Sevenson Environmental Services, Inc.

Technical Execution Plan

NYSEG's Former Manufactured Gas Plant Site

Lockport, New York

Prepared for:

NYSEG

Prepared by:

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Sevenson Environmental Services, Inc.

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Introduction

Sevenson Environmental Services, Inc. (Sevenson) is pleased to present this draft Technical Execution Plan which is intended to outline the means and methods that SES anticipates implementing in order to perform the remediation of NYSEG"s Former Manufactured Gas Plant Site located in Lockport, New York. This work is being conducted by New York State Electric and Gas Corporation (NYSEG) and will be overseen by AECOM, who is the Engineer of record.

This work is being conducted by NYSEG in an effort to remove impacted coal tar material to the extent possible from the on-site soils, and soils immediately north of the facility under LaGrange Street, and to install a containment, collection, and monitoring system in an around the site to prevent the migration of any residual material that may remain upon completion of the source removal.

This plan provides a detailed description of Sevenson's overall project approach in addition to the following information:

- Staging/Stockpile/Layout Plan
- Proposed sheet pile/ bracing layout and sections
- Vibration Monitoring Plan
- Odor control Plan
- Demolition Plan
- Asbestos Abatement Plan
- Traffic Management Plan
- Grout Wall Injection Plan
- Backfill Material Sources
- Disposal Facilities
- Site Restoration Plan
- Schedule
- Subcontractors
- Organization Chart

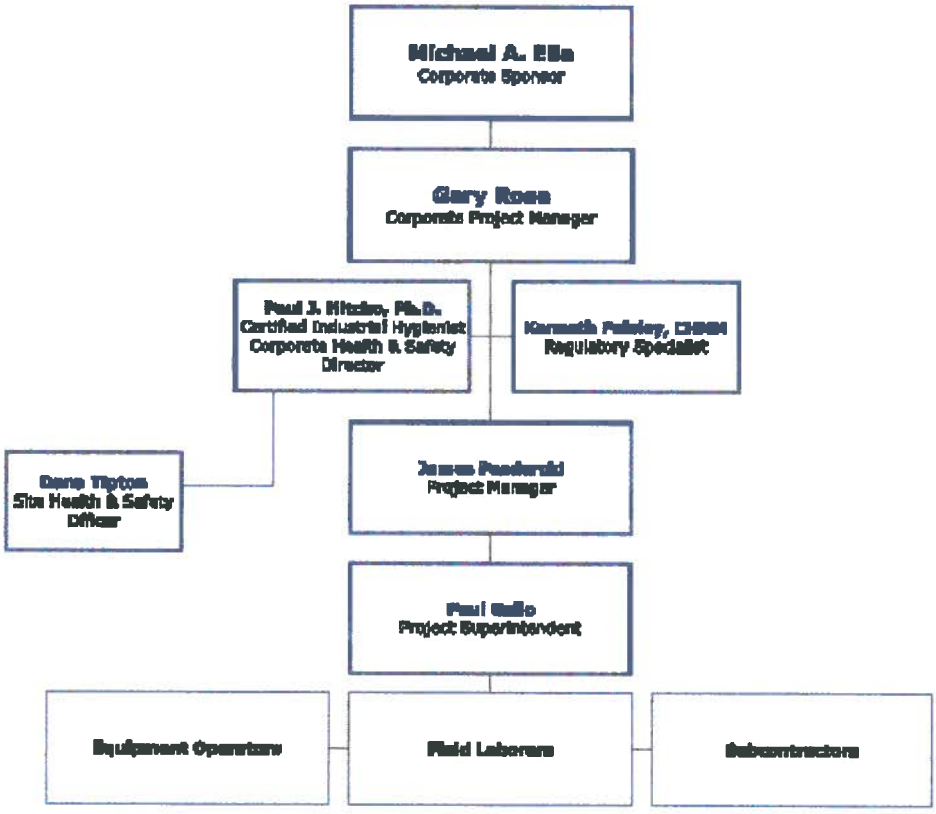
Section A: Project Coordination

Sevenson's Project Management approach is based on an organizational structure that incorporates the following:

- Clear lines of authority which firmly establish accountability for the project at all levels;
- Focus on project safety;
- Continuous and effective lines of communication; and
- Tight fiscal and project execution controls.

Within the overall project organization, each member of Sevenson's Project Team is responsible for ensuring that work assigned to them is carried out in compliance with the project specifications.

Project Organizational Chart
NYSEG - Former Lockport MGP Site
Lockport, New York



As part of the Project Management process, Sevenson is committed to developing and maintaining a positive team building / partnering relationship with the Owner and Engineer, as well as all other members of the entire project team. Experience has shown that the critical functions of planning, coordinating, monitoring, and communicating will be most efficiently performed in partnership with the engineer and client in order to ensure that the established project goals are achieved.

1. Resume of Project Superintendent(s)

Mr. Paul Gallo will be Sevenson's on-site Project Superintendent. His resume, along with the entire proposed site management team, has been included with this document as Appendix A.

2. Identification of Key Personnel

The primary responsibility for the successful completion of the Lockport Former Manufactured Gas Plant Site work rests with the Corporate Sponsor, Mr. Michael Elia. He is supported in this effort by the Corporate Project Manager, Gary Rose, who reports directly to Mr. Elia. Mr. Rose interacts daily with the Project Team and is kept apprised of all activity at the site on a daily basis.

Mr. Rose will visit the site on a regular basis and be responsible for resolving any problems which the on-site management team may be unable to resolve. Should the Team still be unable to resolve the situation, Mr. Elia will become involved and together the Team will work out a satisfactory solution.

Project Manager

Mr. James Pazderski will be Sevenson's Project Manager. Mr. Pazderski has been with Sevenson for 23 years, and has personal experience in all facets of the work that is to be performed on site.

Mr. Pazderski's role as Sevenson's Project Manager necessitates that he will be the lead management authority and contact for Sevenson at the site. He will have overall responsibility for managing technical issues, maintaining cost and performance, and ensuring that the safety,

quality and regulatory compliance for all work Sevenson performs at the site is completed in accordance with the Contracts plans and specifications.

In addition, the Project Manager has the authority to negotiate and execute contract modifications, prepare and submit monthly Progress Payments, ensure that the project's schedule is adhered to, and to access other Sevenson resources (e.g., CIH, Regulatory Specialist, engineers, scientists) when necessary in order to successfully execute the work tasks.

Project Superintendent

Mr. Paul Gallo will be Sevenson's on-site Project Superintendent.

Mr. Gallo will direct all field operations at the site. His duties include supervision of Sevenson's craft labor (equipment operators, carpenters, and laborers), technical staff (survey crew), and all subcontractors.

He will plan daily work activities in association with the Project Manager and in accordance with the anticipated Construction Schedule in order to help ensure that the project remains on schedule and within cost. This will be accomplished by daily planning meetings between the Project Manager, Superintendent, and Health and Safety personal during which the Superintendent will outline his plans for the next day's activities. His input into the preparation of a two-week look-ahead schedule will also be key to ensuring that the project remains on time and within budget.

On-site Health and Safety Officer

Mr. Dana Tipton will be Sevenson's on-site Safety Officer.

The Health and Safety Officer will report directly to Sevenson's Vice President of Health and Safety, Dr. Paul Hitcho, C.I.H.

He will be responsible for the implementation of the approved site Health and Safety Plan (HASP), including conducting required safety inspections, safety briefings, and reports of safety-related activities. In addition to reporting directly to Dr. Hitcho, he will also report to, and keep

informed, the Project Manager and the Onsite Superintendent daily regarding all on-site health and safety issues, concerns and any required corrective actions.

Like all Sevenson employees, Mr. Tipton has received 40-hour HAZWOPER training per 29 CFR 1910.120(e). In addition, he also possesses current Red Cross First Aid and CPR training. He, and / or his designated assistant will conduct personnel air monitoring, confined space entry supervision, and will in conjunction with the Superintendent and Project Manager, lead and conduct the daily pre-work Safety Meetings.

In addition, the SSHO will also be responsible for the following:

- Scheduling and documenting that all contractor and subcontractor personnel working on site have proper safety training and medical surveillance,
- Verify that all personnel working on site are aware of potential hazards and ensure that appropriate personal protective equipment is available, and used for each man as required,
- Performing safety inspections and monitoring performance of personnel for compliance with the HASP and correction of deficiencies,
- Reviewing air monitoring data and recommending changes to PPE, work practices and engineering controls,
- Daily review of safety operations and completion of a daily record of activities,
- Investigation and reporting of all accidents or incidents which occur at the site, and
- Reporting any unsafe acts or conditions and then verifies that corrective actions have been taken.

As previously stated, the SSHO will have both the authority and the duty to halt any operation appearing to be out of compliance with the HASP or is deemed unsafe. The particular operation will remain shut down until corrective action can be made and verified by the SSHO.

Labor Force

All workers on the project will have documentation that they have received all required training and also that they have had and passed a Hazardous, Toxic or Radiological Work (HTRW) physical. In addition to these certifications, each employee will receive a site-specific health and safety orientation given by Sevenson's on-site Health and Safety Officer, as well to the Electrical Sub Station Safety Training that will be provided by NYSEG.

Incoming trade personnel will generally have been given this required 40-hour OSHA training prior to coming on-site. If not, they will receive the specified site-specific training after they have taken and passed the entrance physical. It may be possible, due to scheduling, that some personnel may not receive their physicals as soon as they arrive at the site. In this case, an effort will be made to restrict these persons work activities to non-hazardous areas of work. In addition, there may be an occasional need for an outside mechanic or technician to enter the site in order to service a piece of heavy equipment. In general, these service people do not have 40-hour OSHA training. If this situation arises, Sevenson will again make every effort to move the equipment to a non-hazardous area in order to be serviced.

Sevenson intends to perform this project with labor from the local union trades.

During the course of the project, there may be between 5 to 10 trade union tradesmen and subcontractors on site on site at any one time, in addition to Sevenson's management personnel.

3. Project Staffing Plan

Sevenson's Project Superintendent will manage all crews. It is anticipated that on a normal workday, work will commence at 7:00 AM and continue until 5:00 PM, Monday through Friday, as called out in Section 01140 of the project specification and as shown in the project schedule provided in the RFP. This will include time for lunch and a short morning mid-day break.

The anticipated compositions of the various work crews will be as follows:

Mobilization

- 1 Operator move materials and equipment as required
- 3 Laborers install traffic controls, erosion controls, signs, work zones, trailers

Subcontractors

- Surveyors to perform site layout and topographic survey
- Fence Subcontractors for temporary and permanent fence installation
- Landscapers for tree removal and stump grinding along Lagrange Street
- Electricians to hook up trailers and install electric for WWTP
- Plumbing contractor for sewer tie in on Saxton Street for WWT Discharge

Phase 1A/1B Remediation of Cell 5A and Installation of Subsurface Barrier Wall; Fill Buttress

- 1 Operator – PC200 Excavator with auger to predrill sheeting alignment/excavate/backfill
  PC300 with Robovibe attachment to install sheeting and set walers
- 1 Operator – Rubber Tired Loader to move steel and materials around site/backfill
  D41 for buttress fill and backfill placement
- 1 Operator – PC220 with CP80 processor to demolish/pulverize building
- 4 Laborers – Traffic control during deliveries, water management, odor control,
  dust control, install deneef sealant, collection trench installation
- 1 Welder – Install waler support systems for sheeting

Subcontrators

- Surveyors to layout sheeting alignment, perform construction monitoring for settlement, asbuilt final excavation depths and backfill, asbuilt of collection trench and buttress
- Well Drillers to install piezometers/inclinometers, toe pins, install portion of grout wall along Transit Road, install bedrock extraction well 101
- Asbestos Contractors to remove roof on garage prior to start of demolition
- Transporters to haul material off site
- Vibration Monitoring Techs to set up sensors and for remote monitoring systems
- Compaction tester during backfill operations

Phase 2 Demolition of Holder Slab and Material Excavation

- 1 Operator – PC200 with Hoe Ram and CP80 attachment to demolish slab
  PC200 to load out concrete and perform excavation
- 1 Operator - PC80 for excavation of trenches between substation components
  Skidsteer to move backfill into tight areas
  D41 to place backfill into holder area
- 4 Laborers - Traffic control during deliveries, water management, odor control, dust control, saw cut concrete, spot trucks, decon, install demarcation barrier; hand digging around electrical components as necessary

Subcontrators

- Surveyors to layout excavation area and trenches, asbuilt final excavation depths and backfill for buttress, asbuilt of utility/footer trench
- Well Drillers to abandon bedrock monitoring well BMW 04-01
- Transporters to haul material off site
- Compaction tester during backfill operations

Phase 3 Remediation of Cells 3A, 3B, 3C, and 3D

- 1 Operator – PC200 Excavator with auger to predrill sheeting alignment/excavate/backfill
  PC300 with Robovibe attachment to install sheeting and set walers
- 1 Operator – Rubber Tired Loader to move steel and materials around site/backfill
  D41 for backfill placement
- 4 Laborers – Traffic control during deliveries, water management, odor control, dust control, install deneef sealant, collection trench installation
- 1 Welder – Install waler support systems for sheeting

