CONSTRUCTION QUALITY ASSURANCE PLAN
REMEDIAL ACTION IMPLEMENTATION

NORTH AND SOUTH LANDFILLS
COOPER CROUSE-HINDS FACILITY
SYRACUSE, NEW YORK

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1.0 INTRODUCTION

1.1 *Purpose*

This Construction Quality Assurance Plan (CQAP) presents the procedures and protocols that will ensure the Remedial Action at the Cooper Crouse-Hinds (CCH) North and South Landfills Site will be executed in accordance with the approved design documents.

This CQAP has been prepared in accordance with the requirements of the Order on Consent entered into by Eaton Cooper, formerly known as Cooper Industries, effective August 29, 2011, as well as the Final (100%) Design Report including design drawings and technical specifications.

1.2 *Remedial Action Objectives*

The objectives for the remedial program have been established through the remedy selection process provided in 6 NYCRR Part 375. The goal for the remedial program is to restore the Site to pre-disposal conditions to the extent feasible. At a minimum, the remedy will eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the Site through the proper application of scientific and engineering principles. The remedial objectives for this site are provided below.

1.2.1 Public Health Protection

Groundwater

- Prevent people from drinking groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with contaminated groundwater.
- Prevent potential for inhalation of contaminants volatilizing from the groundwater.

Soil

- Prevent ingestion/direct contact with contaminated soil.
- Prevent potential for inhalation of contaminants volatilizing from the soil.

Surface water

- Prevent people from drinking surface water impacted by contaminants.
- Prevent contact with contaminants from impacted water bodies.

Sediment

- Prevent direct contact with contaminated sediments.

Air/Soil Gas

- Control landfill methane gas generated within the landfills so as not to create hazards to health, safety or property.

1.2.2 Environmental Protection

Groundwater

- Restore the groundwater aquifer to meet ambient groundwater quality criteria, to the extent feasible.
- Prevent discharge of contaminated groundwater to surface water.

Soil

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Surface Water

- Restore surface water to ambient water quality criteria for contaminants of concern, to the extent feasible.
- Prevent impacts to biota from ingestion/direct contact with surface water causing toxicity and impacts from bioaccumulation through marine and aquatic food chain.

Sediment

- Prevent releases of contaminants from sediment that would result in surface water levels in excess of ambient water quality criteria.
- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity and impacts from bioaccumulation through marine and aquatic food chain.

Air/Soil Gas

- Prevent adverse environmental impact related to landfill methane gas migration and odors.

1.3 *Report Organization*

This CQAPP is organized into four sections and five attachments. The remedial action objectives, site location and description, history, and the selected remedy are presented in Section 1. Project management, including roles and responsibilities of the project team, chain of command, communication, and meetings is presented in Section 2. Construction oversight tasks, which will ensure Remedial Action quality, such as inspections and QA/QC testing/documentation, are presented as Section 3. References are included in Section 4.

Attachment A contains the Submittal Log. Attachment B contains the Daily Field Report Form with Supplements. Attachment C contains the Field Change Form. Attachment D contains the Pre-Final Inspection Checklist.

1.4 *Site Location and Description*

The Cooper Crouse-Hinds, LLC (CC-H) Site consists of two former landfills, referred to as the North Landfill and South Landfill with associated wetland areas, separated by seventh North Street, which are located immediately west of CSX railroad tracks and the adjacent operating CC-H manufacturing facility. The Site is located in the Town of Salina (North Landfill) and City of Syracuse (South Landfill), Onondaga County, New York (Latitude 043º 05' 7" N, Longitude 076º 09' 40" W). The North Landfill consists of three contiguous parcels (Tax ID Nos. 073.-01-08.1, 073.-01-08.3, and 073.-01-08.4) totaling 21.48 acres in size. The South Landfill consists of one parcel (Tax ID No. 01.01-03) totaling 19.4 acres in size. The Site is located in an area of mixed usage including light industrial/manufacturing, commercial and retail usage. Seventh North Street is oriented southeast-northwest and separates the two landfills that comprise the Site. A Site Location Map is presented as Figure 1 and a Site Plan and Current Topography is presented as Figure 2.

1.4.1 Landfills

The North Landfill is bordered along its northern border by a former landfill (approximately 37 acres) owned by Plaza East, LLC (Plaza), which consists of areas of fill (municipal waste and miscellaneous debris) with woodland cover and wetland areas. The North Landfill is bordered to the east and southeast by CSX railroad tracks and the CC-H facility and to the south and southwest by Seventh North Street and the South Landfill. West of the North Landfill are wetlands (Plaza property) followed by Ley Creek.

The South Landfill is bordered to the north by Seventh North Street and the North Landfill. To the east and southeast of the South Landfill are CSX railroad tracks followed by mixed commercial and retail development and Hiawatha Boulevard. Further to the South is undeveloped woods, wetlands and mixed commercial and retail development border the South Landfill further to the south. Ley Creek abuts the entire west and northwest boundary of the South Landfill.

Review of available historical documentation indicates that prior to the mid-to-late 1950s the North and South Landfills had been occupied by low lying fields, salt marshes and woodlands. From the mid-1950s to 1989 fill material had been placed across various areas of the North and South Landfills. An overall Site Plan with current topography is shown on Figure 2.

1.4.2 Topography

The site topography is shown on Figure 2. Topography of the North Landfill is generally flat across the southern half of the landfill with an average elevation range of approximately 370 feet to 372 feet above mean sea level (AMSL). However, moving to the north from the central area of the North Landfill, the elevation rises moderately and

increases to near an average of 381 feet AMSL across a notably mounded area of the landfill. Topography slopes moderately to steeply downward from the fill-mound along the northern portion of the North Landfill. Drainage across the North Landfill is generally radially outward from the fill-mound area in all directions. Drainage to the north and west is to the west wetland (Wetland B) and then to the adjacent wetland property owned by Plaza East. Drainage to the south and east is towards the east wetland (Wetland A) and the eastern stream segment (Stream A).

Topography of the South Landfill is generally flat across the landfill area with an average elevation range of 373 feet to 377 feet AMSL. Topography along the edges of the fill-mound slopes moderately to steeply away from the fill-mound to the north, east, south and west. Drainage across the South Landfill is generally radially outward from the fill-mound in all directions. Drainage to the east-southeast is to the stream (Stream B) and wetland areas (Wetland C) located on the east-southeast side of the landfill. Drainage to the south is to the wetland area (Wetland C) located to the south of the fill-mound. Drainage to the west is collected along the landfill's western border for drainage into Wetland C and eventual flows to Ley Creek.

