Pipe 06 (below) locations were inadvertently identified with the same sample descriptions. Because it was not possible to differentiate sample locations these samples were not analyzed. Haley & Aldrich advised NYSDEC of this condition on October 30, 2015 and requested receipt of the NYSDEC sample analytical results for the split samples that NYSDEC obtained at these locations. NYSDEC provided its analytical results from the NYSDEC sampling of this pipe on December 17, 2015. These are provided in Appendix D of this report and described below.

In accordance with Addendum #1 to the Updated Work Plan dated July 14, 2015, an 8-inch expandable plug was installed inside Pipe 5 allowing for future access.

2.3.6 Pipe 06 Investigation and Removal

Pipe 06 was investigated and removed on October 27, 2015. The Contractor marked out a 5 ft. x 5 ft. excavation area adjacent to the Outfall 001/1A (CGW) west vault wall. The Contractor used a walk-behind concrete/asphalt saw to cut the asphalt surface. The asphalt was removed using a track mounted excavator and transferred to the C&D Staging Area located adjacent to the north wall of the Batch House used by World Kitchen. The asphalt was placed on and covered with poly sheeting. Prior to and during excavation, the underlying soils were screened for Volatile Organic Compounds (VOC's) using a 10.6 eV and 11.7 eV Photoionization Detectors (PID'S) based on SMP requirements. All readings were non-detect for (VOC's). Additionally, there was no visual or olfactory evidence of contamination. The 6-in. clay tile pipe was located approximately 4.3 ft. below ground surface. The remaining soil around the pipe was removed using hand shovels to approximately 2.5 ft. west of the vault wall where the pipe was observed to end. The west end of the pipe was observed to be soil filled. Poly sheeting was placed under the west end of the pipe and a sample was collected prior to the pile being removed. The pipe contents appeared to be soil from the surrounding backfill that entered the pipe from the open end left when it was cut and abandoned at an unknown time in the past.

Due to the same sample identification issue as described above for Pipe 05, the Haley & Aldrich sample was not analyzed. The 2.5 ft. length of pipe was removed from the excavation and transferred to the Pipe Staging Area where it was placed on, and covered with poly sheeting. The pipe opening in the vault wall was sealed with mortar. NYSDEC observed the pipe sampling and obtained a split sample of the material from the interior of the pipe. Analytical results from the NYSDEC sampling of this pipe are located in Appendix D of this report.

2.3.7 Outfall 001/1A (CGW) Vault

In accordance with Addendum #1 to the Updated Work Plan dated July 14, 2015, the structure was left accessible as requested by NYSDEC. The steel plate cover was replaced over the structure opening, and poly sheeting and sand bags were placed around the plate to prevent surface water from entering the structure.

2.3.8 Industrial Structure Investigation

An Industrial Structure containing two steel framed ports that may have been located within the footprint of the Former Fallbrook Plant Mixing Building was also investigated. The steel ports at ground surface were 2 ft. x 4 ft. and had a slightly raised steel frame around the openings. Immediately west of the two steel framed ports was an additional 12 ft. long x 6 ft. wide structure opening bordered by a raised concrete curb. All of the structure openings are contained inside an approximately 15ft. wide x 20ft. long concrete pad enclosed on the north, east and south sides by a raised concrete wall. The openings to the structures were observed to have been previously filled with run of bank gravel consistent with demolition work performed in 2007 and contained standing water from precipitation and vegetation. During the investigation, both framed ports were discovered to have been filled with flow-able fill concrete. The steel frames and reinforced concrete pad around the ports were removed and a hoe ram was used to break the flow-able fill into manageable pieces. Gravel fill was observed below the excavated flow-able fill.