Subcontrators

- Surveyors to layout sheeting alignment, perform construction monitoring for settlement, asbuilt final excavation depths and backfill, asbuilt of collection trench
- Well Drillers to install piezometers/inclinometers, install portion of grout wall along LaGrange Street, abandon 1W02, BMW 04-11, MW-06; SMW 06D, SMW 06S, install micro piles for eastern portion of retaining wall
- Transporters to haul material off site
- Vibration Monitoring Techs to set up sensors and for remote monitoring systems
- Compaction tester during backfill operations

Phase 4 Remediation of Cells 4A, 4B, 4C and 4D

- 1 Operator – PC200 Excavator with auger to predrill sheeting alignment/excavate/backfill
  PC300 with Robovibe attachment to install sheeting and set walers
- 1 Operator – Rubber Tired Loader to move steel and materials around site/backfill
  D41 for backfill placement
- 4 Laborers – Traffic control during deliveries, water management, odor control, dust control, install deneef sealant, collection trench installation
- 1 Welder – Install waler support systems for sheeting

Subcontrators

- Surveyors to layout sheeting alignment, perform construction monitoring for settlement, asbuilt final excavation depths and backfill, asbuilt of collection trench
- Well Drillers to install piezometers/inclinometers, install portion of grout wall along LaGrange Street, Abaondon MW-10S, MW-10, SMW 11, BM 01-12, install micro piles for western half of retaining wall
- Transporters to haul material off site
- Vibration Monitoring Techs to set up sensors and for remote monitoring systems
- Compaction testing during backfill operations

Phase 5 Remediation of Cells 5B, 5C, 5D, 5E, and 5F

- 1 Operator – PC200 Excavator with auger to predrill sheeting alignment/excavate/backfill
  PC300 with Robovibe attachment to install sheeting and set walers
- 1 Operator – Rubber Tired Loader to move steel and materials around site/backfill
  D41 for backfill placement
- 4 Laborers – Traffic control during deliveries, water management, odor control,
  dust control, install deneef sealant, collection trench installation
- 1 Welder – Install waler support systems for sheeting

Subcontrators

- Surveyors to layout sheeting alignment, perform construction monitoring for settlement, asbuilt final excavation depths and backfill, asbuilt of collection trench
- Well Drillers to install piezometers/inclinometers, toe pins, install portion of grout wall along South Transit Street, Abaondon MW- 05, MW-07
- Transporters to haul material off site
- Vibration Monitoring Techs to set up sensors and for remote monitoring systems
- Compaction testing during backfill operations

The average number of personnel on-site will be in the range of 5 to 10 workman which is inclusive of subcontractors, depending upon which operations are being performed at any given time. Due to the nature of the schedule, manpower will be either increased or decreased as appropriate to cover the task at hand.

In rare and isolated instances, various crews may continue work for an additional 1-2 hours a day after the general work crew has finished, in order to complete a work activity that will require its' completion rather than it remaining uncompleted overnight. In these cases Sevenson will obtain permission from the Engineer / NYSEG prior to work extending past the normal work day hours of 7:00 am to 5:00 pm.

Occasionally unanticipated repairs to the various pieces of equipment may have to be performed after hours and on the weekend.

Additionally, one or two operators may be assigned to arrive earlier than the normal workday is scheduled to commence in order to fuel and start the equipment or dewater the excavations in preparation for the day's activities.

4. Detailed List of Proposed Subcontractor(s)

Sevenson anticipates utilizing the following list of specialty subcontractors to perform certain operations for the Project:

Asbestos Removal
Metro Environmental
2939 Lockport Road
Niagara Falls, New York 14305

Jason Hibbard
716 - 285 – 9280

Backfill Material Sources
Stone/Aggregate
Lafarge
400 Hinman Road
Lockport, New York 14094

Dick Baudendistle
716 – 439 – 1300

Low Permeability Clay
Mawhiney Trucking
425 Lake Street
Wilson, New York 14172

Roger Mawhiney
716 – 751 – 6418

Compaction/Density Testing

SJB/Empire Geo Services
5167 South Park Avenue
Hamburg, New York 14075

Joe Genovese
1 – 800 – 821 - 5911

Concrete and Flat Work

Hy-Tech Concrete
6136 First Street
Newfane, New York 14108

Edward Pawlak
716 – 778 – 5499

Electrical

Modern Electric Construction
5983 South Transit Road
Lockport, New York 14094

716 – 628 - 4496

Fence Installation (Permanent and Temporary)

City Fence
3893 Walden Avenue
Lancaster, New York 14086

Craig Jones
716 – 206 - 0511

Landscaping / Restoration

A-1 Land Care Inc
1527 Ridge Road
Lewiston, New York 14092

Marc Lombardo
716 – 754 - 4999

Paving

Louis Del Prince & Sons, Inc.
580 Cayuga Road
Buffalo, New York 14225

Jack Palmer
716 – 616 – 0909

Plumbing

Sparks Plumbing and Heating
6700 Lincoln Avenue
Lockport, New York 14094

716 – 434 – 5221

Professional Engineering Services

Glynn Geotechnical Engineering
415 S Transit Street
Lockport, NY 14094

Phone: (716) 625-6933
Contact: Mark Glynn

Survey

McIntosh and McIntosh
429 Pine Street
Lockport, New York 14094

JJ McIntosh
716 – 433 – 2535

Tree Removal

Heritage Tree Care
6400 Main Street
Lockport, NY

John Leible
716 – 625 - 4200

Vibration Monitoring and Preconstruction Property Surveys/Inspections

Integrated Geotechnical Solutions, Inc.
2800 Sylon Boulevard
Hainsesports, New Jersey 08036

Robbi Kavalek
609 – 702 – 7532

Well Installation/ Abandonment/ Drilling/ Grouting

Nothnagle Drilling
1821 Scottsville Mumford Road
Scottsville, New York

Tim Nothnagle
585 – 538 – 2328

Geo-Science Group
86 Gunville Road
Lancaster, New York 14086

Mick Honeck
716 – 818 - 2113

Waste Transportation
MJ Dreher
50 Owens Road
Brockport, New York 14220

585 – 637 - 3080

Riccelli Trucking
6201 East Taft Road
North Syracuse, New York 13212

315 – 701 - 0002

Waste Disposal

Non Hazardous Soils

High Acres Landfill
425 Perinton Parkway
Fairport, New York 14450

Mill Seat Landfill
303 Brew Road
Bergen, New York 14416

Senenca Meadows
1786 Saleman Road
Waterloo, New York 13165

Conditionally Exempt Soils

EMSI
304 Towpath Road
Fort Edward, New York 12828

Covanta Niagara
100 Energy Boulevard at 56th Street
Niagara Falls, New York 14304

In the event that any of the subcontractors indicated above cannot perform the duties required by NYSEG or Sevenson, a qualified alternative will be submitted to the Engineer for approval and will then be utilized for performing the required task.

5. List of Major Equipment, Systems, and Material

Sevenson intends on utilizing the following major pieces of equipment in order to conduct remedial activities at the Site. If certain pieces of equipment indicated below are not available at the time of the project, Sevenson will procure an equivalent piece of equipment that will be utilized. Additional units may be added or removed as site conditions warrant.

(1) PC200 Excavator to excavate/load trucks/backfill
(1) PC200 Excavator with plumbing for auger and hoe pack attachment to pre drill sheeting alignment and to compact deep excavation
(1) PC300 with Robovibe Attachment to install temporary and permanent sheeting
(1) Rubber Tired Loader to move sheet piling/backfill/demolition debris etc
(1) PC80 excavator to excavate trenches between substation components;
(1) D41 Dozer to place stone and backfill
(1) Hoe Ram attachment for concrete demolition;
(1) Concrete pulverizer for concrete sizing
(1) Walk Behind Smooth drum vibratory roller

(1) Hoe Pack attachment for deep compaction

(1) Auger attachment to predrill sheeting alignment

(1) Stone slinger for backfill in low clearance area

Additional small tools, generators, pumps, compressors, and other equipment will be utilized as required.

6. List of Permits and Approvals

Sevenson anticipates obtaining and procuring the following permits:

City of Lockport
Contact Jason Dool
Title Building Inspector
Phone 716-439-6754

- Building Permit for Demolition
- Sewer Tap Permit

City of Lockport Water Administration/Distribution Office
Contact Molly Deegan
Phone 716 – 439 – 6679

- Hydrant Permit

Section B: Progress Schedule

Sevenson's initial baseline schedule will be established prior to mobilization. As construction progresses, it will be updated to reflect actual start and completion dates for individual operations. Sevenson's baseline progress schedule is included with this document as Appendix B.

1. Contractor's Initial Baseline Project Schedule

Sevenson's initial Baseline Schedule is based upon the Milestone dates listed within the Contract Specifications with adjustments made to allow for sheeting extraction which did not appear to be accounted for in the base schedule. These milestone dates provide the anticipated commencement and completion dates of the project, which are as follows:

- September 17, 2013 - Contract Award
- December 4, 2013 – Mobilization and Site Preparation
- December 16, 2013 – Remediation of Phase 1A/1B
- February 18, 2014 – Remediation Phase 2
- March 12, 2014 – Remediation of Phase 3
- July 23, 2014 – Remediation of Phase 4
- October 30, 2014 – Remediation of Phase 5
- October 16, 2014 – Remediation of Phase 6
- June 26, 2015 – Remediation of Phase 7
- July 29, 2015 - Demoblization

The dates indicated above are contingent upon the Contract being in place and the Notice to Proceed issued as anticipated by the Contract Documents.

Time has been allocated within the schedule for initial submittals to be submitted, reviewed, returned, and resubmitted after any appropriate revisions have been incorporated. While they are being reviewed, Sevenson will follow up with other submittals that are required but are not necessarily required until sometime in the future. In this staged manner, the submittals requiring immediate action will be addressed first, and the rest will be "in the system" in time for the normal review and action to be taken prior to their use and implementation being required.

The Progress schedule will be updated weekly. In addition, a two-week look-ahead schedule will be prepared by Sevenson and reviewed weekly with the project team at the weekly site Progress Meeting.

Section C: Construction Facilities and Temporary Controls

A. Locations, Sizes, and Requirements for Utility Services

The utility services Sevenson will require to perform this work will as shown on the attached utility service map included in Appendix C are as follows:

Electric Service:

200 amp 3 phase 480 Drop on State Street to Service 3 – 100 amp panels and miscellaneous exterior outlets on the Stamp Parcel.

200 amp; 240 volt single phase drop to service 50 GPM WWT system that will be located on the corner of Saxton and Genesee Street on the south half of the Hawley Development Parcel Lot 2725, P-308.

Telephone and Internet:

Need to install 2 drops to the trailers and residence on the Stamp Parcel to accommodate the project internet and telephone requirements.

Water and Sewer:

Per Molly Deegan of the City of Lockport Water Administration Office, the hydrant on the south west corner of Saxton and LaGrange has a maintenance issue that will prohibit it from being used in the winter months as it cannot be drained properly. Therefore, Sevenson will have a 2" tap with a heat box installed in the same general location to provide water service throughout the project and prevent freezing issues during the winter. The water from this tap will be used to provide water for the odor control agents, dust control, and equipment decon.

A 4" sewer tap will be required on Saxton Street to accommodate the flow from the waste water treatment plant discharge.

Due to the limited space available on site to perform this work, Sevenson has contacted several local property owners that have expressed interest in temporarily leasing property for trailer staging, employee parking, and equipment and material staging as necessary. The property Sevenson anticipates utilizing for the primary trailer and laydown area is a 2+ acre parcel located immediately to the south west of the vacant Stamp Tire building which is owned by Mr. Bill Stamp.

In the event more space is needed, as a contingency measure, Sevenson has also spoken with Mr. Chuck Bell who is the Director of Planning and Development for the City of Lockport, in regard to the use of the vacant land along the canal and has received favorable indications thus far. It is expected that (3) 40'x10' trailers will be mobilized on the Stamp parcel. One will be used for the engineers and regulators, one will be used for Sevenson's management staff, and the last will be used as a break trailer for the trades.

Power to the trailers and the dwelling will be supplied by either a generator or by direct hookup to an existing drop. An approved, licensed electrical contractor will perform any such electrical work.

To access these locations, as shown on the map included in Appendix D, head south on State Street from South Transit as this is a one way street. Employees will leave their vehicles at this location and walk across the street to the jobsite to minimize congestion on Saxton Street. To travel between the laydown area and the site via truck for material deliveries, employees will turn left out of the parking lot and head south on State Street, turn left on West High Street, turn left to head north on South Transit, turn right to head east on West Genesee Street, and turn right to head south on Saxton Street to return the substation. Any vehicle or truck staging that is required while awaiting access to the site will use either the Stamp parcel or the City Parcel along the canal to avoid creating congestion around the substation while work is being performed.

Due to the location of the Site, Sevenson understands that the local community has concerns with the site activities. We believe the location of the proposed staging area and the traffic route selected will minimize inconvenience to the home owners during construction operations.