1.4.3 Surface Water Features

Ley Creek is located between 80 feet and 120 feet west of the western property boundary of the North Landfill and adjacent to the western boundary of the South Landfill (Figure 2). Ley Creek is part of the Onondaga Lake drainage basin and flows to the south/southwest towards Onondaga Lake. Between the mouth of Ley Creek and the Onondaga County Ley Creek Transfer Station and former sewage treatment plant (POTW) outfall, Ley Creek is classified as a Class C water body. From the POTW outfall to a point located 3.1 miles north of the creek mouth, Ley Creek is classified as a Class B water body. The section of Ley Creek adjacent to the CC-H Landfill Site is classified as a Class C water body. Flood insurance maps indicate that the CC-H Landfill Site is located within the 100-year flood plain of Ley Creek as defined by the Federal Emergency Management Agency (FEMA). The base flood water surface water elevation for the Site is 374 feet AMSL.

Bear Trap Creek drains into Ley Creek at its terminus that is located approximately 260 feet west of the southwest corner of the North Landfill, which is to the immediate north of the Seventh North Street bridge that crosses Ley Creek (Figure 2). Bear Trap Creek extends northward from its terminus and receives drainage from areas that range from undeveloped usage to commercial usage and potentially light industrial usage.

Two stream segments and one drainage ditch are located on the CC-H Landfill Site and are described in the next section.

1.4.4 Wetlands

In November 2005, wetland delineation was conducted across the Site to define the extent of wetlands on-site. All work was conducted according to the criteria set forth in the *1987 United States Army Corps of Engineers Wetlands Delineation Manual, Classification of Wetlands and Deepwater Habitats of the United States,* and the *1995 NYSDEC Freshwater Wetlands Delineation Manual*. Wetland areas identified on-site are described further below.

Two wetland areas and one stream section were identified on the North Landfill (Figure 2). The first wetland, Wetland A (a.k.a. the "east wetland") extends along the majority of the southeastern side of the North Landfill and is approximately 2.63 acres in size. The east wetland receives flow from an off-site drainage ditch/stream form the Plaza East former landfill and CSX Railroad properties that enters the wetland at the east corner of the landfill. Surface water in this ditch/stream appears to originate as surface water runoff and drainage from and across the adjacent properties owned by Plaza East, LLC and CSX Railroad. Surface water discharge from the east wetland is to a stream (Stream A) that is 675 feet in length and flows southwest from Wetland A to the south point of the North Landfill where it then turns to the northwest and parallels Seventh North Street. At its terminus, the stream discharges into two 24-inch diameter culverts, which carry flow beneath Seventh North Street and into a drainage ditch that is located along the northeast boundary of the South Landfill. Drainage in the ditch flows northwest and ultimately discharges to Ley Creek. The second wetland, Wetland B (a.k.a. the "west wetland") is located along the northwest side of the North Landfill; the on-site portion of this wetland feature is approximately 2.61 acres in size. Wetland B occurs adjacent to and within the flood plain of Ley Creek and extends offsite from the northwest property boundary, and across the adjacent property owned by Plaza East, LLC, to Ley Creek. Wetland B is identified on National Wetland Inventory (NWI) maps (ID No. PFO1/SS1E).

One wetland area, stream section, and drainage ditch were identified on the South Landfill (Figure 2). Wetland C (a.k.a. the "south wetland") is located south of the southwest point of the South Landfill and is approximately 1.29 acres in size. The stream section (Stream B) is approximately 1,825 feet in length and extends along the southeast side of the South Landfill. The stream channel begins near the east point of the landfill and runs parallel with the CSX railroad tracks and southeastern edge of the landfill until it enters the Wetland C. Upon entering Wetland C, the stream flows southwest along the northwest edge of Wetland C.

Prior to 2009, surface water from Stream B and Wetland C discharged into Ley Creek at the terminus of the stream via a 36-inch diameter culvert pipe. The culvert pipe was removed in 2009 and the area backfilled with imported gravel material and fill (Figure 2) to prevent the flow of surface water and entrained sediments from Ley Creek to the South Landfill and vice versa. There is no longer a discharge point to Ley Creek, however surface water can still flow along Stream B and into Wetland C.

Surface water flow in Stream B appears to be primarily from surface water runoff from the South Landfill and the adjacent CSX railroad property. Observations indicate that flow in the stream is generally limited to times of heavy runoff due to either rainfall events or snow melt. Generally, the upper one third of the stream area is dry for the majority of the year. Prior to the removal of the 36-inch culvert pipe, observations indicated that surface water from Ley Creek flowed into Stream B and Wetland C during high water events in Ley Creek.

The drainage ditch is located along the northern boundary of the South Landfill and Seventh North Street. The ditch is 1,075 feet in length and begins at the east point of the South Landfill. Flow in the ditch is to the northwest to its terminus where it discharges into Ley Creek. The ditch accepts discharge from a culvert pipe located at the head of the ditch and from the two 24-inch culvert pipes leading beneath the roadway. The source of flow from the culvert pipe at the head of the ditch is from unknown off-site sources to the southeast. The head of the ditch is located at an elevation of approximately two feet below the head of the South Landfill (Stream B) and does not provide discharge flow to Stream B.

Based on the NYSDEC wetlands maps, the wetlands located on the North and South Landfills are not under the direct jurisdiction of New York State. The United States Army Corps of Engineers (USACE) provided a preliminary Jurisdictional Determination (JD) dated June 19, 2009 on these wetland areas.

1.5 Site History

Available information indicates that prior to the mid-1950s the area of the North Landfill had been undeveloped and occupied by fields, salt marshes and woodlands. Beginning in the mid-1950s, CC-H reportedly began using the North Landfill for disposal of wastes that were generated at their adjacent manufacturing facility. Between the mid- 1950s and 1972 the North Landfill reportedly accepted an unknown quantity of solid industrial waste (i.e., foundry sand) from the CC-H facility. In April of 1981, CC-H applied for a Part 360 permit to operate the North Landfill as a non-hazardous landfill. On March 10, 1982, CC-H withdrew its application. Waste disposal was discontinued at the North Landfill in 1989. The North Landfill has been inactive since 1989.

Available information indicates that prior to 1959 the area of the South Landfill had been undeveloped and occupied by fields, salt marshes and woodlands. Beginning in 1960, CC-H reportedly began using the South Landfill for disposal of wastes that were generated at their adjacent manufacturing facility. Between 1960 to early 1965 the South Landfill also accepted approximately 2,000 cubic yards per week of municipal solid waste (sanitary, domestic, trash, debris, etc.) from the City of Syracuse.