To manage standing water inside the excavation, a total of 1288 gallons of water was pumped from the excavation and contained in a 6,900 gallon poly tank mobilized to the site by the Contractor. Excavated soils were screened for Volatile Organic Compounds (VOC's) using a 10.6 eV and 11.7 eV Photoionization Detectors (PID'S) based on SMP requirements. All readings were non-detect for (VOC's), with no staining, sheen or odors observed in the excavated gravel backfill. As the excavation continued, gravel fill was observed to slough into the excavation from the adjacent curbed structure, confirming all of the structures were interconnected as one single underground Industrial Structure. Excavation of the soil within the Industrial Structure along the inside of the east wall continued to a depth of approximately 7.5 feet below the top slab. The investigation of the Industrial Structure did not identify any other piping connections, including any connections to the Outfall 001/1A (CGW) structure. Upon consultation in a phone conversation between Haley & Aldrich and the NYSDEC on November 3, 2015, it was decided that this structure had been adequately investigated and restoration of the structure could begin. The information provided to the Department and the conclusions reached during this call were as follows:

- The steel framed ports have been excavated and removed.
- It was discovered that they were openings into the larger subsurface concrete vault structure that was believed was used as a glass crusher and elevator pit.
- The concrete vault had been previously filled with run of bank gravel and was holding water at or near ground surface.
- A portion of the structural top slab was removed, and gravel in the vicinity of the two plated openings had been excavated to a depth of approximately 6-7 feet. Water within the vault was pumped into a holding tank to facilitate the excavation.
- There were no signs of any piping or apparent connections to the Outfall 001/1A (CGW) structure.

- Field screening and visual inspections had not indicated any apparent contamination of the excavated gravel fill.
- The structure holds water therefore it does not drain; it wasn't confirmed that there are not pipes or openings in bottom but the fact that it holds water indicates this structure was relatively water tight and it does not suggest it would be a source of release to the environment.

All excavated materials were transferred to staging areas along the north side of the Batch House used by World Kitchen. NYSDEC was present during periods of the investigation and also was informed via telephone during the investigation by Haley & Aldrich.

Following verbal approval to backfill the excavation by NYSDEC, the Contractor backfilled and compacted the excavation to approximately 2.0 ft. with approved Item 4 gravel and flow-able fill was placed from 2.0 ft. to the bottom of the existing concrete slab. Reinforced concrete was placed and finished to ground surface.

2.4 RESTORATION

Upon completion of the pipe removal and industrial structures investigation, the Contractor worked to restore the areas disturbed by this project based on SMP requirements. The work was conducted in an area of the BCP site that was covered in concrete or asphalt pavement. This area is specified under the SMP to be restored with a low-permeability cover system; therefore, all penetrations of the site cover system for this project were restored with concrete slab or asphalt meeting or exceeding the requirements of the SMP.

Removal of pipes 01, 02, and 03 required saw-cutting an existing concrete slab at ground surface that also contained anchors for angle braces supporting the adjacent exterior site security wall. Restoration of these trenches included backfill and compaction of suitable excavated trench spoils, placement and compaction of imported approved Item 4 gravel to a depth of approximately 6 inches below finished grade, and construction of a 6 inch thick reinforced concrete slab. The slab was connected to the existing concrete adjacent slab with steel dowel rods, and new concrete anchors were installed to support re-installation of the wall braces.

Pipes 04 and 06 were excavated in areas of existing asphalt pavement which was saw-cut prior to removal. Restoration of these trenches included backfill and compaction of suitable excavated trench spoils, placement and compaction of imported approved Item 4 gravel to a depth of approximately 5-6 inches below finished grade. Trench restoration was completed with the placement of a minimum of 4 inches of asphalt binder course followed by 1.5 inches of asphalt top course to support the heavy forklift traffic in the area.

As described above, restoration of the industrial structure near former Outfall 001/1A (CGW) was completed with a 6 inch thick reinforced concrete slab placed over a flow-able fill subbase and doweled into the adjacent slab for structural continuity. This included construction of a slab to seal the center opening that had previously allowed precipitation to fill the chamber with water. See Appendix B-Photographs for documentation of sealing of this structure to prevent future infiltration of precipitation.

The imported Item 4 gravel was obtained from Gridley Excavating, a NYSDEC-permitted facility and representative samples of the materials were tested and approved by NYSDEC for use at the Tioga Avenue BCP Site in accordance with the SMP. The locations of the import material sources and the confirmatory sample laboratory analytical reports are provided in Appendix C. The test results and source identification information were submitted to the NYSDEC on August 5, 2014 and approval was granted on August 28, 2014.