B. Layout of Support Zone and other Work Zones, Including Decontamination Zone.

As the remediation is going to be performed in multiple phases, due to the small foot print of the property the zones will change with each phase or work that is being completed. Please refer to Appendix E which illustrates the proposed exclusion zone, contamination reduction zone, decon area, and support zone for each phase of work.

C. Proposed design for Site Access Road.

Although Sevenson doesn't envision the need for a site access road as the majority of the site already has a layer of either aggregate, paving, or concrete, we may have to construct some access spurs in order to keep truck tires clean for materials being transported either into or off of the job site. The access spur design will consist of a layer of woven geotextile fabric topped with 6" of clean crushed stone. Erosion controls such as silt fence, hay bales, berms etc, will be installed as appropriate along the perimeter of the spurs if they are located in an area that would be susceptible to erosion. A detail of the road spur is provided in Appendix F of this document.

D. **Proposed design of Decontamination Stations.**

The design for the decontamination stations will be as indicated on the plan view and Section A-A' on drawing #22 as provided by AECOM. A 6" layer of run-a-crush stone will be placed and compacted to provide a smooth solid sub-base for the pad construction. This same material will be used to construct appropriately sized berms around the pad perimeter that will provide a reservoir for decon water containment and collection once the impermeable 40 mil liner has been installed. After the liner has been installed, an additional 6" to 9" lift of #1 or #2 crushed stone will be installed as an armoring layer to protect the liner beneath, and also to channel decon water to a sump for collection and conveyance to the on-site waste water treatment system with an appropriately sized submersible pump. To contain overspray, temporary free standing fence panels covered in painters tarps will be set up along the entire length on either size of the washing operation during decon operations.

E. Decontamination Methods and Equipment

It is Sevenson's intent to minimize the amount of equipment that comes into contact with the contaminated soil. Stone, liner, or crane mats will be used to try and keep the tracks of the machines out of the dirt to the extent possible so only the bucket and the arm of the machine would need to be decontaminated upon the completion of an area and prior to backfill. For truck loading operations, the tires of the off-site transport vehicles will be kept on a clean surface at all times. To keep the sides of the vehicle free from contamination during loading, the liner flaps will be folded out and over the truck sides and secured with bungee straps to prevent any material from coming into contact with the exterior of the truck bed. In the event the liner flaps are not long enough to properly cover the trucks exterior, as an alternate, painters tarps will be attached to shepherds hooks and draped over the sides of the vehicle as a secondary means of protection. Upon completion of loading operations, the trucks will be inspected to ensure they are free of external contamination prior to being allowed to leave site.

To prevent cross contamination of clean areas, Sevenson will utilize 4' tall high visibility construction fence and appropriate signage to delineate work zones which include the Support Zone, the Contamination Reduction Zone and the Exclusion zone. Strict controls will also be in place to ensure that proper procedures and decontamination practices are being followed for all personnel and equipment entering and exiting these areas. Around the perimeter of active work areas either silt fence, berms, ditches or a combination thereof will be installed to control both run in of surface water from offsite, or potential run off from the work area.

The first means of preventing contamination from leaving the work area after the work zones have been properly established is the proper use of personal protective equipment. For personnel assigned to work in the exclusion zone, a minimum of Modified Level D personal protective equipment, which consists of standard Level D PPE with the addition of protective over boots, a chemical resistant coverall suit, and neoprene gloves will be donned prior to entering the work area. Upon leaving the work area, personnel will first go through a boot wash and use a brush to remove potentially contaminated material from their over boots. Once the boots have been cleaned, personnel will step into the CRZ and carefully remove the balance of their PPE in a manner that will prevent the contamination of the clothing underneath their suit. Once all of the PPE has been removed, stored, or properly disposed of, industrial hand wipes

will be used to clean off the employees hands and face prior to leaving the CRZ and entering the support zone.

For equipment that has entered the exclusion zone and come into contact with contaminated material, a decon pad will be set up where the equipment will be cleaned prior to being allowed back into the support zone. To minimize the generation of decon water, personnel will first perform a gross dry decon on the machine with scrapers, brushes, and shovels to remove bulk contamination from its exterior. Once the bulk contamination has been removed to the extent possible, employees will use a 3500 psi pressure washer, scrub brushes, and a cleaning solution such as Simple Green to remove the balance of the contamination. Upon completion of the decon effort, Sevenson's Site Health and Safety Officer will inspect the machine to ensure it has been properly cleaned and fill out an Equipment Decontamination Certificate prior to it leaving the exclusion zone. Sediments and used personal protective equipment generated from the decon process will be disposed of with the remainder of the contaminated material that is being shipped off site. Decon water will be collected and conveyed to the on-site WWTP for treatment prior to being discharged to the local sanitary sewer system.

Section D: Dewatering

Due to the limited amount of water that is expected to be encountered within the sealed sheeting cells during excavation, it is Sevenson's intent to use a 5000 watt generator and 2" Godwin GSP 05 or equivalent electric submersible pumps to convey water from the work area to the on-site waste water treatment plant. As shown in the pump specification in Appendix G, these pumps are capable of pumping up to 70 gallons per minute at 39' of head which should be more than adequate to handle the pumping requirements on this project. Should more water be encountered than anticipated, Sevenson will either add additional pumps to the dewatering configuration or increase the size of the pumps as appropriate. Please refer to Appendix G for the pump specifications on the Godwin GSP 05 and a sketch of the system with components and tie in locations.

Section E: Grout Wall

The installation of the grout wall is a specialty item which will be performed by a subcontractor for Sevenson Environmental Services, Inc. Please refer to Appendix H for a copy of the work plan as required in Specification Section 01330.

Section F: Vertical Barrier Walls

A. Site preparation, construction of working areas, etc.

Upon completion of the work zone delineation described previously in the plan and as illustrated in the drawings provided in Appendix E, Sevenson will initiate construction of the vertical barrier wall. After all of the utility locates have been performed and after NYSEG has relocated overhead utilities as required, Sevenson will use an operator on a PC200 excavator working in conjunction with a laborer as a spotter to locate the existing grounding grid, while at the same time excavating the 2' deep pilot trench that will allow for the barrier wall sheeting to be installed to the required elevation 2' below grade. Once the grid had been located, the portion of it that falls within the sheeting alignment will be exposed so it can be detached from the main grid in a manner that will allow for a replacement grid to be installed and reattached in the future. As the material from the top 2' of the vertical barrier wall alignment from Phase 1 is not scheduled for offsite disposal, the clean spoils generated from the pre-trenching will be temporarily stockpiled on the concrete holder pad on the east side of the site, and then placed immediately back in the trench after the sheeting has been installed. This will eliminate ponding areas, trip hazards and provide suitable access for the continuation of work in Phase 5.

Once the grounding grid has been cleared, a PC200 excavator with an auger attachment will be used to probe the area adjacent to the existing retaining wall to confirm the location of the existing footer, which in turn will ultimately define the final sheeting alignment for the vertical barrier wall. After the sheeting alignment for Phase 1 has been confirmed, this same machine will predrill the entire length of the Phase 1 barrier wall to help expedite the installation of the sheeting by loosening up the hard pack, and also to minimize the level of vibration, effort and time required to complete the installation. During the predrill process, the Biosolve odor control

system will be available and used as required to control any odors that may result from the preparatory work on the sheeting alignment.

B. Pile driving methods and tools...

After predrilling operations have been initiated Sevenson will mobilize the driving equipment and sheet piles to site. To install the sheeting, a PC300 excavator with a Robovib Vibratory Driver/Extractor attachment, will be used to perform this work. This equipment provides the versatility needed to pick up, orient, set, and drive each sheet within a much smaller foot print and at much lower clearance than would be required by a crane. A general description and specification for this unit and the AZ14-770 sheeting specification has been included in Appendix I of this document. Prior to each sheet being installed, a laborer will install Deneef joint sealant within each interlock prior to establish a water tight interlock as required in the specification.

C. Pile driving templates and guide structures

Due to the limited space available for the sheeting installation, Sevenson will use a grade beam, H pile, or sheet pile, placed directly on the ground as a straight edge to keep the sheets in alignment. This unit will be relocated as appropriate after each stage has been completed until the entire length of sheeting has been installed.

D. Sequence of installation

In regard to the sequence of the sheeting installation, Sevenson will start the work on the vertical barrier wall at the south east corner of cell 5A and work toward the east where Phase 1A terminates at the base of where the new buttress is to be installed. Once all of the work on the Phase 1A has been completed and restored, NYSEG will relocate utilities back in that area as appropriate to clear the area for the vertical barrier wall to continue as required in Phase 1B.

E. Sheet pile driving hammer, including Wave Equation Analysis to evaluate sheet pile driving stresses and drivability.

As indicated above, a general description and specification for the Robovib hammer that Sevenson has proposed to perform this work, as well as the sheeting specification for the AZ13 sheet pile has been included in Appendix I of this document.

F. Quality Control, including procedures for maintaining alignment, plumbness, and wall continuity.

Once the location of the retaining wall footer has been established, Sevenson's surveyor will layout the remainder of the wall in accordance with the plans to confirm the final alignment. Once confirmed, off sets will be installed that will be used to verify the location of the wall during construction. In addition to survey layout and the use of a straight edge to maintain the sheeting alignment, a standard 4' construction level will be used to check each sheet to ensure it remains plumb during installation. A driving log will also be maintained for each sheet installed to document the date, time, sheet type, length, and estimated drive time. Once the sheeting is installed and prior to the tops being cut off, the top of sheet will be surveyed and the sheet length will be subtracted to determine the final toe elevation at bedrock for purposes of the final asbuilt. Once the toe elevation has been established, the excess sheeting will be cut off at 2' below final grade. The top of the sheeting wall will then be resurveyed for asbuilt purposed prior to the sheeting trench being backfilled.

The same equipment and methods will also be used to install all of the temporary sheeting as required for the soils removal.

Section G: Excavation and Backfill

A. Detailed description of equipment and procedures to be used to excavate impacted soils and subsurface structures

Prior to the start of any excavation operations Sevenson will ensure the following tasks have been completed as appropriate for each phase of work:

1. Ensure that all utilities have been properly located, marked, and abandoned as necessary, and that NYSEG has completed utility relocates as required for the ensuing phase of work.
2. Install the 50 gpm waste water treatment system, conveyance lines, and sewer connections as required to control contaminated construction water prior to the start of work.
3. Surveyors will layout the excavation foot print and temporary sheeting alignment as required for Phases 1, 2, 3, 4 and 5.
4. Install all traffic controls, road closures, and detour signs as required to facilitate work operations on LaGrange Street
5. Install all required erosion and sediment control measures.
6. Set up exclusion zones, contamination reduction zones, decon areas and support zones as required.
7. Ensure dust and odor control systems are available on site, set up and ready for immediate use.
8. Perform precondition inspections and take photos of adjacent properties to document their condition prior to the start of work.
9. Install piezometers and inclinometers as required to monitor for settlement outside the immediate area of the sheet pile installation.
10. Install vibration monitoring sensors between the sheet pile alignment and existing structures to document the effects of the sheeting installation on adjacent structures and properties.
11. Set up survey monuments on surrounding structures so they can be monitored routinely during sheeting installation to determine if the structures are being impacted due to the work.

Phase 1 Remediation of Cell 5A

Upon the completion of the aforementioned activities, Sevenson will use an operator on a PC200 excavator with a bucket, and a laborer acting as a spotter, to locate the grounding grid within the foot print of the sheeting alignment. Once the grid has been located, it will be disconnected in a manner that will allow for its replacement by others upon the completion of work in this area. After the grounding grid has been located and the appropriate sections removed, a second PC200 excavator with an auger attachment will be used to predrill the entire temporary sheeting alignment of cell 5A to loosen hard packed soils, and to identify obstructions within the alignment that may need to be removed prior to the installation of sheeting. Predrilling the sheeting alignment will also minimize the vibration that will be required to install the sheets and shorten the duration of time required to complete the work.

Once the preparatory work and predrilling has been completed, grade beams will be installed as appropriate along the alignment to act as a straight edge during the construction of the cell. Once the beams are in place, a PC300 excavator with a Robovib vibratory impact hammer attachment will be used to install approximately 150 linear feet of AZ14-770 sheet piling around the perimeter of the cell. Prior to its arrival on site, this sheeting will have had 3" pipe sleeves welded on every sheet to facilitate the installation of the toe pins that will described later on in this section. To minimize the infiltration of ground water into the sheeting cell, fabricated corners and T's will be used as necessary to provide a water tight seal in the corners. (2) 90 degree corners on the south side of the cell and (3) T's on the north side will be required to facilitate the tie in of the sheeting for Cells 5B and 5C later on in the project. In addition to the manufactured corners, DeNeef sealant will be applied to each of the sheeting interlocks just prior to a sheet being installed.

After the sheeting and corners have been installed, Sevenson's drilling subcontractor will commence with the installation and grouting of approximately (70) 1.5" x 6' long 75 ksi sheeting pins that are required to secure the base of the sheeting wall to the bedrock. It is assumed that 1 pin an hour can be installed for a total of 10 pins per day in a 10 hour day, and that 7 days will be required to complete the toe pin install in this phase of work per the design.