In a memo dated December 1, 1960, from the City of Syracuse Department of Public Works (DPW) to CC-H, the DPW indicated that the landfill (reportedly the South Landfill) would be prepared for usage in a way that would correct drainage issues in

ditches and culverts across the South Landfill and along Seventh North Street and also in a way that would allow for the development of a lagoon for use in clarifying liquid plant wastes. [Note: The source of the liquid waste was not identified]. It was also indicated at this time (1960) that the Ley Creek channel west from Seventh North Street would be cleaned for the length of the CC-H creek frontage to improve area drainage and reduce odor problems. In a memo dated June 9, 1961, from the City of Syracuse DPW to CC-H, the DPW presented a plan for cleaning the ditches across the North and South Landfills in lieu of conducting cleaning of the Ley Creek channel by crane and drag-line. The date of channel cleaning completed by the City of Syracuse DPW, and/or how the sediments from Ley Creek were handled and where they were disposed of was not noted in available documentation. However, it is clear from available documentation and aerial photographs that the DPW actively modified drainage in ditches along the east side of both the North and South Landfills and along Seventh North Street to facilitate usage of the South Landfill by DPW. The location of these ditches also correlates with the location of the stream sections (Stream A and B) and drainage ditches that are currently mapped on the CC-H Site in Figure 2.

At some time in early 1965, CC-H terminated use of the South Landfill by the City of Syracuse due to concerns over the remaining useful volume of the fill area and because the City was not providing cover material per the agreement. Waste disposal activities were reportedly discontinued at the South Landfill in 1969 and the South Landfill has been inactive since that time.

After the City of Syracuse's use of the South Landfill was terminated in 1965, the City entered into an agreement with Plaza East, LLC to dispose of municipal solid waste on property located immediately north of the North Landfill. Access to this area was through a 100-foot wide strip of land located along the northwest portion of Wetland B (adjacent to Ley Creek) which was conveyed to Plaza East, LLC by CC-H in 1964. A road was constructed on this strip to allow the City of Syracuse to use Plaza East property for the continued disposal of municipal waste. A letter from the City of Syracuse, Department of Public Works dated June 24, 1968 states that the access road would be first landfilled to approximately 12 to 18 inches below grade before placement of a road surface. There is no indication as to the type of fill material to be placed by the City.

In the early 1970s, Onondaga County formed the Bear Trap-Ley Creek Drainage District to address periodic flooding in Ley Creek. The County began operations intended to widen and deepen the Ley Creek channel for the majority of its length. As part of that plan the County took the 100-foot wide Plaza East, LLC parcel which left Plaza East, LLC with no access to their property from Seventh North Street. On August 30, 1972, CC-H entered into a land transfer and right of-way (ROW) agreement with Onondaga County in which an additional 100-foot wide strip of land was transferred from CC-H to Onondaga County so that the County could grant an easement to Plaza East, LLC for access to the landfill property. At some point the 100-foot wide parcel was transferred back to Plaza East, LLC. The 150-foot wide strip of land between Wetland B and Ley Creek is currently owned by Plaza East, LLC as shown on Figure 2.

As part of the 1972 ROW agreement, CC-H also granted Onondaga County a semi-permanent ROW along the entirety of the western property border of the South Landfill. This agreement allowed Onondaga County temporary access to the CC-H Site for a period of one year in order to complete widening and deepening of Ley Creek in association with the Ley Creek drainage project. Available information indicates that work on the Ley Creek dredging and drainage channel improvements for the South Landfill was completed in about January 1973. CC-H indicated that a dike had been located in the area of the southwest corner of the South Landfill and that dredge spoils had reportedly been spread over the southwest corner of the South Landfill in the area of Wetland C.

1.6 Selected Remedy

The selected remedy for the CCH site, as stated in the Record of Decision (ROD), includes:

- Three identified hot spots that will be targeted for excavation and off-site disposal. All three areas occur in the North Landfill. One area on the east side includes approximately 750 cubic yards of waste containing PCBs at concentrations of 50 ppm or greater. The other area on the east side includes approximately 4,500 cubic yards of waste that contains elevated solvents. The area on the west side of the North Landfill includes approximately 1,500 cubic yards of oily waste in the vicinity of monitoring well MW-6. All three areas will be characterized, excavated and transported off-site to a TSCA and/or hazardous waste landfill as applicable. Characterization will include design borings to further delineate the hot spot areas. During excavation, the hot spot areas containing oily waste or elevated solvents will be further delineated through visual confirmation, detection of strong odors, measurement of elevated contaminant vapor concentrations, or by otherwise readily implementable methods without the need for laboratory analyses. (This work was completed in November and December of 2012).

- Both the North and South Landfills will be consolidated to reduce their current area. The consolidated areas will have engineered cap systems designed and constructed in conformance with the substantive requirements for landfill caps set forth in 6 NYCRR Part 360. The areas to be consolidated will be determined during the design; however, areas to be excavated will include a 50-foot buffer zone area between the South Landfill and Ley Creek and 30-foot buffer zone areas between the landfills and on-site wetlands. If required for cap installation, buffer zones will be established between the landfills and Seventh North Street. This excavated material will be consolidated in the landfills above the water table.

- Wetland sediment at PCB concentrations greater than 1 ppm and less than 50 ppm will be excavated for consolidation and capping on site with the material discussed above. PCB contaminated sediment at concentrations of 50 ppm or greater will be properly transported offsite for disposal.

- The excavated wetlands and buffer zones will be restored and maintained per an approved restoration plan developed during the remedial design phase. Buffer zone soils will need to meet the Unrestricted Use Soil Cleanup Objectives set forth in Table 375-6.8(a) of 6 NYCRR Part 375 for a minimum of two feet in depth measured from the finished surface grade. The remaining buffer zone soils will need to meet, at a minimum, the lower of the protection of groundwater or the protection of public health soil cleanup objectives for commercial use as set forth in Table 375-6.8(b) of 6 NYCRR Part 375.

2.0 PROJECT MANAGEMENT

2.1 Roles and Responsibilities of the Remedial Action Project Team

The CCH Remedial Action will be a consorted effort between NYSDEC and Eaton Cooper. Each will have specific roles and responsibilities necessary to execute the project in accordance with the Consent Order, ROD, approved Final (100%) Design, and Contract Documents. A clear chain of command will be established for better communication and decisive decision making. An organizational chart of the Remedial Action Project Team is presented as Figure 3. Roles and responsibilities of the team members, as well as involved agencies, are described below. Key contact information is presented as Table 1.