3. Waste and Residuals Management

Several types of waste materials were generated during this work. The management of these materials is described in the following sections of this report. For non-hazardous solid waste: Corning coordinated waste characterization and disposal with Steuben County Landfill; Haley & Aldrich performed sampling and assisted with sample shipping and analysis; and OSC arranged for loading and transportation of the solid waste materials. Appendix A provides a summary table for each type of material, quantities, and disposal/recycling facility where the materials were disposed. Accompanying documentation including analytical testing results, weigh tickets, Non-Hazardous Waste Manifests and receipts are also provided in Appendix A.

Summary of Waste Materials Disposal

CONSTRUCTION AND DEMOLITION DEBRIS (C&D) DISPOSAL						
Date	Ticket #	Weight (tons)	Description	Transporter	Source	Materials Taken To
12/08/15	3364004	12.26	C&D	D.Gross	Concrete/Asphalt	Steuben County Landfill
12/08/15	3364031	8.19	C&D	D.Gross	Concrete/Asphalt	Steuben County Landfill
Total Weight (tons):		*20.45*				
SOIL DISPOSAL						
Date	Ticket #	Weight (tons)	Description	Transporter	Source	Materials Taken To
12/08/15	3363955	11.57	BUD (Soil)	D.Gross	Soil from pipe trench/structures	Steuben County Landfill
WATER DISPOSAL						
Date	Ticket #	Gallons	Description	Transporter	Source	Materials Taken To
11/19/15	014218512	1288	Water	TTT Service Inc.	Excavation dewatering	EQ Detroit Inc.
METAL RECYCLING						
Date	Ticket #	Weight (tons)	Description	Transporter	Source	Materials Taken To
12/08/15	122464	Not Indicated	Steel Pipes	OSC	Pipes excavated during Outfall 001 work	Swarthout Facility, Beaver Dams, NY

Each type of waste was segregated and staged along the north wall of the Batch House used by World Kitchen. The materials were placed on and covered with poly at all times for the duration of the project when the stockpiles were not in active use. Soil samples collected for disposal were sampled for TCLP RCRA Metals and Total Petroleum Hydrocarbons (TPH) in accordance with Steuben County Landfill requirements. TCLP results for all samples collected were less than hazardous waste characterization thresholds and wastes were disposed of as non-hazardous. Water generated during investigation of the Industrial Structures was sampled for RCRA Metals (total), pH and Total Suspended Solids (TSS), the waste management vendor used by Corning for disposal of the water.

3.1 CONSTRUCTION & DEMOLITION (C&D) DEBRIS

Construction and Demolition (C&D) Waste included concrete, asphalt and clay tile excavated during trenching activities. The C&D material was disposed of at Steuben County Landfill.

3.2 SOIL AND PIPE CONTENTS

Soil Waste included excavated soil fill removed from the pipe trenches, excess soils accumulated during the pipe sampling and residual soils removed from the piping during cleaning. The soil material was disposed of at Steuben County Landfill.

3.3 WATER

Water consisted of water pumped during the investigation of the (2) Industrial Structures adjacent to former Outfall 001/1A (CGW). The water was shipped to EQ Detroit, Inc. as a non-hazardous waste.

3.4 METALS RECYCLING

Metal recycling included all steel pipes associated with former Outfall 001/1A (CGW) and metal frames around the (2) Industrial Structure openings. The metal was delivered by the Contractor to the Swarthout Facility in Beaver Dams, NY for recycling.

4. Material Sampling and Analytical Results

4.1 MATERIAL SAMPLING AND ANALYSIS

Samples of various materials were collected through the course of the work in accordance with the Work Plan. A representative sample of the contents of each of the pipes numbered 01 through 06 at the locations shown on Figure 2 was obtained by Haley & Aldrich. In addition, a soil sample from the trench immediately under the east end of pipe 04 (Pipe 4 Trench) was obtained at the request of the NYSDEC representative. These samples were submitted to ESC Lab Sciences, Mt. Juliet, TN for chemical analysis for the following:

- Analysis of Target Analyte List (TAL) metals (including mercury);
- Analysis of PCBs.

In accordance with the Work Plan and the SMP, analysis of the Target Compound List (TCL) volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) was not conducted based on field screening (elevated readings on either a 10.6eV or 11.7eV photoionization detector/PID were not observed).