Immediately after the completion of the toe pinning, Sevenson will install the upper W30 x 90 walers on the north and south perimeter of the cell. Once the lookouts have been installed to support the walers, and the walers have been placed, hard wood blocking will be used where necessary to remove any of the void space that may remain between the sheet piling and the bracing when W30 x 90 waler and HSS 12.5 x 0.375 struts used for the cross bracing have been placed. As a potential alternate, in the interest of production and time, Sevenson is proposing to use Mechanical Super Struts (size 04) rented from MABEY Bridge and Shoring in lieu of the W30 x 90 cross braces on the short wall and the HSS 12.5 x 0.375 strut that are to be used for the center of the cell. As the super struts are adjustable, that will minimize the need for field fabrication and shimming and provide the same level of support. In the event this option is approved, a cut sheet on the Mechanical Super Strut has been included in Appendix J of this plan.

When all of the bracing has been completed, in an effort to dewater the material to the extent possible prior to the start of excavation and direct loading operations, Sevenson will install a sump down to bedrock (approximate elevation 588), consisting of a 12" perforated HDPE pipe wrapped in geotextile fabric. Once the pipe and fabric are in place, a GSP 05 - 2" submersible pump (or equivalent) will be installed to remove perched water from the work area and help dry out the material in the cell. All water removed from the cell will be pumped to the waste water treatment system, where the first 40,000 gallons will be treated, sampled and analyzed prior to being discharged to the local sewer.

After the cell has been dewatered, a PC200 excavator will initiate excavation on the western perimeter of the cell. The intent is to pull the material up onto it self within the cell to allow any free water to decant back toward the sump. The operator would then mix the wet material that was below the ground water table with the dry material above it in an effort to dry it enough to pass a paint filter test as required for material transport. If the material is deemed unsuitable for direct loading, a small percent of cement kiln dust will be introduced into the material with an excavator as required to dry it enough for transport. A laborer will be used full time to deploy Biosolve or Rusmar foam as necessary to control odors being generated during this and all excavation operations.

Trucks for the off-site transportation and disposal of material will be backed up to the eastern perimeter of cell 5A onto a clean road spur or plastic sheeting where they will be lined and covered as required to keep the exterior of the truck and tires clean during loading operations. Once the truck has been loaded, the laborers will fold the liner on top of the material, and tarp the truck prior to it being given a completed manifest and sent off site. As there is approximately 500 cubic yards of material in this cell which amounts to between 750 and 900 tons of material, Sevenson plans on direct loading between 15 and 20 truckloads of impacted material per day which will amount to approximately 2 - 3 days of excavation and transport per cell.

Due to utility relocation requirements that need to be performed when switching from one phase of work to the next, immediately upon the completion of excavation operations, Sevenson will decontaminate the backhoe bucket and use this same machine for the installation of imported material for the 2' impermeable clay layer that is to be installed on top of the bedrock, for the installation of the collection trench materials, and for the placement of subgrade fill to bring the cell up to grade. All of the materials being installed will be placed in lifts and compacted by a second PC200 excavator with a hoe pack attachment to 90 percent using a modified proctor as required in the specification. Each material layer will be surveyed to provide a construction asbuilt that documents the excavation and restoration of each cell from start to finish. After the cell has been filled two within two feet of final grade, the sheeting and walers will be removed and prepared for use on the subsequent phases of excavation.

The sheeting is being removed when the backfill is 2' below final grade to leave the area exposed for the reinstallation of the grounding grid that is to be installed at that elevation. This will also create a reservoir for the drilling fluids that will be encountered during the installation of the small section of the grout wall and bedrock monitoring well 101 that are to be installed within the foot print of the cell during this phase of work. Having the drilling spoils and fluids contained within the depressed area will make them much easier to manage and help prevent them from running off site onto South Transit Road.

Upon the satisfactory completion of all aspects of work during this operation, utilities will be relocated as required and work will proceed on Phase 1B and Phase 2 work.

For purposes of the Technical Execution Plan, as cell 5A was the first area in which excavation is required, full details were provided on Sevenson's approach to the work in this area. However, as the same general sequencing and procedures will be used for the work performed during each of the subsequent phases of excavation, in the interest of time and efficiency, these procedures will not be repeated in the plan for Phase 1B, Phase 2, Phase 3, Phase 4 and Phase 5.

B. Detailed description of excavation and backfill sequencing to minimize dewatering flows to the construction water treatment systems

Sevenson's proposed excavation and backfill sequencing to minimize dewatering flows on the NYSEG Lockport MGP Site will be as follows:

- 5A
- Phase 2 Gas Holder Area
- 3D
- 3C
- 3B
- 3A
- 4D
- 4C
- 4B
- 4A
- 5B
- 5C
- 5D
- 5F
- 5E

To minimize ground water infiltration, in addition to using sealed sheeting to keep water out during the course of excavation, immediately upon completion of excavation Sevenson will install and compact the impermeable clay later and then bring the cell back up above the ground water table to within 2' of final grade prior to initiating excavation on the subsequent cells.

C. Schedule for installation and operation of dewatering systems, including table showing coordination of dewatering systems with excavation.

The installation and operation of Sevenson's dewatering system will coincide with the excavation sequence detailed in the previous section.

The dewatering system will consist of a 12" perforated HDPE pipe wrapped in fabric installed to bedrock within each excavation area. A 2" electric submersible GSP 05 pump (or equivalent), with the capacity to pump up to 70 gallons per minute will then be placed in the sump to convey ground water through heavy duty lay flat hose to the 20,000 gallon influent and settling tank that will be located on the Hawley Development Property L-2725, P-308. From the influent tank, the water will be processed through a 50 gallon per minute trailer mounted waste water treatment system, and then discharged into one of two 20,000 storage tanks for sampling (initial batch only) prior to discharge to the City of Lockport sewer located on Saxton Street.

As Sevenson does not plan on dewatering more than one excavation cell at a time, a table showing the coordination of dewatering systems with excavation will not be required.

D. Excavation production rates in the form of a table of excavation volumes per week for each week of the Project Schedule. In the same table, show the estimated quantities of off-site transportation and the quantities of materials in stockpile.

Excavation Area	Proposed Excavation Dates	Quantity		Daily Production	Direct Load for Off Site T&D	Stockpile Volume
				150 cuyds per day	150 cuyds per day	
Cell 5A	December 23 - December 27, 2013	502	cuyds	4 work days	4 days	0
Holder Demo/ Exc.	February 21 - March 3, 2014	460	cuyds	7 work days	7 days	0
Cell 3D Exc	March 27 - March 31, 2014	441	cuyds	3 work days	3 days	0
Cell 3C Exc	April 14 - April 16, 2014	487	cuyds	3 work days	3 days	0
Cell 3B Exc	April 30 - May 2, 2014	555	cuyds	3 work days	3 days	0
Cell 3A Exc	May 16 - May 20, 2014	626	cuyds	4 work days	4 days	0
Cell 4D Exc	August 5 - August 7, 2014	289	cuyds	2 work days	2 days	0
Cell 4C Exc	August 21- August 25, 2014	320	cuyds	2 work days	2 days	0
Cell 4B Exc	September 9 - September 11, 2014	3S2	cuyds	3 work days	3 days	0
Cell 4A Exc	September 25 - September 29, 2014	391	cuyds	3 work days	3 days	0
Cell 5B Exc	November 18 - November 20, 2014	699	cuyds	3 work days	3 days	0
Cell 5C Exc	December 10 - December 12, 2014	775	cuyds	4 work days	4 days	0
Cell 5D Exc	January 15, 2015 - January 19, 2015	528	cuyds	4 work days	4 days	0
Cell 5F Exc	March 3, 2015 - March 5, 2015	616	cuyds	4 work days	4 days	0
Cell 5E Exc	April 7, 2015 - April 9, 2015	660	cuyds	5 wrk days	5 days	0
Total Cubic Yards		7701				

E. Figures showing locations of temporary on site haul roads to support the progress of excavation work.

Sevenson has provided a layout of the proposed temporary on site haul routes in Appendix E of the Technical Execution Plan.

Section H: Stockpile Management and Loading

A. Provide a drawing showing the proposed layout of the stockpile area, including locations of stockpiles for Clean Material, Impacted Material, and Material to be tested. Show on-site truck routes, unloading areas for excavated soil excavated soil, and loading areas for offsite transportation.

Due to the limited space available on site, in an effort to minimize the requirement for double handling of material and on site stockpile management, to the extent possible, Sevenson will schedule deliveries of clay and stone fill material as needed during backfill operations. As Lafarge's Stone Quarry, and Mawhiney Trucking's clay pit are both located a few miles from site, most of the site materials will be readily available. In the event some on site stockpiling of material cannot be avoided, Sevenson has provided a layout for the on-site stockpile management and loading plan in Appendix K of the Technical Execution Plan.

B. Methods and facilities for managing storm water run-on, runoff from stockpile areas, and water drained from saturated impacted soils.

Either tarps, silt fence, hay bales, berms, ditches or a combination thereof will be used as appropriate to protect stockpiles from storm water run-on or run off. As Sevenson does not plan on stockpiling impacted excavation material outside of the excavation foot print, water generated from the excavated soils will drain directly back into the sheeting cell and be conveyed to the on-site waste water treatment system via the 2" submersible pump.

C. Truck loading areas, staging areas for incoming empty trucks

As Sevenson will be direct loading trucks for the removal of the impacted material, loading will take place immediately adjacent to the excavation cells in the CRZ's shown in Appendix E so the trucks can be sealed, inspected, and decontaminated as necessary prior to entering the support zones, receiving manifests and leaving site.

Empty trucks awaiting loading operations will be staged off of State Street either on the staging area property Sevenson will be leasing from Mr. Bill Stamp, or on the vacant city property that is available on the northwest side of the road adjacent to the canal as shown in the drawing in Appendix D.

D. Coordination of excavation, stockpiling and loading.

Due to the limited space on site, Sevenson does not intend on stockpiling impacted material outside of the excavation foot print. As such, all of the loading will take place immediately adjacent to the excavation area as described previously in the plan.

Section I: Off-Site Transportation

A. Provide names and qualifications of proposed transporters and number of vehicles dedicated to the project.

The names of the transporters that Sevenson is proposing to use for the removal of material from site are as follows:

Riccelli Trucking
6201 E Taft Road
North Syracuse, New York 13212
315 -701 – 0002

Riccelli Trucking has 10 – 20 vehicles available to service the project as required.

Qualifications for Riccelli Trucking can be found in Appendix L of the Technical Execution Plan.

MJ Dreher
50 Owens Road
Brockport, New York 14420
585 – 637 – 3080

MJ Dreher has 10 – 20 vehicles available to service the project as required

B. Provide an estimate, by day, of expected quantities of material to be shipped from the site. Describe the number of trucks to be used, the expected turn-around-times, and the expected number of trips per day.

Sevenson is anticipating 15 – 20 loads of material being shipped per day from the site during active excavation operations. As 2 trips per day can be accomplished for waste going to the landfill, it is anticipated that 10 trucks per day will be assigned to the site that will make 2 trips each. For loads being transported to the thermal facility, as only 1 load per day can be achieved, Sevenson is planning on scheduling 20 trucks per day during those operations.

C. Describe locations and procedures for staging and sequencing trucks to minimize disruption and obstruction of the area around the site.

Due to the limited space on site and the concern over causing congestion on public road ways in the City of Lockport, Sevenson will implement the following procedures:

1. Truck arrival times will be coordinated with the dispatcher to stagger the times the vehicles arrive on site to minimize the wait time for loading. For vehicles that arrive on site before they can be loaded, Sevenson has made arrangements to lease several acres of property in close proximity to the site in which empty triaxle trucks will be staged while awaiting their turn to load. Once a truck has been loaded, inspected and decontaminated as necessary and released from the loading area, he will call the next driver over the radio and instruct him to proceed to the site along the designated travel routes which are shown in a diagram in Appendix D.

D. Describe locations and equipment to be used to weigh haul trucks. Include frequency of obtaining true weights of trucks.

Due to the limited space available on site Sevenson does not plan on installing a temporary truck scale to obtain truck weights on site. To ensure the trucks are being loaded to capacity and within their legal load limits, Sevenson will calculate the weight of the material in the truck by using a bucket count which will be based on the size of the bucket and the assumed density of the material being loaded. As a secondary measure to ensure proper load weights, the drivers of the vehicles will monitor their air gauges and inform the operator when they appear to have a full legal load. As the trucks will be making two trips per day to the landfill, upon receipt of the first weight from the certified truck scale at the disposal facility, the truck driver will call Sevenson's Superintendent and inform him of his actual weight so the bucket count can be adjusted as appropriate to optimize the loading operation.

In regard to the frequency in which true truck weights will be obtained, each truck will obtain a true weight on each load of material upon arrival at the certified scales of the disposal facility.

E. Provide a traffic control plan showing how trucks will enter and exit the site, the locations of flaggers and signs, truck driver orientation and acceptance forms that shall include truck driver responsibilities as specified in the Transportation Plan, designated haul route to and from the off site disposal facilities with posted speed limits, warnings, etc., and incident reporting procedures for trucking related incidents.