2.1.1 Agencies

NYSDEC

The NYSDEC is the lead agency on this CERCLA project. Mr. Richard Mustico has been the NYSDEC Project Manager for the LCP Site throughout the investigation and design phases and will continue in that role. Mr. Mustico will orchestrate and participate in public meetings, as necessary, and be the point of contact for public questions and concerns. Mr. Mustico will also handle media issues that may arise, participate in progress meetings, conduct inspections on an as needed basis, and approve major design changes.

OTHER AGENCIES

The USEPA, Onondaga County, Town of Salina, and City of Syracuse may become involved in the project in some capacity. Any concerns from these agencies must go through the NYSDEC.

2.1.2 Cooper Industries, LLC

Cooper Industries, LLC is ultimately responsible for implementing the Remedial Action in accordance with the Consent Decree. Mr. Nelson Olavarria will serve as Cooper's Project Manager and communicate with NYSDEC on key decisions. Mr. Olavarria will attend public meetings and specific construction meetings, review documents prior to submission to the NYSDEC, and approve invoice payments to the Remedial Action Contractor.

Cooper will procure a Remedial Action Contractor to execute the work and ensure the work is completed in accordance with the Contract Documents. Cooper will arrange and

contract directly with a transportation service and disposal facility for the offsite disposal of waste.

2.1.3 Remedial Action Contractor

The Remedial Action Contractor (RAC) will be responsible for the construction activities as described above. The RAC's project team will consists of, at a minimum, a Construction Project Manager, a Site Superintendent, and a Site Health and Safety Officer.

The Construction Project Manager will be the primary point of contact for the RAC and have the following specific duties:

- Provide centralized leadership for project activities;
- Interpret and plan the overall work effort;
- Define personnel and equipment requirements and secure resource commitments;
- Communicate directly with the RAC Site Superintendent for project needs;
- Prepare for and attend meetings as required;
- Procure, contract with, and monitor subcontractors as needed;
- Establish work budgets and schedules with milestones;
- Monitor the financial status of the project, negotiate change orders, and submit pay applications; and,
- Maintain overall project quality and safety standards.

The RAC's Site Superintendent will be responsible for the day-to-day operations of the project at the site. The Site Superintendent will be responsible for the implementation of onsite activities and direct the work crew and onsite RAC personnel on daily operations. The Site Superintendent will have authority to make field decisions for the RAC, will attend project meetings, will control subcontractors' work activities, and will communicate directly with the Cooper On-Site QA/QC Engineer.

The full-time onsite Site Health and Safety Officer will be responsible for implementation of the Construction Health and Safety Plan (HASP). His specific responsibilities will include: ensure that site personnel possess necessary training and medical surveillance; conduct daily safety meetings with the workers; establish work zones and relocating zones as necessary; determine personnel protective equipment requirements for specific work tasks and ordering any changes based on work area monitoring data; ensure work is performed in compliance with the HASP and applicable regulations; implement air monitoring program and report data; perform routine safety inspections; report and investigate accidents or incidents.

Depending on the site work force size and complicity of the site operations, the Site Superintendent may assume the Health and Safety Officer duties.

2.1.4 Cooper QA/QC Engineer

The full-time onsite Cooper Quality Assurance/Quality Control (QA/QC) Engineer will be responsible for distributing technical submittals, conducting QC testing (or working with independent testing subcontractors), and documentation of the work (i.e., waste manifests, daily reports, etc.).

2.2 Chain of Command and Communication

The Remedial Action cannot commence until the Final (100%) Design is approved by the NYSDEC. Once approved and the work starts, Cooper ultimately controls the work in terms of its contractors, the project schedule, sequencing, means, and methods as long as the work is conducted in accordance with the approved design.

The chain of command onsite will start with the Site Superintendent. Issues or concerns from the NYSDEC will be channeled through Mr. Olavarria of Eaton Cooper. The Site Superintendent will be in direct communication with Mr. Olavarria of Eaton Cooper. The Site Superintendent will then communicate with the RAC subcontractors and the onsite QA/QC Engineer as necessary.

To minimize confusion and miscommunication, NYSDEC, other agencies, and the media will not communicate directly with RAC personnel or subcontractors. The only exception will be if upon a site visit or sudden notice, the NYSDEC or another public agency with the authority, orders an immediate halt to the work, this will be directly communicated to the Site Superintendent. The Site Superintendent will halt the work and notify Eaton Cooper.

Any knowledgeable party onsite may immediately stop work if there is a situation that threatens the health and safety of an onsite worker.

RAC personnel will utilize radio communication for safety and production.

2.3 Meetings

2.3.1 Construction Kickoff Meeting

Following approval of the Final (100%) Design, a Construction Kickoff Meeting will be arranged for the CCH Project Team to introduce themselves. Representatives from NYSDEC, Eaton Cooper, the RAC, and the QA/QC Engineer will meet to discuss the construction activities, means and methods, site safety, roles and responsibilities. A site walk will follow the meeting. Cooper will arrange the details of the meeting (i.e., agenda, meeting minutes, refreshments, etc.).

2.3.2 Progress Meetings

Progress meetings will be conducted weekly to discuss the prior week's completed work and the next week's anticipated work. The NYSDEC representative, the Site Superintendent, and the QA/QC Engineer will participate, at a minimum. The agency's issues will be raised and addressed during the meeting. One weekly meeting will be substituted by a monthly meeting for which a larger audience of Cooper and agency personnel will be invited to participate. A brief project summary will be provided at the monthly meeting. The Site Superintendent will arrange the details of the meetings (i.e., agenda, meeting minutes, refreshments, etc.).

2.3.3 Public Meeting

If deemed necessary by NYSDEC, a public meeting, prior to starting the Remedial Action, will be conducted. Residents, business, local officials, and others will be invited to the meeting to discuss the project. Cooper will work closely with NYSDEC to arrange the meeting, provide appropriate public notifications (i.e., fact sheets and meeting agendas), and meeting presentation materials.

2.3.4 Construction Wrap-up Meeting

Following substantial completion of the Remedial Action, the project team will meet to discuss the final check list, site operation, maintenance, and monitoring, and project completion issues. The Construction Completion/Certification Report expectations will be addressed.

3.0 CONSTRUCTION OVERSIGHT TASKS

3.1 Inspections

Inspections will be conducted by members of the project team at various points of the project to ensure consistent quality is maintained. The QA/QC Engineer will be conducting inspections on a daily basis. NYSDEC and the other agencies are free to conduct inspections within their jurisdiction during any work hour period.