Due to a field sample labeling error by Haley & Aldrich, samples for pipes 05 and 06 could not be positively identified upon arrival at the laboratory and therefore, were not analyzed. Following delivery of these samples to the laboratory, it was learned that the samples obtained at the Pipe 05 and Pipe 06 locations were inadvertently identified with same sample descriptions. Because it was not possible to differentiate sample locations these samples were not analyzed. Haley & Aldrich initially advised NYSDEC of this condition on October 30, 2015 and requested use of the NYSDEC sample analytical results for the split samples that NYSDEC obtained at these locations. NYSDEC provided its analytical results from the NYSDEC sampling of this pipe on December 17, 2015 which are provided in Appendix D of this report.

NYSDEC representatives were on-Site during portions of the work and collected sample splits with some of the Haley & Aldrich samples. The NYSDEC samples were submitted to Test America Laboratories, Inc., Amherst, NY for analysis. NYSDEC sample number DEC 04 was split with Haley & Aldrich sample PIPE 05(not analyzed), NYSDEC sample number DEC 05 was split with Haley & Aldrich sample PIPE 06(not analyzed), and NYSDEC sample number DEC 06 was split with Haley & Aldrich sample PIPE 04(analyzed). A summary of the results of these samples are shown in Table 1.

Table 1 summarized the results of each individual pipe content samples. Table 2 compares the laboratory results for the individual soil sample collected from the pipe 04 trench to the NYSDEC BCP Soil Cleanup Objects (SCOs) for both Restricted Commercial and Restricted Industrial criteria. The soil results indicate that the arsenic level of 58.9 mg/Kg was above both the Restricted Commercial and Restricted Industrial SCOs. In addition, measured barium, cadmium, copper, lead and mercury were above the Restricted Commercial but below the Restricted Industrial SCOs.

The SMP for the Tioga Ave BCP Site requires that an engineering control cover system be maintained over the site to mitigate contact with site contaminants. The area of the BCP site where former Outfall

001/1A (CGW), the removed pipes, and the nearby industrial structure are located is required by the SMP to have a low permeability cover system to further mitigate potential leaching of contaminants to groundwater. As described above, the restoration of the areas disturbed under this Work Plan was accomplished with asphalt or concrete cover systems meeting the requirements of the SMP.

4.2 DATA VALIDATION PROCEDURES

Validation of the laboratory analytical data obtained by Haley & Aldrich and by NYSDEC was performed based on the evaluation criteria outlined in "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", EPA-540-R-014-002, August 2014 and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA 540-R-013-001, August 2014. The evaluation and recommended criteria specified in these documents were being used to qualify the reported values for the following quality assurance parameters:

Organic Analysis:

i) technical holding time compliance;
ii) initial and continuing calibration compliance;
iii) method blank sample analyses;
iv) system monitoring compounds (surrogate spikes) recovery compliance;
v) matrix spike and matrix spike duplicate (MS/MSD) recovery compliance;
vi) laboratory control sample (LCS) recovery compliance;
vii) sample chromatograms and raw data.

Inorganic Analysis:

i) technical holding time compliance;
ii) initial calibration compliance;
iii) initial and continuing calibration verification standard recovery compliance;
iv) preparation and instrument blank analyses;
v) ICP interference check samples;
vi) ICP serial dilutions;
vii) laboratory control samples (LCS) recovery compliance;
viii) MS/MSD recovery compliance;
ix) matrix duplicate (MD) sample analyses;
x) Duplicate sample analyses;
xi) instrument raw data.

The results of the data validation are presented within Data Usability Summary Reports (DUSR) prepared for each laboratory report are provided in Appendix D. The DUSR presents the findings of the data validation and provides the recommended data qualification for the affected results as are indicated on Tables 1 and 2. All of the project sample results were found to be usable with the recommended data qualifiers as presented along with the reported values in Tables 1 and 2.

Results of the quality control samples for the total metals analyses indicated a potential high bias in the reported results for copper and selenium in the project samples submitted to ESC Lab Sciences by Haley & Aldrich. The laboratory reports for all of the project samples were found to be complete with the following exceptions:

- SDG J103741-1 containing the TCLP analysis results for soil samples DEC 04, 05 and 06 from NYSDEC Study Area Site #851046 OU5 is listed as report "Revision #1" but there is no explanation in the case narrative as to what information in the report has been revised.