Sevenson has provided a local traffic control plan layout and anticipated haul route for onsite loading operations in Appendix M of this plan which illustrates the routes trucks will use to enter and exit the job site. These plans also indicate the proposed sign locations and types that are to be in place during trucking operations. Also included in Appendix M will be the truck routes from the site to the respective disposal facilities that will indicate the major travel routes, mileage, and anticipated time to travel between the facility and the site.

As Sevenson will attempt to service the site from Saxton Street to the extent possible to avoid the heavy traffic that will be encountered on South Transit Street, flag men will be posted at the intersection of LaGrange and Saxton as necessary when trucks are entering and leaving site.

Driver site orientation forms, project information sheets, incident reporting requirments, and site procedures with respect to transportation, speed limits, etc. will be provided upon award as part of the Waste Management, Transportation and Disposal Plan that Sevenson will prepare for submittal and approval before offsite shipment of waste commences.

F. Provide a plan for verifying the accuracy of weight scales

An initial confirmation that offsite facility scales are currently inspected and calibrated will be provided upon award as part of the above referenced plan. Ongoing scale performance will be evaluated on a weekly basis from summaries of loads provided by the facilities.

Section J: Disposal Facilities

A. Detailed description of disposal facilities to be used and their daily capacities

A list of both the Non Hazardous Soils and Conditionally Exempt Soils Disposal Facilities is as follows:

Non Hazardous Soils

High Acres Landfill
425 Perinton Parkway
Fairport, New York 14450

Mill Seat Landfill
303 Brew Road
Bergen, New York 14416

Senenca Meadows
1786 Saleman Road
Waterloo, New York 13165

Conditionally Exempt Soils

EMSI
304 Towpath Road
Fort Edward, New York 12828

Covanta Niagara
100 Energy Boulevard at 56th Street
Niagara Falls, New York 14304

The landfill can take between 500 and 700 tons of material per day from the site. The thermal treatment facility can take between 300 and 500 tons per day.

Section K: Site Restoration

A. Describe procedures and equipment and materials to be used to restore disturbed areas. Provide a description of proposed method for the following:

i. Placing Clean Backfill

Due to space constraints on site, and in an effort to avoid double handling of material, the majority of backfill will be ordered and delivered to the work area from the quarry on the day it is required for placement. Trucks will be backed in adjacent to the work area, the material will be dumped, and a PC200 with a bucket will place the material in lifts within the deep excavation areas. A second PC200 excavator with a hoe pack attachment will be used to compact the material to 90 percent modified proctor as required in the specification prior to subsequent lifts being placed. Sevenson may store a small amount of stone on site that will be moved with a rubber tired loader to facilitate the installation of the collection trench while imported backfill is being placed.

ii. Replacing asphalt

Sevenson will remove the existing asphalt as required during remediation operations with a PC200 excavator and load it into off site trucks for recycling or disposal. Once work has been completed and the minimum 12" of select granular subgrade material has been installed and compacted in accordance with the specification, Sevenson's asphalt subcontractor will install the two 3" lifts of F9 Binder Course Hot Mixed Asphalt and the 1 ½" top course as required. Once the asphalt work has been completed to the satisfaction of the engineer, Sevenson will be in the painting subcontractor to install the striping as shown on Drawings 16 and 17.

iii. Replacing Curb and Side Walk

Upon completion of remediation work and the restoration of subgrade, but prior to the installation of the asphalt on LaGrange Street, Sevenson's concrete contractor will form and install concrete walks and curbs down either side of LaGrange Street as required on drawings 16 and 17.

iv. Installation of Fencing and Grounding Grid

Per the responses to questions during the bid phase, it is Sevenson's understanding that the grounding grid materials will be provided and installed by others and that the contractor will only be responsible for excavation and backfill of the trench required for the electricians to perform this work.

In regard to the installation of the chain link fence, Sevenson's subcontractor will develop a plan for the removal and replacement of the permanent perimeter fence in a manner that will ensure the substation is completely secure at the end of each work shift. The fence materials will be in keeping with the material specifications and the Iberdola Yard Spec and be 8' high around the entire perimeter of the substation with the exception of the section of fence on top of the retaining wall that is to be 6' tall.

Additional plans that are required to be submitted with the proposal that were not included in the outline included specification section 01330 are as follows:

Proposed Sheet Pile / Bracing Layout Sections
Vibration Monitoring Plan
Odor Control Plan
Demolition Plan
Asbestos Abatement Plan

Sevenson has conducted many projects in heavily populated residential areas and therefore understands the importance of limiting the impact this work will have on the local community to the extent possible. As such, if awarded the work Sevenson will work closely with NYSEG and AECOM to ensure this work is performed safely, economically, and as efficiently as possible in an effort to minimize any disruptions to the local residents and businesses in the area.

Table of Contents

for NYSEG's Former Manufactured Gas Plant Site
Lockport, New York

APPENDIX A

Resumes

Michael A. Elia

Project Sponsor

Education

- BS, Civil Engineering, Villanova University

Highlights of Qualifications

- Over 35 years experience and oversight of all company hazardous waste site remediation operations and environmental dredging, dewatering, and capping systems.
- Civil Engineer with project supervisory experience in heavy, highway, and building construction.
- Experience in construction of processing facilities and treatment plants.

Value-Added Benefits

- Executive level oversight from experienced hands-on leader.
- Health and Safety advocate ensuring below industry standards incident rates with proven results as demonstrated by firm's excellent safety record.
- Demonstrated value-engineering initiatives employed on past projects resulting in significant cost and time savings for clients.
- Quality Control advocate to ensure high performance standards that meet or exceed client expectations.

Mr. Elia a principal at Sevenson Environmental Services, Inc. since 1979 has led the hazardous waste site remediation operations of the company. He provides executive level oversight reinforcing the corporate quality control and health and safety programs to ensure high performance standards and below industry incident rates on all projects the firm completes.

Under Mr. Elia's leadership the firm has employed innovative strategies to develop specialized remediation and environmental dredging equipment to maximize project efficiencies and minimize environmental impact to affected areas.

He has pioneered approaches to executing remedial construction and environmental dredging which have shortened project schedules resulting in significant cost savings for Sevenson's clients.

Years of Experience:
25

Education:

- BS, Special Studies, State University College at Fredonia, 1988

Certifications:

- OSHA 40 Hour HAZWOPER Training
- OSHA 8 Hour HAZWOPER Refresher

Role and Responsibility:

- Responsible for delivery of completed project in compliance with plans and specifications.
- Attends all scheduled progress meetings.
- Meets daily with the project team to review planned activities.
- Develops and maintains all project deliverables, submittals, schedule and reports.
- Develops and manages cost control and accounting, procurement and expediting material delivery, inspection, and quality control functions.

Experience and Expertise:

- Remediation skills developed out of heavy, highway and civil construction project experience.
- Understands CERCLA, RCRA, TSCA and additional regulatory requirements.
- Firm Fixed Price, Cost Reimbursable, Fixed Fee, Guaranteed Maximum Price Contract Experience
- Union and Open Shop Labor
- Dredging, Dewatering and Filtrate Treatment
- Excavation and Earthwork
- Steel Sheeting Systems
- Recovery and Treatment Systems
- Solidification/Stabilization
- Constructability Reviews

Gary Rose

Corporate Project Manager

Past Project Experience

Energy East Corporation, NY: Since 2003 Mr. Rose has had direct project management and oversight for both MGP and civil site remediation projects for Energy East. Project locations include Lockport, Deerland, Rochester, Gowanda, Ithaca, Elmira, Brockport, Long Lake, Binghamton, Geneva, Plattsburg, Dansville, Palmyra and Oneonta, NY. Remediation techniques implemented include: MGP soil/holder excavation, characterization, transportation and disposal; waste water treatment design and operation and maintenance; decontamination and demolition; clean and hazardous earthwork; soils/sludges solidification and stabilization; cleaning/removal/replacement of storm insitu and exsitu sanitary sewer lines; and residential property remediation and restorations.

Former Saranac Street MGP Site, Plattsburgh, NY (2010): Project Manager. Design/build sediment remediation and restoration project along a ½ mile of river bed and embankments required careful planning and execution. Constructibility review was incorporated into remedial design and the project planning process. Installation of 65 lf by 1,125 lf fish channel Porta-dam capable of handling river flows of 1,700 CFS including a head water dam constructed with H-piles and steel plates to divert river flows. Excavation in the dry was sediment removal methodology. Erection of 180 lf by 132 lf fabric structure houses screening and stabilization operations. A carbon vapor extraction air handling system is operational during processing. Excavated sediment was transferred to stockpile area for screening and stabilization for offsite T+D. Construct, operate and maintain on-site temporary 500 gpm WWTS. Restoration of river bottom and embankments to original grade and contours of the river.

Court Street Former MGP Site, Ithaca, NY: Project Manager. Demolition and environmental decommissioning of a 40,000 masonry and steel building. Permanent low permeability steel sheet pile wall (400 lf x 30 ft) will be installed along perimeter historical building. Eight (8) temporary interior steel sheet pile cells will be installed as protective shoring for deep excavation. All excavation will be done under a temporary, mobile enclosed fabric structure which will move from cell to cell as excavation progresses. The fabric structure includes an air handling system with carbon ventilation system. Excavation, T+D of 150,000 cy of coal tar contaminated soils. Remove gas holder, foundations and all appurtenances. Install a temporary WWT plant sized at 250 gpm to treat all water encountered during operations. Install permanent WWT system. Extensive site restoration includes backfill, topsoil and seed, landscaping, fence, curb, and asphalt pavement.

Central Avenue MGP Site, Mechanicville, NY: Project Manager. Installation of steel sheet piling to enclose gas holders (1 each) 100 ft. diameter and (1 each) 50 ft diameter; excavate contents; dewater and pump liquids to onsite waste water treatment plant for treatment. Additional work tasks include stream bank soils excavation, characterization and T+D. All disturbed areas restored.

East Station MGP Remediation, Rochester, NY: Project Manager. Work tasks include the clearing and grubbing of 5 acres and stretches along the bank of the Genesee River; excavation and stockpile of overburden material; excavation, characterization, T+D of 30,000 cy cyanide impacted materials; and removal of underground foundations, the former gas holder and all appurtances. All water generated from operations is collected and stored for treatment offsite. Sevenson will also construct a 1,000 lf cement bentonite cutoff wall along the river, 20w x 13 ft BGS and a NAPL collection trench (15 ft BGS) adjacent to the wall. The wall is installed insitu using an auger.

Former MGP Plant Remediation, Oneonta, NY: Project Manager Excavation, characterization, T+D of MGP coal tar waste; installation of 1,650 LF of Sevenson's patented SEAL Wall low permeability steel sheet piling; dewatering and water treatment of all water generated from excavation and remediation operations; demolition of two (2) gas holders and all site facilities; extensive site restoration.

River Sediment Removal, Greenfield, MA: Project Manager. Project required "excavation in the dry" and solidification of contaminated river sediments from earlier MGP operations. Portadam installed to enable dewatering of cell. Sediment stabilized and shipped offsite for disposal. River bottom restored.

Former MGP Site, Ithaca, NY: Project Manager. Decontamination of 5,000 sf plant structure. Hydro-blast complete interior including trenches, sumps, pits and piping to depths of 12 feet. Contaminated soils and material handled during excavation is characterized and either stockpiled onsite for use as backfill or shipped offsite for disposal. All utilities (gas, electric, water and sewer) will be relocated. Site will be restored.

MGP Soils Removal, Johnson City, NY: Project Manager. Removal action required excavation, characterization and offsite thermal treatment of MGP impacted soils. Additional work required the construction of 3 acre retention pond and site restoration.

Coal Tar Removal, Palmyra, NY: Project Manager. Excavation, characterization, transportation and offsite disposal of impacted soils. Disturbed areas restored per specifications.

East Station Gas Holder Remediation, Rochester, NY: Project Manager. Decommissioning and removal of one (1) 100 feet diameter gas holder and foundation. Excavation and removal of an estimated 10,000 tons coal tar contaminated soils. Loadout for offsite disposal. Segregation and relocation of 15,000 cy of overburden topsoils. Backfill and site restoration.

Madison Avenue Gas Holder Remediation, Elmira, NY: Project Manager. Decommissioning and removal of two (2) 60 feet diameter gas holders and associated piping and appurtenances. Excavation of an estimated 8,500 tons coal tar contaminated soils. Load out for offsite disposal. Backfill and site restoration.

Former MGP Site Remediation, Ithaca, NY: Project Manager. Excavation and removal of 5,000 LF of coal tar contaminated duct and piping to depths of 12 feet. Load out for offsite disposal an estimated 12,000 tons contaminated soils and materials. Replace utility and sewer lines. Backfill and site restoration.

Deerland Generating Station, Deerland, NY: Project Manager. Decontamination of 5,000 SF plant structure. Hydro-blast complete interior including trenches, sumps, pits and piping. Collect all water for treatment. Demolish the building to grade level and ship debris offsite for disposal.

Court Street Gas Holder Remediation, Binghamton, NY: Project Manager. Cleaning and removal of 750 LF of 66-inch diameter storm and sewer lines containing DNAPL contaminated sediments. Dewater and solidify sediment. Reline 500 LF of sewer and manhole chambers with a custom PVC liner. Decommission a 90-foot diameter gasholder and foundation. Excavation of contaminated coal tar soils for offsite disposal (estimated at 10,000 cy). Backfill and restore site.