3.1.1 Routine Work Inspections

The QA/QC Engineer will conduct routine inspections of the overall site condition in addition to specific work elements. Overall site condition items include field trailer, parking lot, access roads, soil erosion and sediment control measures, security fence/gate(s), and survey markings

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3.1.2 Pre-Final and Final Inspections

Following notification of substantial completion by the RAC, the Site Superintendent, QA/QC Engineer, and the NYSDEC will conduct a pre-final inspection of the site. A final written work check list will be prepared by the Site Superintendent and the NYSDEC for use by the RAC. The final check list will enable the RAC to understand the project completion expectations and schedule work activities, including demobilization, accordingly. Once check list items have been addressed by the RAC and approved by the QA/QC Engineer in writing, the NYSDEC inspector will conduct a final inspection. Upon written NYSDEC approval, the Remedial Action activities will be considered completed. The RAC will demobilize from the site

3.2 Quality Control and Assurance Testing

Quality Assurance and Quality Control testing is part of ensuring the Remedial Action is completed in accordance with the Final (100%) Design. The RAC has full testing responsibilities. Daily recording of QA/QC data may be performed by the QA/QC Engineer with a sign off by the Site Superintendent. QA/QC testing is detailed in the Technical Specifications.

3.3 Technical Submittal Review

The RAC is required to prepare a schedule of submittals and meet the submittal requirements as stated in the design specifications. Construction submittals will be reviewed by Tetra Tech. Submittals required by the Consent Decree will be reviewed by the agencies.

3.4 Documentation

3.4.1 Field Log Books

The Site Superintendent and the QA/QC Engineer will each maintain daily field log books in a format of their choice for the project. Construction activities will be documented with the following details at a minimum: dates, times, weather conditions, personnel onsite, equipment used, materials used, visitors, health and safety issues, work activities completed, delays, and other construction related issues. These field books will be kept on site and open to any authorized party during working hours as a written record of site activities.

3.4.2 Daily Field Reports

The QA/QC Engineer will prepare a daily field report that summarizes construction activities from the field book. The daily field report will include site photos and sketches of work completed as necessary. The report will be submitted to Cooper on a schedule appropriate for the ongoing field work. Cooper will submit the daily reports to the NYSDEC if requested and deemed necessary. Refer to Attachment D for the Daily Field Report form. All QA/QC testing documentation completed in the field will be attached to the Daily Field Report and kept in a three ring binder in chronological order. Periodically (normally monthly unless site activity is minimal) this binder content will be copied at the Cooper Plant and distributed to Cooper and Tetra Tech via scan and email.

3.4.3 Monthly Progress Report

The RAC will prepare a monthly status report and submit it to Eaton Cooper. Information to be included in the monthly status report is detailed in the contract documents. Per the Consent Order, Cooper will prepare and submit a monthly progress report to the NYSDEC. The Monthly Progress Report will summarize work activities and other issues pertinent to the Remedial Action completion. The RAC will assist Cooper and Tetra Tech to fulfill this requirement.

3.4.4 Construction Certification Report and Record Drawings

Per the Consent Order, a Construction Certification Report will be prepared and submitted to the NYSDEC 90 days following the Remedial Action completion. A New York State (NYS) licensed Professional Engineer will certify that the construction was performed in accordance with the Consent Order, the ROD, the approved Final (100%) Design and approved field changes. The Construction Certification Report will include a description of the completed Remedial Action work activities, approved design changes to the Final (100%) Design, Record Drawings, a project photo log, sampling/analysis summary table, waste manifests, material trip tickets and/or summary table, and other

pertinent information. Record Drawings will be prepared based on the Design Drawings, Contractor markups on the drawings conducted throughout the construction, and construction survey information conducted during and after the construction. The Record Drawings will be signed/sealed by a NYS licensed Professional Engineer.

3.4.5 Field Change Form

Changes to the approved Final (100%) Design will require approval by Cooper and Tetra Tech, and if deemed significant, by the NYSDEC. Attachment E presents an example Field Change Form that includes a description and reason for the field change, date, and signatures. Material substitutions (i.e., "or equals") are not considered a field change and will be approved by Tetra Tech as part of the technical submittal review process.

3.4.6 Final Site Management Plan

A preliminary Site Management Plan has been written as a separate document for review by the NYSDEC, and includes operation, maintenance, and monitoring for the site. Following Remedial Action completion, a final Site Management Plan will be submitted to NYSDEC for review and approval. The Final Site Management Plan will include a description, operational procedure, catalog cut, and owner's manual for each component, an overall description, and record drawings. The plan will provide clear understanding on how to operate, maintain, and monitor the CCH site.

- Stream B in the South Landfill will be restored to an open water stream with an emergent wetland bank to match its current state.
- Wetland C in the South Landfill will be restored to an emergent wetland to match its current state.

The buffer zones surrounding the landfill caps will be initially restored as grassed swales to conduct surface water flow to the adjacent wetlands in an orderly sheet manner to avoid erosion. Silt fences will be left in place at swale terminations to keep any sediment from entering the wetlands and streams. Over time vegetation will thicken in the swale areas and the water retention capacity of the swales will increase. This will further protect the wetlands from eroded sediment.