- SDG J103741-2 containing the Total Metals analysis results for soil samples DEC 04, 05 and 06 from NYSDEC Study Area Site #85106 OU5 does not include the raw data for the analysis of percent (%) solids. However, the reported results were presented in units of milligrams per kilogram dry weight (mg/kg DW).

4.3 ADDITIONAL ANALYSES

The NYSDEC also analyzed samples DEC 04, DEC, 05, and DEC 06 by TCLP for RCRA 8 metals. Results of the analyses did not exceed the TCLP regulatory levels for hazardous waste determination for any of these three samples. The laboratory reports are included in Appendix D.

4.4 CHARACTERIZATION FOR WASTE DISPOSAL

Waste materials were generated during the work as described above. Waste asphalt and concrete were disposed of at the Steuben County Landfill as construction and demolition debris.

Excess soil was generated from the trench excavations during the pipe removal work. This soil was consolidated into a single stockpile on-Site. A five point composite sample was collected and submitted to ESC Lab Sciences for analysis by TCLP for RCRA 8 metals and TPH as required by the Steuben County Landfill. Results of the analysis demonstrate that none of the measured constituents exceeded the TCLP regulatory levels for hazardous waste determination for the sample. The laboratory reports are included in Appendix A.

Pipes 01, 02, 03, 04, and 06 were removed from the ground during the project. Each of these pipes contained various amounts of residual solid material which was removed to the extent practical by the Contractor prior to recycling of the pipe as scrap metal. The pipe solids were collectively stockpiled on-Site and a five point composite sample was collected and submitted to ESC Lab Sciences for analysis by TCLP for RCRA 8 metals and TPH. Results of the analysis did not exceed the TCLP regulatory levels for hazardous waste determination for the sample. The pipe contents stockpile was then combined with the soil stockpile and disposed of at the Steuben County Landfill. The laboratory reports are included in Appendix A.

The Industrial Structure containing the two steel framed ports contained water that required removal during the investigation. The water was pumped into a 6900 gallon poly holding tank brought to the site for this purpose. Approximately 1288 gallons of water were collected from the excavation. A sample of the water was collected from the tank and submitted to ESC Lab Sciences for analysis for total RCRA 8 metals, pH, and total suspended solids. The water was disposed of at the EQ Detroit, Inc. facility in Detroit, Michigan as a non-hazardous waste. The laboratory reports are included in Appendix A.

A small amount of residual solids remained in the poly tank after removal of the water. A five point composite sample was collected and submitted to ESC Lab Sciences for analysis by TCLP for RCRA 8 metals and TPH. Results of the analysis indicated that these constituents did not exceed the TCLP

regulatory levels for hazardous waste determination for the sample. The tank was then returned to the tank vendor. The laboratory reports are included in Appendix A.

5. Summary and Certification

Corning completed investigation, characterization, and removal of piping entering former Outfall 001/1A (CGW) and removal of steel framed ports in a nearby structure in accordance with both the Tioga Avenue BCP Site Management Plan (SMP) dated January 2012 as revised on March 29, 2012 and approved by NYSDEC on April 3, 2012; and the Work Plan For the Characterization and Removal of Former Outfall 001/1A (CGW) and Associated Inlet Piping and Two Nearby Industrial Structures (the "Work Plan") dated June 30, 2015 and the Work Plan Addendum #1 dated July 14, 2015 that was approved by the New York State Department of Environmental Conservation (NYSDEC) on August 4, 2015. Former Outfall 001/1A (CGW) was removed from operation in 1977 and was removed from the Pressware facility SPDES permit in April 1979, finalizing operational closure of the Outfall.

The former Outfall 001/1A (CGW) outflow pipe has been fitted with a removable plug and left in place as requested by NYSDEC on July 7, 2015. The Outfall structure box was also left in place. Two nearby steel plate-covered industrial structures were excavated and determined to be openings into a larger subsurface concrete vault. Further investigation of the vault did not identify any other piping connections, including any connections to the Outfall 001/1A (CGW) structure. The structures were removed and the vault was closed in accordance with the SMP.