Former MGP Site Remediation, Geneva, NY: Project Manager. Excavation and removal of 8,000 tons coal tar and DNAPL contaminated soils. Load out for offsite disposal. Backfill and site restoration.

NRG Energy Huntley Station, Tonawanda, NY and Dunkirk Station, Dunkirk, NY: Project Manager. Mr. Rose has provided direct field project management for both locations. Services include all aspects of industrial cleaning, decontamination, vacuuming, power washing, basin and pond cleaning, dredging, excavations, landfill maintenance and transportation of wastes.

Industrial Services, Niagara Falls, NY: Project Manager for maintenance and decontamination of plant chemical processes. The project involved coordination of vacuum trucks and high-pressure water blasting; transportation and disposal of hazardous products; and dismantling.

Gill Creek Remediation, Niagara Falls, NY: Superintendent for creek remediation involving the construction of a steel-sheeting and earth-fill cofferdam; installation of a bypass pumping system; treating contaminated water on site; and excavation of creek sediments and loading for disposal off site.

Confidential Client, Niagara Falls, NY: Project Manager for the decommissioning and process demolition of a mercury cell building.

Sealand Restoration Superfund Site, Lisbon, NY: Superintendent for the remediation of a former commercial hazardous waste landfill. The project involved excavation and transport of over 7,200 tons of contaminated soils to an offsite incineration facility; sampling, staging, and disposal of 1,500 buried drums; installation of a wastewater collection and treatment system; and overall site restoration.

Plasticizer Tank Farm Remediation, Avon Lake, OH: Superintendent for the excavation, transport, and disposal of contaminated soils; cleaning and dismantling of six above-ground storage tanks; and removal and restoration of a railroad spur, with subsequent restoration.

James Pazderski

Corporate Project Manager

Years of Experience:
22

Education:

- BA, Business, Management and Economics Concentration – Construction Management, Empire State College, 1999

Certifications:

- U.S. Army Corps of Engineers CQM Training
- DuPont – Safety Skills Audit
- American Heart Association – CPR / First Aid Training
- OSHA 30 Hour Construction Outreach Training
- OSHA 40 Hour HAZWOPER
- OSHA 8 Hour Supervisory and HAZWOPER Refresher

Role and Responsibility:

- Responsible for delivery of completed project in compliance with plans and specifications.
- Attends all scheduled progress meetings.
- Meets daily with the project team to review planned activities.
- Develops and maintains all project deliverables, submittals, schedule and reports.
- Develops and manages cost control and accounting, procurement and expediting material delivery, inspection, and quality control functions.

Experience and Expertise:

- Remediation skills developed out of heavy, highway and civil construction project experience.
- Understands CERCLA, RCRA, TSCA and additional regulatory requirements.
- Firm Fixed Price, Cost Reimbursable, Fixed Fee, Guaranteed Maximum Price Contract Experience
- Union and Open Shop Labor

Past Project Experience

Former GM Facility Sediment Remediation, Sleepy Hollow, New York: Corporate Project Manager for a project requiring the water based mechanical dredging, solidification and on site disposal of approximately 4500 cubic yards of metals contaminated sediment from a 250' x 100' area along the eastern shoreline of the Hudson River. Work which was performed from October 15, 2012 – February 1, 2013, included the construction of interim material handling and staging pads; the installation and removal of approximately 250 linear feet of 35' long steel sheeting; the installation and removal of approximately (20) – 55' long round piles and 650 linear feet of turbidity curtain and oil boom around the work area; the setup of a water handling system to manage decant water from the dredged sediment; the excavation of sediment using a water based tub crane with a 9 cubic yard GPS equipped environmental clamshell bucket; the off-loading of sediment with a 200 ton land based crawler crane; the transport of excavated materials between the pads; the blending of Portland cement into the sediment to enable it to pass paint filter test prior to final placement and disposal on site; and the placement of approximately 2300 cubic yards of backfill to establish an ample cover over the dredge foot print.

Former BICC Cables Site DCU 2C/2B Sediment Remediation, Yonkers, New York: Corporate Project Manager for a multiphase project completed in November of 2012 requiring the mechanical dredging of 1000 cuyds of TSCA contaminated sediment with a 200 ton land based crawler crane and GPS equipped environmental clamshell bucket, and the performance of a pilot study to evaluate various means and methods to remove TSCA contaminated, debris laden sediment, from beneath an existing structure. The various removal methods performed included hydraulic dredging; mechanical dredging; and diver assisted debris removal. As there was less than 8' of overhead clearance at low tide, and less than 4' of overhead clearance at high tide. The second phase of work required Sevenson to fabricate a custom low profile barge to accommodate a PC50 excavator to minimize the overhead clearance requirements, and also to modify an H&H hydraulic dredge by removing the cab and the engine from the unit and mounting them in a second custom fabricated barge that was situated behind the dredge. Limited access, low overhead clearance, tidal conditions, strong currents and frequent swells made this a very difficult and challenging project.

Former BICC Cables Site Phase 2, Yonkers, NY: Project Manager and Lead Estimator. This project was completed in July of 2012 and required the installation of +/- 325 lf x 55 ft of AZ19-700 steel sheet piles. Installation of +/- 242 lf x 10 ft – 15 ft of AZ19-700 steel sheets for dead men on the inland side of the main bulkhead sheets. Installation

Experience and Expertise:

- Dredging, Dewatering and Filtrate Treatment
- Excavation and Earthwork
- Steel Sheeting Systems
- Recovery and Treatment Systems
- Solidification/Stabilization
- Constructability Reviews

of +/- 560 lf of galvanized walers. Demolition of the top 2 ft of the existing vinyl bulkhead and removal of obstructions as required to install the new tie back system. Excavation and stockpiling of overburden to allow for the installation of the new tie backs. Installation of +/- 4,000 lf of galvanized #10 threaded rod. Placement and compaction of the previously excavated overburden. Restoration of disturbed areas.

Former Settlement Basin Remediation, Henderson, NV: Corporate Project Manager for a fast tracked project in February of 2012 which required the remediation of a 60 ft x 40 ft x 20 ft deep concrete settling basin located within an active plant. The scope of work included the excavation and stockpiling of approximately 800 cyds of material for characterization and offsite T+D. An additional 200 cyds of high hazard material remaining at the bottom of the vault was excavated and direct loaded into lined, sealed roll-off containers. To facilitate the removal of the highly volatile material Sevenson implemented controlled excavation techniques and utilized odor suppressing foam to control VOCs. When the roll-offs were full, covers were secured and transported offsite to an incineration facility. High pressure water and scrapers were used to decontaminate the concrete basin prior to installation of clean backfill. Sevenson also demolished the top 4 ft of concrete around the perimeter of the basin, profile sampled, and disposed of this material.

CE Windsor Site, Windsor, CT: Corporate Project Manager and Lead Estimator for a multi-phase LLRW material excavation and handling project in Windsor, Connecticut from May of 2011 – November 2011. This FUSRAP project included the installation of water filled bladder dams and 24" gravity bypass piping systems to allow for the dewatering and excavation of several hundred cubic yards of low level radioactive waste from isolated areas within and around a small stream that feeds into the Farmington River; the removal of a contaminated debris pile; the removal of a few hundred feet of potentially contaminated industrial waste lines; the collection, filtration and discharge of approximately 800,000 gallons of impacted, construction water; and restoration of the wet lands and uplands areas as required upon the completion of this phase of work. The second phase of work required the clearing and grubbing of approximately 4 acres of land adjacent to a wetland; the excavation, transport, screening, segregation, and replacement of approximately 40,000 cubic yards of material back into the original excavation area; asbestos and debris removal from within the excavation area; strategic excavation and off site disposal of VOC contaminated soils; and site restoration.

Former BICC Cables Site, Yonkers, NY: Corporate Project Manager for a mechanical dredging, material stabilization, off site disposal and capping project on the Hudson River in Yonkers, New York from March 2010 – November of 2010. The project included both land based and water based mechanical dredging of approximately 23,000 cy of PCB contaminated material; stabilization and off site transportation and disposal of both TSCA and Non TSCA PCB material via both rail and truck; the installation of 260 lf x 40 ft AZ19-700 steel sheeting; the installation and operation of a 500 gpm

waste water treatment system; the performance of diver assisted hydraulic dredging in areas underneath existing structures; demolition of concrete slabs; and restoration of disturbed areas. Project responsibilities included oversight and management of project operations; performance of field inspections; interfacing with the project engineer and client as to address project issues; schedule and cost monitoring; and provide corporate support for the field management team to ensure the safe and timely completion of the project.

Metal Bank Project, Philadelphia, PA: Corporate Project Manager for a fast tracked mechanical dredging, material placement, and capping operation on the Delaware River from July 2009 – January 2010. Work on the project included the installation of a 700 lf king pile turbidity wall; mechanical dredging and dewatering of more than 4,000 cy of sediment from both tidal and deep water areas; sampling, stabilization, and on site placement of <50 PCB material; the off site transportation and disposal of >50 PCB material as required; the installation of geotextile fabric and armor stone over the excavated areas; the installation of more than 60,000 sf of sub-aqueous marine mattresses; the installation and operation of a 100 gpm temporary waste water treatment system; the installation of more than 550 lf of 15 ft BGS leachate collection trench and associated piping; the installation of 46 tie backs between an existing sheet pile wall and previously installed dead men; the import and placement of more than 30,000 cy of organic cover soil material; and site restoration. Project responsibilities included oversight and management of all project operations; the performance of routine field inspections throughout the duration of the project; interfacing with the project engineer and client as necessary to address project related issues; project schedule and cost monitoring; and to provide corporate support as necessary for the field management team to help ensure the safe and timely completion of project operations.

Flood Plain Restoration, Bedford, IN: Corporate Project Manager and Lead Estimator for the restoration of a 50 acre flood plain from May of 2008 - Present. Work on the project included: dewatering, excavation, and grading of approximately 30,000 cy of existing soils to prepare the site subgrade; the diversion of an active creek channel to facilitate the installation of nearly 1 mile of new creek bed, the import and placement of approximately 75,000 cy of common fill; 70,000 cy of organic clay; 25,000 cy of various creek substrates; and 35,000 cy of topsoil; installation of various wet lands seed mixes and 15,000 bare root seedlings. Project responsibilities included oversight and management of all project operations; procurement of equipment and materials; interfacing with the client and engineer to address project related issues; coordination of subcontractors; project cost tracking and invoicing; and to provide operations support as necessary for the site superintendent.

Removal Action, Bedford, IN: Corporate Project Manager and Lead Estimator for a strategic excavation of both TSCA and non TSCA PCB soils at depths >20 ft from July to November of 2008. Work on the project included the installation of more than 500 linear feet of 24 inch and 36 inch bypass sewer line and 5 manholes at depths of up to 25 ft; the installation of approximately 3000 lf of 8 inch HDPE effluent line between the excavation and the on site WWTP to control contaminated

excavation water; the strategic excavation of 6,500 cy of non TSCA material; the excavation of approximately 1, 000 cy of TSCA soils; the transport and placement of TSCA soils in an on site vault and off site as required in a licensed disposal facility; and backfill and restoration of the work area as appropriate. Project responsibilities included oversight and management of all project operations; procurement of equipment and materials; interfacing with the client and engineer to address project issues; coordination of subcontractors; project cost tracking and invoicing; and to provide operations support as necessary for the site superintendent.

Brownfield Remediation, Sleepy Hollow, NY: Corporate Project Manager. Project required the set up and operation of a 100 gpm temporary waste water treatment system; concrete demolition and removal of more than an acre of concrete slabs; the installation of 525 lf of 55 ft long AZ26 sheet piling using a 125 ton truck crane and APE vibratory impact hammer; the excavation and chemical fixation of 11,000 tons of metals contaminated soils using Sevenson's patented MAECTITE® treatment process; the excavation of approximately 11,000 tons of petroleum contaminated soils from below the ground water table; and the loading, transport and disposal of 20,000+ tons of non hazardous soils via rail car to a licensed disposal facility. Project responsibilities included oversight and management of all project operations; procurement of equipment and materials; interfacing with the client, engineer, the Mayor of Sleepy Hollow, and the local home owner association president to address project issues as necessary; coordination of subcontractors; project cost tracking and invoicing; and to provide operations support as necessary for the site superintendent(s).

Soils and Sediment Removal, Bedford, IN: Project Manager and Lead Estimator for a residential soils and sediment remediation project from July 2003 to present. Work on the project required clearing and grubbing; installation of water by pass systems; excavation, transport and disposal of an estimated 167,000 tons of PCB contaminated soils and sediment; and restoration of the creek beds and flood plain areas. A second phase of this project required the construction of a 2.5 acre multi layer TSCA vault and the excavation and handling of an estimated 200,000 cy of material. Upon completion of the excavation operations, a multi-layer landfill cap is scheduled to be installed. Job duties included oversight and management of project operations; procurement of equipment and materials; interfacing with the client, engineer and homeowners to address project issues as necessary, coordination of subcontractors; project cost tracking; and to provide operations support as necessary for the site superintendent.