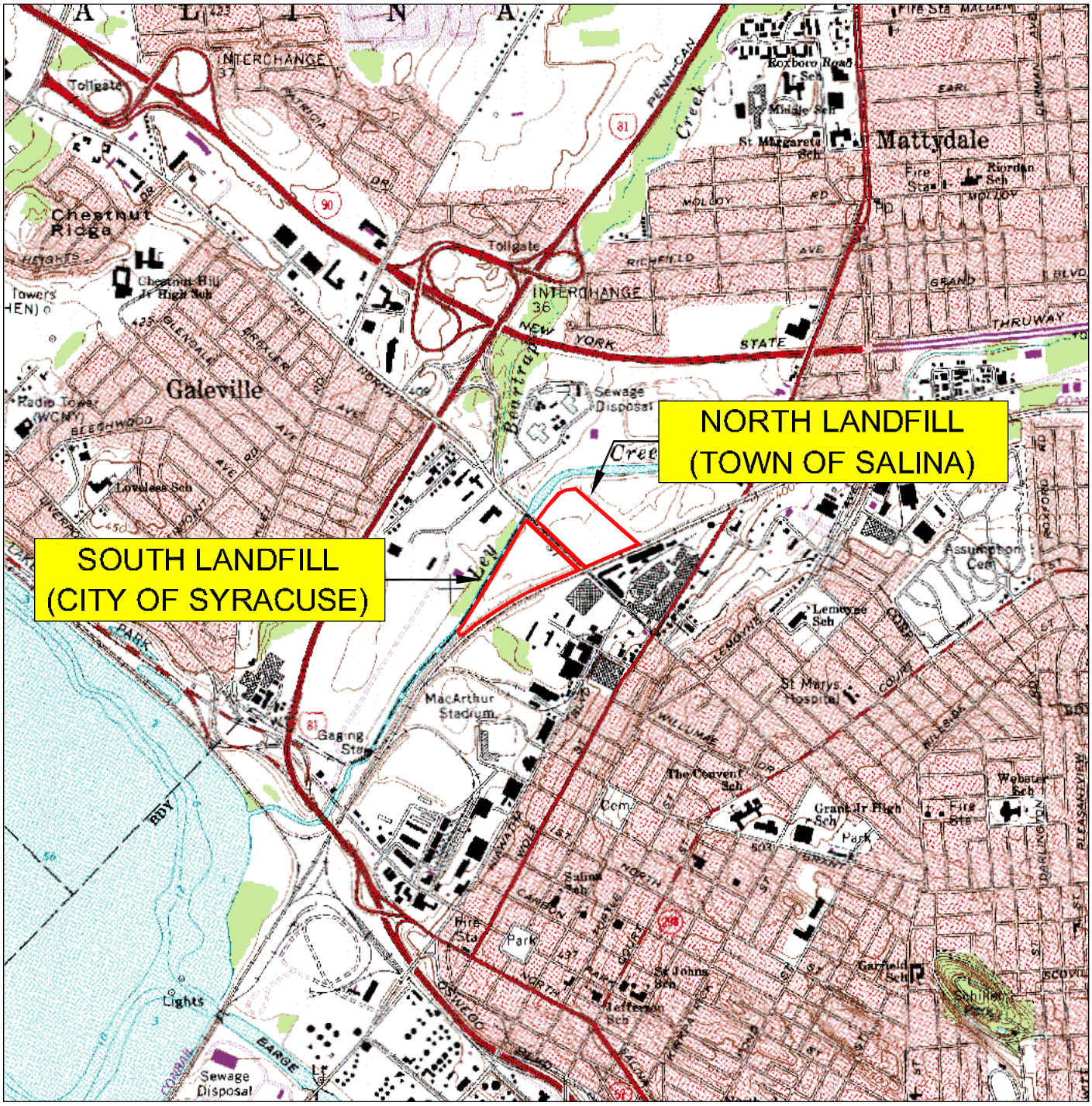
4.0 REFERENCES

1. Final Design Specifications, Remedial Action Implementation, North and South Landfills, Cooper Crouse-Hinds Facility, Syracuse, NY, *Tetra Tech*, April 2013

2. Final Design Plans, Remedial Action Implementation, North and South Landfills, Cooper Crouse-Hinds Facility, Syracuse, NY, *Tetra Tech*, April 2013

3. Record of Decision, Crouse-Hinds Landfills, State Superfund Project, Syracuse, Onondaga County, Site No. 734004, *NYSDEC*, March 2011

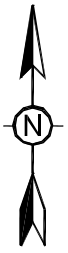
4. Order on Consent (Index No. R7-0666-05-11), Site No. 7-34-004, Crouse-Hinds Landfills, Syracuse, Onondaga County, *NYSDEC*, August 29, 2011



National Geodetic Vertical Datum of 1929
Contour Interval 10 Feet

SCALE
0 5000
FEET

QUADRANGLE LOCATION



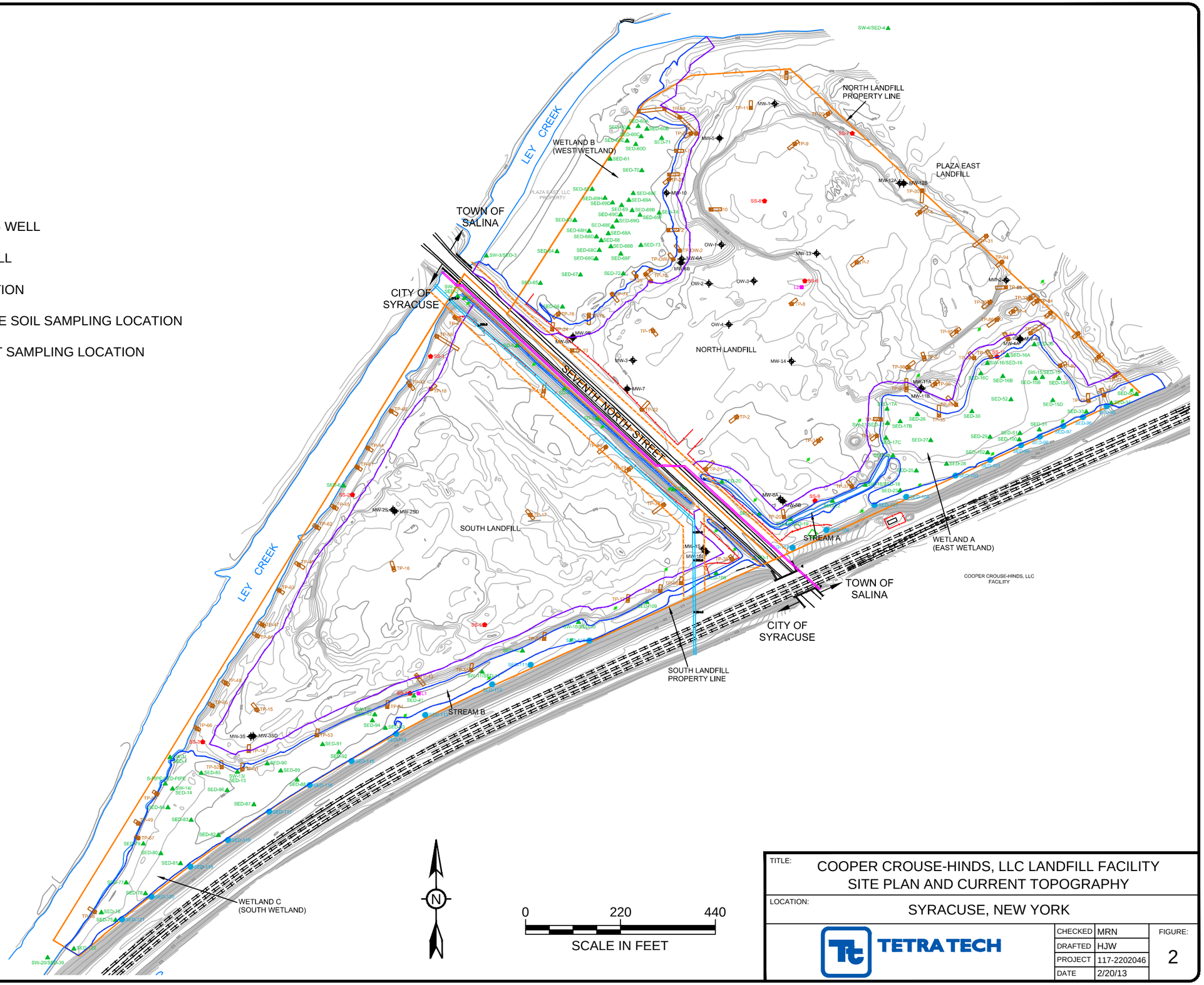
Base map from U.S.G.S. 7.5' SYRACUSE WEST, NEW YORK topographic quadrangle map.