Analytical testing of pipe contents and a sample of soil obtained from the trench immediately under the east end of pipe 04 were completed and are documented in this report. Testing of pipe contents by the NYSDEC by TCLP for RCRA 8 metals did not indicate the presence of hazardous waste. Additional testing of waste materials by Haley & Aldrich for waste characterization and disposal purposes by TCLP for RCRA 8 metals indicated that none of the waste material generated during this project was a hazardous waste.

I, James E. Siegfried, certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject investigation and removal program, and I certify that the Work Plan was implemented and that all activities were completed in substantial conformance with the DER-approved Work Plan and approved Site Management Plan applicable to this Site at the time the activities were performed.

NYS Professional Engineer #062918 | Signature | Date 02/12/2016

References

1. Work Plan for the Characterization and Removal of Former Outfall 001/1A (CGW) and Associated Inlet Piping and Two Nearby Industrial Structures, Tioga Avenue BCP Site - #C851031, revised June 30, 2015

2. Updated Work Plan, June 30, 2015, Addendum #1, Former Outfall 001/1A (CGW) Tioga Avenue BCP Site #C851031, dated July 14, 2015

3. Tioga Avenue BCP Site Management Plan (SMP) dated January 2012, revised April 3, 2012

G:\Projects\33123\032 2015 Services\Outfall 1A Closure & Asphalt Repair Projects\Outfall 1A Construction Phase\Report\Draft Report\TIOGA 2016_0212_HANY_Outfall001_ClosureRpt_Final.docx

TABLES

Table 1 –Outfall 001/1A (CGW) Associated Pipes
Sample Results Summary

Sample ID	PIPE01-102015-1400	PIPE02-102015-1600	PIPE03-102015-1415	PIPE04-102715-1045	DEC 04 Pipe 05	DEC 05 Pipe 06	DEC 06 Pipe 04
Location	Pipe 1 Contents	Pipe 2 Contents	Pipe 3 Contents	Pipe 4 Contents			
Sample Date	10/20/15	10/20/15	10/21/15	10/27/15	10/26/15	10/26/15	10/27/15
Metals (mg/kg)							
Aluminum	3320	3690	3610	6500	6140	1320	6990
Antimony	584	254	971	183	252	292	155
Arsenic	237	154	364	94.6	93.5	109	94.3
Barium	2670	1790	5710	1430	6140	9010	1770
Beryllium	<4.36	<4.14	<1.36	<1.0	ND	ND	ND
Cadmium	16.6	32.7	8.22	25.4	10	10.2	29.8
Calcium	3560	13200	2960	34100	27900	47100	32800
Chromium - Total	87.6	81.6	1360	34.5	40	58.3	90.1
Chromium - Hexavalent	NA	NA	NA	NA	NA	NA	NA
Chromium - Trivalent	NA	NA	NA	NA	NA	NA	NA
Cobalt	30.9	27.8	8.27	5.4	17.6 J	26.7 J	5.3 J
Copper	301 J	1610 J	2880 J	579 J	2790	3620	475
Iron	272000	293000	101000	20100	26700	74200	18000
Lead	1540	1660	2730	1310	907	1190	3320
Magnesium	1840	1330	1330	3280	3820	3160	2520
Manganese	1440	1330	458	236	129000	255000	709
Mercury	0.235	9.77	0.798	14.8	14 J	7.2 J	19.8 J
Nickel	111	431	28.7	692	56.7	73.7	644
Potassium	797	902	715	1630	2090 J	2510 J	1900
Selenium	<43.6 UJ	<41.4 UJ	<13.6 UJ	<10.0 UJ	59.2	104	3.7 J
Silver	<21.8	<20.7	<6.79	<5.0	14.5	23.2	NA
Sodium	<2180	<2070	<679.	1490	493 J	662	1230
Thallium	<43.6	<41.4	<13.6	<10.0	101	176	NA
Vanadium	<43.6	<41.4	<13.6	<10.0	ND	ND	9.4 J
Zinc	175	512	1410	479	1900	1970	359
Total Solids	91.8	96.7	73.6	85.2			
Total PCB (mg/kg) (all isomers)							
PCB 1016	<0.0185	<0.0176	<0.0231	<0.017 J	ND	ND	ND
PCB 1221	<0.0185	<0.0176	<0.0231	<0.017	ND	ND	ND
PCB 1232	<0.0185	<0.0176	<0.0231	<0.017	ND	ND	ND
PCB 1242	<0.0185	<0.0176	<0.0231	<0.017	ND	ND	ND
PCB 1248	<0.0185	<0.0176	<0.0231	<0.017	ND	ND	ND
PCB 1254	<0.0185	<0.0176	0.473	0.366	ND	ND	ND
PCB 1260	0.291	<0.0176	<0.0231	<0.017 J	ND	ND	ND