Industrial Landfill Closure, Defiance, OH: Project Manager and Lead Estimator for a landfill capping and closure project from April 2002 - January 2003. Work on the project required clearing and grubbing; excavation, relocation and consolidation of approximately 100,000 cy of material; installation of an 1,800 lf leachate collection system with associated manholes and pump stations; decommissioning and reinstallation of groundwater monitoring wells; decommissioning, removal and reinstallation of 13 KV overhead power lines; treatment and discharge of more than 2,000,000 gallons of contaminated water;

installation and removal of temporary steel sheeting; and the installation of a 10 acre, multi layer RCRA cap. Job duties included oversight and management of project operations; procurement of equipment and materials; interfacing with the client and engineer at weekly progress meetings; coordination of subcontractors; and project cost tracking.

Whitmoyer Laboratories Superfund Site, Myerstown, PA: Project Engineer for Operable Unit 3 - Phase I and II from October 1999 - November 2001: Phase I of the project involved the strategic excavation, loading and off-site transportation of more than 20,000 cubic yards of arsenic contaminated soil and sediment and the backfill and restoration of the excavation areas. Phase II of the project involved building, slab, and foundation demolition, material relocation and grading, and the installation of a two foot thick soil cover over a twenty two acre site. Job duties included: equipment and material requisitions; completion of hazardous waste manifests; layout of ground elevations; interfacing with clients and regulators at weekly progress meetings; record keeping and inventory of hazardous waste shipments; project cost management and payroll; and operations support as necessary for the Site Superintendent.

Newport Superfund Site, New Castle, DE: Project Engineer for multiple phases of work from March 1999 - September 1999. The river remediation phase of the project involved the installation of more than 2,000 lf of steel sheeting and the mechanical dredging and onsite disposal of more than 10,000 cy of metals contaminated sediments from three different locations along the banks of the Christina River. The vertical barrier phase of the project involved the installation of approximately 1,700 lf of low permeability steel sheeting. Job duties included: conducting weekly progress meetings with client and regulatory agency representatives; daily project cost accounting; weekly payroll and batch reporting; equipment and material requisitions; daily progress reports; coordination of flight schedules and living arrangements for the crew; project safety audits; and operations support as required for the site superintendent.

Whitmoyer Laboratories Superfund Site, Myerstown, PA: Project Engineer for Operable Unit 5 - Consolidated Lagoon Excavation from September 1998 - January 1999. The project involved the strategic excavation and loading of 20,000 tons of arsenic contaminated sludges and soils. Job duties included: completion of hazardous waste manifests; layout of excavation grids; interfacing with both the client and regulators at weekly progress meetings; recordkeeping and inventory of hazardous waste shipments; project cost management and payroll; and the coordination of flight schedules and living arrangements for the crew.

Whitmoyer Laboratories Superfund Site, Myerstown, PA: Site Health and Safety Officer for the multiple phases of work from May 1994 - June 1998 which included erection of a temporary building structure, facility decontamination, decommissioning and demolition; material excavation and transport, material transferring, repackaging and disposal. Real time and low volume air sampling was performed in and around active work areas as well as at the site perimeter. Levels B, C, and Modified C were the required levels of protection.

Lima OH: Site Health and Safety Officer for landfill cell construction, waste water treatment plant set up, chemical treatment plant installation, material excavation, treatment and staging. Real time and integrated monitoring was conducted in active work areas and around the site perimeter. Modified C and Level C protection was required.

Summit National Superfund Site, Deerfield, OH: Site Health and Safety Officer for the project which included set up of a thermal treatment unit, installation of a leachate collection system with depths up to 40 ft, drum excavation and over packing, material handling. Real time air monitoring was performed in active work areas and around the site perimeter. Confined space monitoring was required daily. Level B, Level C and Modified C were the required levels of protection.

Marathon Battery Site, Cold Spring, NY: Site Health and Safety Officer for excavation, dredging, dewatering, stabilization, transport and disposal of material. Real time monitoring was required in active work areas as well as around the site perimeter. Level C and Modified Level C were the required levels of protection.

Confidential Client, Niagara Falls, NY: Site Health and Safety Officer for the dewatering, excavation and stabilization of creek sediments. Real time air monitoring was required in active work areas and around the site perimeter. Level B, Level C and Modified C were the required levels of protection.

Madison Wire Site, West Seneca, NY: Site Health and Safety Officer for the site clearing, excavation, transport and disposal of contaminated soils. Real time and low volume air sampling were conducted in active work areas and around the site perimeter. Level C and Modified Level C were required levels of protection.

Montclair Radium Site, Montclair, NJ: Site Health and Safety Officer for total and partial demolition of homes, soils excavation, transport and disposal. Real time and low volume air monitoring were performed in active work areas and around the site perimeter. Level C and Modified C were the required levels of protection.

Confidential Client, Massena, NY: Site Health and Safety Officer for landfill capping construction work. Real time particulate readings were conducted around the landfill perimeter. Level D was required level of protection.

Groveland Correctional Facility, Sonea, NY: Site Health and Safety Officer for the containerization, decontamination, sampling and transporting of pesticide/herbicide, low level rad, and other miscellaneous waste. Level C was the required level of protection.

Confidential Client, Niagara Falls, NY: Air Monitoring Supervisor for collection system installation, landfill cell construction and capping, and waste consolidation. Real time and low volume air monitoring was required in and around each active work area. Level B, Level C and Modified C were the required levels of protection.

Years of Experience:
40

Education:

- BS, Civil Engineering, Lehigh University, Bethlehem, PA
- Professional Engineer, Licensed in New York State

Certifications:

- OSHA 40 Hour HAZWOPER Training
- OSHA 8 Hour HAZWOPER Refresher

Role:

- Supervise and oversee all field activities
- Work in conjunction with onsite Project Manager to implement the schedule
- Determine equipment and labor needs.

Experience and Expertise:

- Remediation skills developed over 35 years of remedial construction project experience.
- Understands CERCLA, RCRA, TSCA and additional regulatory requirements.
- Owned and managed his own construction company for over 30 years servicing the NYS Thruway Authority, NYSDOT and a variety of public agencies.
- Firm Fixed Price, Cost Reimbursable, Fixed Fee, Guaranteed Maximum Price Contract Experience
- Union and Open Shop Labor
- Dredging, Dewatering and Filtrate Treatment
- Excavation and Earthwork
- Steel Sheeting Systems
- Recovery and Treatment Systems
- Solidification/Stabilization

Paul Gallo

Project Superintendent

Past Project Experience

Study Area 5 Remedial Action, Jersey City, NJ: Superintendent. Project involves excavation and loading of 52,000 +/- cy of chromium contaminated soil for offsite T+D; backfill; water collection and treatment (200 gpm system); installation of approximately 75,000 sf of permanent sheeting to serve as a hydraulic barrier; installation of 145,000 SF of LLDPE liner for capping of chromium impacted material; installation of deep wells in various locations for dewatering purposes; coordination with New Jersey City University for excavation and loading of areas of concern, asphalt paving and restoration of perimeter fencing; installation of manholes and 8 inch sanitary sewer replacement; and restoration activities including installation of erosion control matting, topsoil and hydraulic seeding.

Removal Action, Bayonne, NJ: Superintendent for the excavation, characterization and offsite disposal of chromium contaminated soils. Installation of 1,500 lf temporary sheet piling as protective shoring system for deep excavation. Collection and pre-treatment of all water encountered during excavation. Installed new 36-inch storm and sewer pipeline. Restored site per restoration plan.

Military Munitions Non-Time Critical Removal Action, Surf City, NJ: Superintendent for the excavation and mechanical screening of 430,000 cubic yards of hydraulically-placed beach fill to remove munitions and explosives of concern. Replacement and grading of all fill materials passing ¾ inch sieve. Restoration of dune crossovers, fencing and dune grass along beach.

Hudson River Phase 1 Processing Facility Construction, Ft. Edwards, NY: Superintendent for the construction, installation, training, startup operations, and shake down of the sediment dewatering facility.

Buffalo Sewer Authority, Buffalo, NY: Supervised the removal and replacement of sludge drying equipment at the Squaw Island Sewage Treatment Plant. Scope of work included demolition of existing units and rigging and installation of replacement units.

Grant Street Bridge Rehabilitation, Buffalo, NY: Supervised the removal and replacement of the Grant Street Bridge over the Scajaquada Expressway. Including demolition of the existing structure, excavation, sheeting and dewatering for the new foundations, and construction of the new superstructure.

Erie County Sewer Authority Plant Expansion, Lackawanna, NY: Supervised the rehabilitation and expansion of the A Street Overflow Retention Facility. Project scope of work included installation of steel sheeting for protective shoring during operation; sheeting; excavation; concrete construction of overflow basin; and installation of pumping equipment and controls.

Years of Experience:
35

Certifications:

- Hazardous Materials Management - US Air Force
- Hazardous Materials Controls - JT Baker
- OSHA 30 Hour Construction Training
- OSHA 40 Hour Training/OSHA 8 Hour Refresher
- First Aid Training/CPR

Role and Responsibility:

- Responsible for implementation of the project-specific worker health and safety plans.
- Responsible for overseeing the medical monitoring of project-specific field employees.
- Performs audits and safety inspections at the sites.
- Oversees the health and safety aspects on assigned project.
- Assists Sevenson's CIH in training all field personnel
- Conducts informational meetings.
- Repairs and maintains field instruments.
- Manages air monitoring and sampling programs.
- Evaluates analytical data.

Experience and Expertise:

- Implemented and enforced site-specific plans on a variety of remedial action projects involving: excavation and earthwork; innovative and traditional steel sheeting systems; sediment remediation; temporary and mobile water treatment systems; sludge solidification and soils stabilization; chemical treatment/heavy metals fixation; slurry wall and trench construction; collection, recovery and treatment systems construction; facilities decontamination and demolition; and low level radiation remediation.

Dana Tipton

Onsite Health and Safety Officer

Past Project Experience

Energy East Corporation, NY: Direct field health and safety management and oversight for both MGP and civil site remediation projects for Energy East. Project locations include Lockport, Deerland, Rochester, Gowanda, Ithaca, Elmira, Brockport, Long Lake, Binghamton, Geneva, Plattsburg, Dansville, Palmyra and Oneonta, NY. Remediation techniques implemented include: MGP soil/holder excavation, characterization, transportation and disposal; waste water treatment design and operation and maintenance; decontamination and demolition; clean and hazardous earthwork; soils /sludges solidification and stabilization; cleaning/removal/replacement of storm insitu and exsitu sanitary sewer lines; and residential property remediation and restorations.

Linde FUSRAP Site, Tonawanda, NY: Health and Safety Officer. Remediation of the Linde site is managed by the US Army Corps of Engineers under FUSRAP and CERCLA. The primary contaminants are Uranium-238, Radium-226, and Thorium-228 in soils. Remediation requires the excavation, loading, transportation and disposal, backfill and site restoration. All soils handling require characterization and a final status survey in accordance with MARSSIM. A detailed health and safety plan is required to protect onsite workers as well as the surrounding community.

Universal Oil Products Non-Time Critical Removal Action, East Rutherford, NJ: Health and Safety Officer. Project required Sevenson to remediate a portion of the streamlands area of the site. Approximately 27,000 cy of contaminated sediment, soil and debris from a previous lagoon was be excavated, dewatered and shipped off site for disposal. A tide gate was installed to control water. The area was dewatered to allow for excavation "in the dry," down to the existing natural clay layer. Fill material added to provide cover and allow vegetation to grow. A 300 gpm wastewater treatment system is set up to treat all water generated from remediation operation.

Emmell's Septic Landfill Superfund Site, Galloway Township, NJ: (USACE) Health and Safety Officer for this cost plus fixed fee contract which was conducted in 2 phases. Phase I required the construction, start up and prove out of a 350 gpm groundwater recovery and treatment system. 50,000 tons of PCB contaminated soils were also excavated, characterized and disposed of offsite. Installation of 7,800 lf of force mains and piping was required as well as the expansion of the extraction well field. Phase 2 is the long term operations and maintenance of the plant as well as expansion of the recharge basin.

Study Area 5 Sediments Remediation, Jersey City, NJ: Health and Safety Officer for the excavation and loading of 52,000 +/- cy of chromium contaminated soil for offsite T+D; backfill; water collection and treatment; installation of approximately 75,000 sf of permanent sheeting to serve as a hydraulic barrier; and sewer replacement and restoration.

Military Munitions Non-Time Critical Removal Action, Surf City, NJ: (USACE) Health and Safety Officer for the excavation and mechanical screening of 430,000 cy of hydraulically-placed beach fill to remove munitions and explosives of concern. Replacement and grading of all fill materials passing ¾ inch sieve. Restoration of dune crossovers, fencing and dune grass along beach.

Starlight Park Former MGP Site, Bronx, NY: Health and Safety Officer for the excavation and T+D of contaminated soils from an inactive MGP site. Project also includes the installation of Sevenson's Low-Permeability SEAL Wall system around the perimeter of site to control groundwater infiltration. A well point system was installed to control groundwater during excavation operations. All groundwater was collected and pumped to an onsite WWTS sized at 250 GPM for treatment. Community relations was an important component to the project as the site is located in a residential area.