COOPER CROUSE-HINDS, LLC LANDFILL FACILITY SYRACUSE, NEW YORK	DATE: 8/1/12 DESIGNED: HJW CHECKED: MRN APPROVED: MRN DRAWN: HJW PROJ.: 117-2202046
SITE LOCATION MAP	
TETRA TECH	Figure 1

S:\CAD\COOPER\SYRACUSE\12-11-09\2202036FIG1.DWG

EXPLANATION

- MW-3S — SHALLOW AQUIFER MONITORING WELL
- MW-3SD — DEEP AQUIFER MONITORING WELL
- SS-1 — SURFACE SOIL SAMPLING LOCATION
- SED-95 — SURFACE SOIL AND SUBSURFACE SOIL SAMPLING LOCATION
- SW-1/SED-1 — SURFACE WATER AND SEDIMENT SAMPLING LOCATION
- SED-27 — SEDIMENT SAMPLING LOCATION
- TP-48 — TEST PIT LOCATION
- L1 — LEACHATE SAMPLING LOCATION
- WETLAND BOUNDARY
- LEY CREEK / WETLAND BUFFER
- PROPERTY BOUNDARY
- EASEMENT
- WATER MAIN
- GAS MAIN
- EXISTING CHAIN LINK FENCE
- ELECTRIC UTILITY POLE



TITLE:	COOPER CROUSE-HINDS, LLC LANDFILL FACILITY SITE PLAN AND CURRENT TOPOGRAPHY
LOCATION:	SYRACUSE, NEW YORK

TETRA TECH

CHECKED	MRN	FIGURE:
DRAFTED	HJW	2
PROJECT	117-2202046	
DATE	2/20/13	

S:\CAD\COOPER\SYRACUSE\CLOSURE DESIGN\SITE PLAN.DWG

FIGURE 3
NORTH AND SOUTH LANDFILLS
COOPER CROUSE-HINDS FACILITY
PROJECT ORGANIZATION

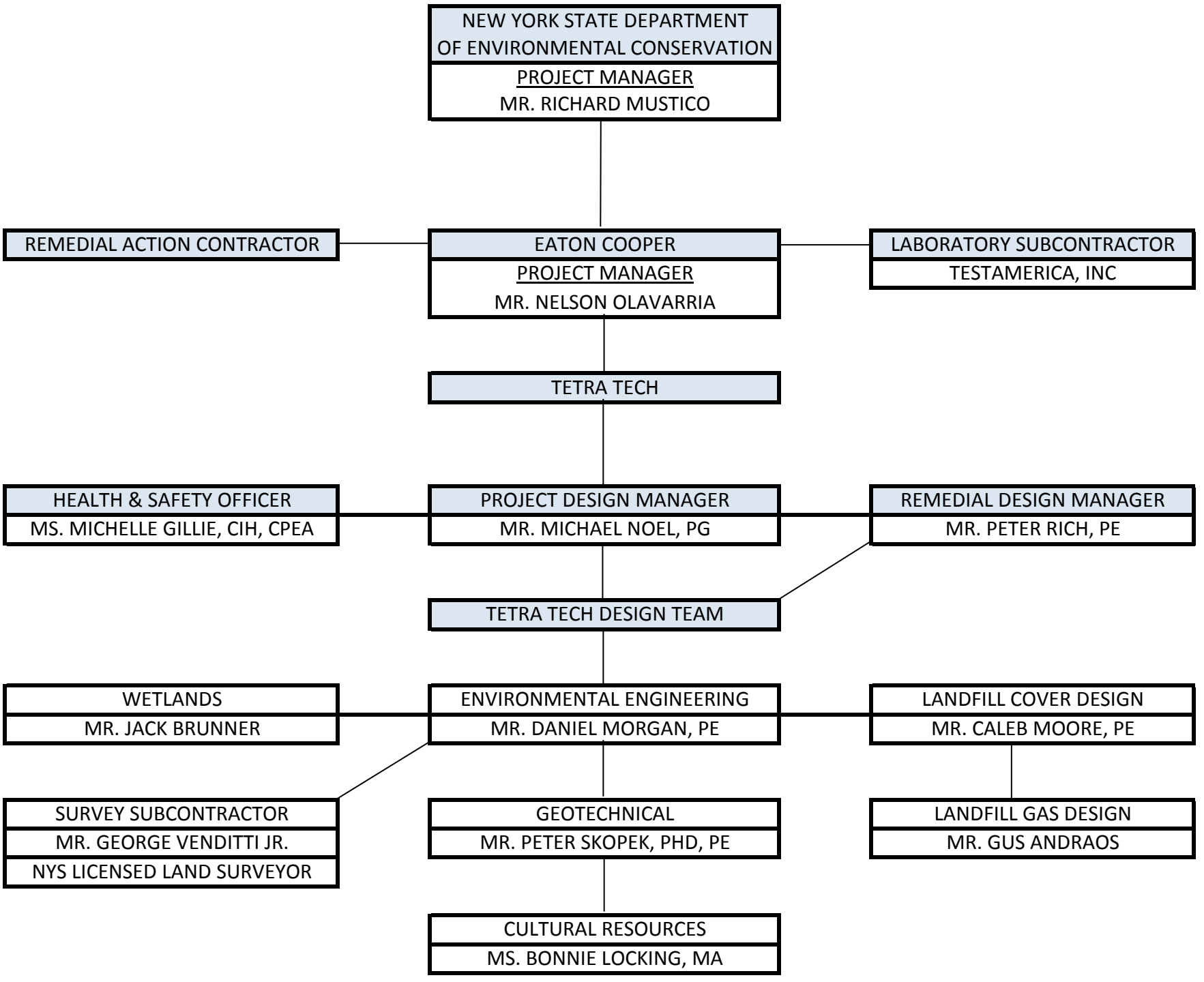


TABLE 1

KEY CONTACT INFORMATION

TABLE 1

KEY CONTACT LIST

NEW YORK STATE DEC

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Eaton Cooper Project Manager
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Eaton Cooper
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Email: nelson.olavarria@cooperindustries.com