Qualifiers:

J = Result is an estimated value (see DUSR for more information).
UJ = The reporting limit is an estimated value (see DUSR for more information)

Table 2 –Outfall 001/1A (CGW) Pipe 04 Trench Soil Sample Results Summary

Sample ID	0204TRENCH-10211501400		NYSDEC BCP Site SCOs	
Location	Soil Beneath Pipe 4 Trench Under cut end (east)			
Sample Date	10/21/15		Restricted Commercial	Restricted Industrial
Metals (mg/kg)				
Aluminum	9150		--	--
Antimony	112		--	--
Arsenic	58.9		16	16
Barium	944		400	10000
Beryllium	0.515		590	2700
Cadmium	5.57		9.3	60
Calcium	13500		--	--
Chromium - Total	19.9		--	--
Chromium - Hexavalent	NA		400	800
Chromium - Trivalent	NA		1500	6800
Cobalt	11.8		--	--
Copper	389	J	270	10000
Iron	48500		--	--
Lead	1780		1000	3900
Magnesium	3010		--	--
Manganese	479		10000	10000
Mercury	4.66		2.8	5.7
Nickel	35		310	10000
Potassium	1650		--	--
Selenium	<2.44	UJ	1500	6800
Silver	<1.22		1500	6800
Sodium	326		--	--
Thallium	<12.2		--	--
Vanadium	22.4		--	--
Zinc	483	J	10000	10000
Total Solids	82			
Total PCB (mg/kg) (all isomers)			1	25
PCB 1016	<0.0207			
PCB 1221	<0.0207			
PCB 1232	<0.0207			
PCB 1242	<0.0207			
PCB 1248	<0.0207			
PCB 1254	<0.0207			
PCB 1260	<0.0207			

Qualifiers:
-- = No SCO
J = Result is an estimated value (see DUSR for more information).
UJ = The reporting limit is an estimated value (see DUSR for more information)

FIGURES

LEGEND

- APPROXIMATE LOCATION OF STEEL PLATE COVERED OPENINGS
- APPROXIMATE LOCATION OF BCP BOUNDARY LINE
- PLATED STRUCTURE — APPROXIMATE LOCATION OF SOIL BORING INSTALLED 20-21 MAY 2013

NOTES:

1) AERIAL IMAGERY COURTESY OF PICTOMETRY INTERNATIONAL, INC., 2012.

N
W E
S

0 20 40
SCALE IN FEET

HALEY ALDRICH

CORNING INCORPORATED & CORNING PROPERTY MANAGEMENT
BCP SITE #C851031
CORNING, NEW YORK

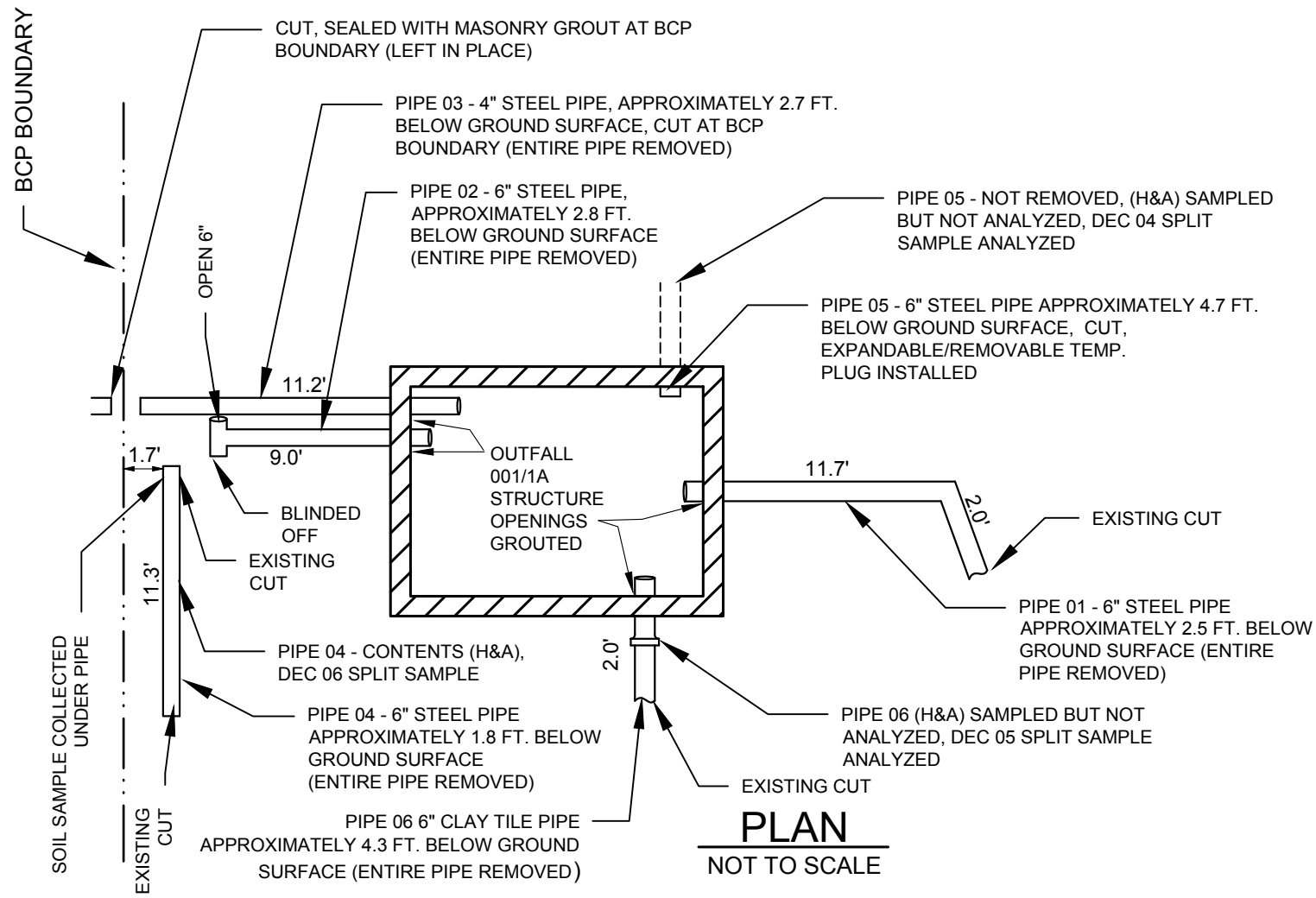
OUTFALL 001/1A (CGW) LOCATION PLAN

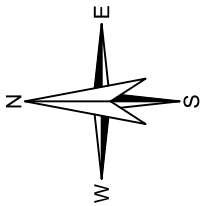
SCALE: AS SHOWN
FEBRUARY 2016

FIGURE 1

G:\Projects\33123\GIS\Map Projects\2015_0617_TJV_Pictometry2012_BL_D5.mxd

BECKER, JON Printed: February 12, 2016 Layout: HA-FIG-A-L
Drawing: G:\PROJECTS\33123\032 2015 SERVICES\OUTFALL 1A CLOSURE & ASPHALT REPAIR PROJECTS\OUTFALL 1A CONSTRUCTION PHASE\REPORT\OUTFALL STRUCTURE\DRAWING2.DWG





NOTE:
1. CONTENTS OF PIPE SECTIONS 01-06 WERE SAMPLED INDIVIDUALLY.
2. OUTFALL 001/1A IS A SUBSURFACE CONCRETE STRUCTURE APPROXIMATELY 2' W X 4' L X 5' D WITH A STEEL PLATE COVER.
3. PIPE DEPTHS MEASURED FROM INVERT OF PIPE.

HALEY ALDRICH

OUTFALL 001/1A (CGW) PIPING AND INDUSTRIAL SYTRUCTURE CLOSURE
FORMER FALLBROOK FACILITY
TIOGA AVE., CORNING, NY

OUTFALL 001/1A (CGW) AND ASSOCIATED PIPING

SCALE: AS SHOWN
FEBRUARY 2016

FIGURE 2