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Email: dan.morgan@tetratech.com

ATTACHMENT A

SUBMITTAL LOG

SUBMITTAL LOG

Project No.: 117-2202046	**Project:** Remedial Action Implementation North and South Landfills, CCH Facility	**Location:** Syracuse, NY

Specification Section and Paragraph	1	2	3	4	5	6	Date Submitted to Engineer	No. of Copies	Date Returned for Revision	Date Resubmitted	Date Approved by Engineer	Date Returned to Contractor	Date Required for Construction	Comments
MONITOR WELL ABANDONMENTS 24010 3.1.A.2	X													NYSDEC Well Decommissioning Records
GEOTEXTILES 31050 1.3.A.1	X													Specifications, Literature, and Installation Instructions
SYNTHETIC GEOMEMBRANE 31060 1.3 A, B, and C	X	X	X	X	X	X								Product Data, Samples, Schedules, Shop Drawings, Certifications, Test Data
SITE CLEARING 31160 1.4 A, B, and C	X	X		X										Photographs, Record Drawings, Certifications
EARTHWORK 31180 1.3 A, B, and C	X	X	X											Test Reports, Manufacturer's Data, Plan
GAS VENTING 31190 1.3 A-E	X	X	X											Product Data, Plan, Schedule, Test Reports
WASTE EXCAVATION AND RELOCATION 31200 1.3 A and B		X												Plan and Drawings

EXC & MANGMT PCB MATERIALS 31210 1.3 A-G			X	X										H&S Plan, Test Results, Disposal Documents, Notifications
DEWATERING 31220 1.2 A-D	X	X												System Data, Shop Drawings
TRENCHING AND BACKFILLING 31230 1.3 A and B			X			X								Samples and Test Results
EROSION AND SEDIMENT CONTROL 31240 1.4 A-D	X		X	X		X								Certificates, Product Data, Test Results, Samples
COMPOSITE DRAINAGE NETTING 31350 1.3 A-C	X	X	X			X								Product Data, Samples, Shop Drawings
BARRIER PROTECTION LAYER 31360 1.3 A-E	X	X	X			X								Samples, Plans, Test Reports
STONE FILL 31370	X		X	X										Product Data, Test Results, Certificates
LANDFILL TOPSOIL 32910 1.2 A and B	X		X	X										Product Data, Test Reports, Certificates
LANDFILL SEEDING 32920 1.2 A	X		X	X										Certifications, Plans, Maintenance Instructions,
CHAIN LINK FENCES AND GATES 33000 1.3 A-C	X	X				X								Drawings, Product Data, and Samples

SHEET PILING 34000 1.3 A-C	X	X				X								Shop Drawings, Products Data, and Samples

1 Product Data
2 Shop Drawings
3 Field Test Data
4 Certificates
5 Calculations
6 Samples

ATTACHMENT B

DAILY REPORT FORM WITH SUPPLEMENTS

DAILY REPORT
CCH SYRACUSE LANDFILL CAPS

Project Number: 117-2202046 Project: SOUTH LANDFILL ____ NORTH LANDFILL_____ Location: Syracuse, NY	Date: Report # _____ Weather: (8AM): (1PM): Work Period:	
CONTRACTOR	NUMBER OF PERSONNEL/ EQUIPMENT	TRADE OR PROFESSION
Tetra Tech	1	QC/QA Engineer
OBSERVATIONS:		
Photo JPG File ID Numbers:		
TIME ARRIVED: TIME DEPARTED:		SIGNATURE:

TETRA TECH

DAILY REPORT FORM SUPPLEMENT

CCH SYRACUSE LANDFILL CAPS

BUFFER ZONE AND WETLAND EXCAVATION

North Landfill ____	South Landfill ____
Drawing Sheet Reference Number	Test Pit or Cell Designation
Target Base Elevation	Actual Base Elevation
Target Excavated Volume (CUFT)	Actual Excavated Volume (CUFT)
Date Excavation Started	Fill Source
Peat Encountered and Depth	Fill Name/Number
Date Excavation Completed	Date Topsoil Placed
Date Backfill Started	Date Seeded and Mulched
Date Backfill Completed	Estimated Water Removed (GAL)

Draw sketch of excavation and indicate arrows with photo JPG file ID numbers below and add notes & comments below.

TETRA TECH

DAILY REPORT FORM SUPPLEMENT

CCH SYRACUSE LANDFILL CAPS

LANDFILL CAP CONSTRUCTION

North Landfill ____	South Landfill ____
Drawing Sheet Reference Number	Specification Section
Test/Inspection Report Attached _____	Name of Test/Inspection
Date of Test/Inspection	Location
Time:	Equipment
Test	Result
Test	Result
Test	Result
Test	Result

Draw sketch of excavation and indicate arrows with photo JPG file ID numbers below and add notes & comments below. Attach field test reports to this sheet.

ATTACHMENT C

FIELD CHANGE FORM

REMEDIAL ACTION IMPLEMENTATION
NORTH AND SOUTH LANDFILLS
CCH FACILITY
SYRACUSE, NY

FIELD CHANGE FORM # _____

Project Number: 117-2202046	Date:
Cooper QA/QC Engineer	
Remedial Action Contractor (RAC)	

You are hereby authorized and instructed to complete the following modifications to the approved Final Design:

APPROVALS:

Cooper Representative	
Name:	
Signature:	
Date:	
RAC Representative	
Name:	
Signature:	
Date	
Agency Representative	
Name:	
Signature:	
Date:	

cc: Nelson Olavarria, Cooper Industries, LLC
Mike Noel, Tetra Tech

ATTACHMENT D

PER-FINAL INSPECTION CHECKLIST

PRE-FINAL INSPECTION CHECKLIST

CONSTRUCTION QUALITY ASSURANCE

Project No. 117-2202046 Project : REMEDIAL ACTION IMPLEMENTATION NORTH AND SOUTH LANDFILLS, CCH Location : Syracuse, NY		Date: Page of	
Specification Section	Item/Location	Remedy	Completion Date

Signature: _____