Pfohl Brothers Landfill Project, Cheektowaga, NY: Health and Safety Officer for the excavation and consolidation of 540,000 cy of waste at a former landfill site. The project also included the construction of a 10,000 foot perimeter collection system; construction of a 1,000 foot interior collection system; installation of a 40 mil HDPE liner system over a 100 acre area; importing and placement of over 800,000 cy of various fill materials (sand, clay, topsoil); installation and O+M of a wastewater system to treat approximately 25 million gallons of water; extensive site and wetlands restoration.

RCRA Lagoon Closure, Perth Amboy, NJ: Health and Safety Officer for dredging approximately 60,000 cy of oil refinery sludge from two impoundments. Sludge is pumped to treatment area for processing. Treatment includes centrifugation and separation of sludges and waste water treatment. Contaminated underlying soils not meeting closure guidelines will also be removed and placed in stockpiles for treatment or disposal. Level B and C protection.

Bristol Landfill Site, Bristol, PA: Health and Safety Officer for installation of 8,000 lf of slurry wall up to 45' deep; installation of 8,000 lf of bio-polymer collection trench; cap construction for 61 acres for three landfills; construction and restoration of wetlands. Level B and C protection.

Lipari Landfill, Pitman, NJ: (USACE) Site Health and Safety Officer for the excavation, dewatering, preparation, and low-temperature thermal treatment of lake sediments. Comprehensive real-time and integrated air monitoring. Level C protection.

Source Removal Action, Hartland, WI: Site Health and Safety Officer for the excavation, characterization, transportation and disposal of drums. Level B and C protection.

Sinclair Refinery Site, Wellsville, NY: Site Health and Safety Officer for the installation of storm sewer; removal of contaminated sludge; sand blasting and demolishing of oil/water separator, followed by backfilling; regrading of the site; and collection of water and soil samples. Level C and B protection.

Blosenski Landfill Site, Coatsville, PA: Site Health and Safety Officer for the excavation, characterization, transportation and disposal of drums. Level B and C protection.

Gill Creek Site, Niagara Falls, NY: Site Health and Safety Officer for the installation of a cofferdam; remediation of a creek; stabilization of creek sediment; and treatment of creek water. Level C and B protection.

Brewer Road Landfill Site, Waterloo, NY: Site Health and Safety Officer for the installation of soil-bentonite groundwater cutoff wall; installation of leachate collection system and capping of the site. Level C protection.

Facility Decontamination, Troy, NY: Site Health and Safety Officer and Superintendent for the removal of contaminated paint from walls; removal of wooden ceilings and flooring; packaging, transportation and disposal; comprehensive real-time and integrated air monitoring. Level C protection.

RCRA Lagoon Closure, Baton Rouge, LA: Site Health and Safety Officer for lagoon-sludge solidification, including a comprehensive real-time and integrated air monitoring program. Level B protection.

Source Removal Action, Nashville, TN: Site Health and Safety Officer for the excavation of drums and contaminated soil. Level B protection.

Hyde Park Landfill Site, Niagara Falls, NY: Site Health and Safety Officer for the installation of a leachate collection system involving trench shoring. Level A protection.

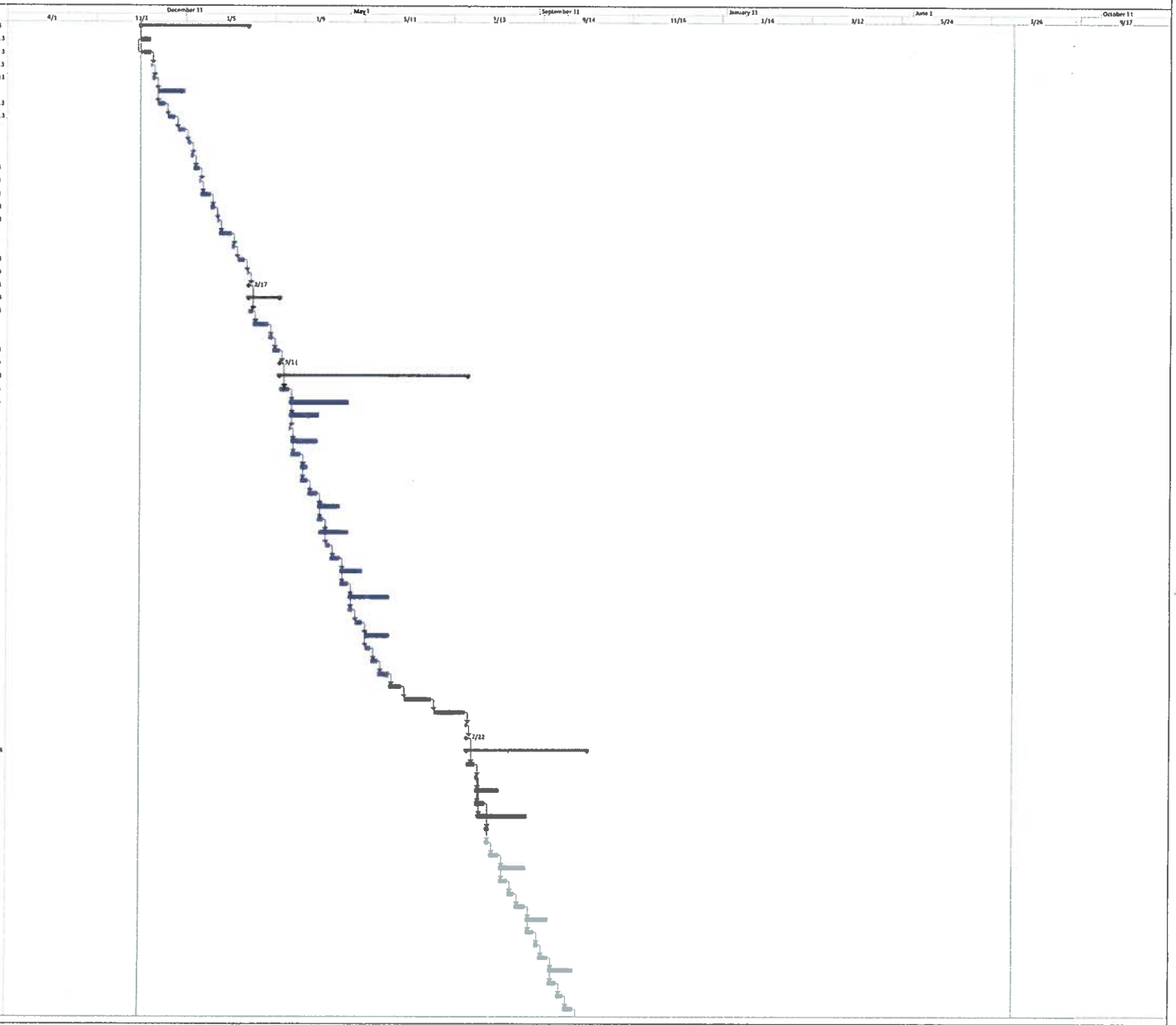
Aladdin Plating Superfund Site, Chinchilla, PA: Site Health and Safety Officer for the excavation of chromium-contaminated soil. Extensive air monitoring.

APPENDIX B

Schedule

NYSEG - Remediation
Former Lockport MGP Site

ID	Task Name	Duration	Start	Finish
1	Phase 1 (Remediation/Distribution)	51 days	12/4/13	2/17/14
2	Mobilization	5 days	12/4/13	12/10/13
3	Install Traffic & Pedestrian Controls as Indicated, Close JaGrange St., and Sidewalks, Provide Drive Thru Route	1 days	12/6/13	12/10/13
4	Transfer load on Circuit 114 to Circuit 113	1 day	12/11/13	12/11/13
5	Remove Pole for Circuit 114 along South Fence Line	2 days	12/12/13	12/13/13
6	Remediation for Cell 5A	11 days	12/16/13	1/1/14
7	Install Sheet Piles, Fabricate & Install Bracing and Struts, Drill & Install Toe Pins into Bedrock	5 days	12/16/13	12/20/13
8	Dewater and Excavate Cell	1 days	12/23/13	12/17/13
9	Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place, Etc.)	4 days	12/30/13	1/3/14
10	Remove Sheeting	1 days	1/6/14	1/7/14
11	Install Portion of Grout Curtain Wall Along Transit Street	1 days	1/8/14	1/9/14
12	Install Ground Grid - Cell 5A	1 days	1/10/14	1/13/14
13	Installation Bedrock Extraction Well BR-101	1 day	1/14/14	1/14/14
14	Install Phase 1A Sheet Pile Subsurface Barrier Wall	5 days	1/15/14	1/21/14
15	Replace Poles for Circuit 1A and Restore Load to Circuit 114	3 days	1/11/14	1/24/14
16	Transfer Load From Circuit 113 to Circuit 114	1 day	1/22/14	1/22/14
17	Remove Existing Building/Install Fill Buttress	2 days	1/16/14	2/5/14
18	Install Ground Grid - Buttress Slope	1 days	1/6/14	2/7/14
19	Install Phase 1B Sheet Pile Subsurface Barrier Wall	5 days	1/10/14	2/14/14
20	Restore 113 Circuit	1 day	2/17/14	2/17/14
21	Phase 1 Construction Complete	0 days	2/17/14	2/17/14
22	Phase 2 (Remediation)	34 days	2/18/14	3/31/14
23	Mobilization	3 days	1/18/14	1/10/14
24	Excavate Phase 2 Portion Including Removal of the Emitting Holder Slab & Additional Excavation for Control House	7 days	1/21/14	3/1/14
25	Install Compacted Backfill (Including Embankment in Place, Subbase, and Crushed Stone)	1 days	3/4/14	3/6/14
26	Install Ground Grid - Former Holder Slab Area/New Entrance Area	3 days	3/7/14	3/11/14
27	Phase 2 Construction Complete	0 days	1/11/14	3/11/14
28	Phase 3 (Remediation/Distribution/Substation)	93 days	3/13/14	7/22/14
29	Mobilization	5 days	3/12/14	3/18/14
30	Install Control House Foundation/Conduit and Grounding	30 days	3/19/14	4/29/14
31	Replace Former Breaker for Circuit 415 w/ New Breaker for Circuit 411	15 days	1/19/14	4/8/14
32	Transfer Load from Circuit 416 to Circuit 413 and from 414 to 418	1 day	3/19/14	3/19/14
33	Remediation Cell 3A	13 days	3/20/14	4/7/14
34	Cell 3A-Install Sheet Piles, Fabricate and Install 2 Rows of Bracing & Corner Struts	5 days	1/20/14	3/26/14
35	Cell 3A-Dewater and Excavate Cell	3 days	3/27/14	3/31/14
36	Install Retaining Wall Micro-Piles Between MH-64 and MH-65	3 days	3/27/14	3/31/14
37	Cell 3A-Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place Etc.)	5 days	4/1/14	4/7/14
38	Remediation Cell 3B	11 days	4/8/14	4/21/14
39	Cell 3B-Install Sheet Piles, Fabricate and Install 2 Rows of Bracing & Corner Struts	4 days	4/8/14	4/11/14
40	Pull Cablet and Terminate	15 days	4/9/14	4/29/14
41	Cell 1B-Dewater and Excavate Cell	3 days	4/14/14	4/16/14
42	Cell 1B-Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place Etc.)	5 days	4/17/14	4/23/14
43	Remediation Cell 3C	11 days	4/14/14	5/9/14
44	Cell 3C-Install Sheet Piles, Fabricate and Install 1 Rows of Bracing & Corner Strutt	4 days	4/24/14	4/29/14
45	Install Control House and Associated Components	20 days	4/30/14	5/18/14
46	Cell 3C-Dewater and Excavate Cell	1 days	4/30/14	5/1/14
47	Cell 1C-Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place Etc.)	5 days	5/5/14	5/9/14
48	Remediation Cell 3D	11 days	5/12/14	5/18/14
49	Cell 3D-Install Sheet Piles, Fabricate and Install 2 Rows of Bracing & Corner Struts	4 days	5/12/14	5/15/14
50	Cell 1D-Dewater and Excavate Cell	1 days	5/16/14	5/20/14
51	Cell 3D-Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place Etc.)	5 days	5/11/14	5/24/14
52	Remove Sheeting	7 days	5/29/14	6/6/14
53	Replace Former 12k V Breaker w/New Breaker for Bank 5 Townside Bank Breaker	15 days	6/9/14	6/17/14
54	Transfer Load from Old Control Houses to New Control Houses	15 days	6/30/14	7/21/14
55	Restore Circuit 414 and 416/Transfer Load	1 day	7/12/14	7/11/14
56	Phase 3 Construction Complete	0 days	7/21/14	7/12/14
57	Phase 4 (Remediation/Distribution/Substation)	80 days	7/23/14	10/15/14
58	Mobilization	4 days	7/23/14	7/28/14
59	De-Energize Bank #5	1 day	7/19/14	7/19/14
60	Remediation Cell 4A	13 days	7/29/14	8/14/14
61	Cell 4A-Install Sheet Piles, Fabricate and Install 2 Row of Bracing & Corner Struts	5 days	1/29/14	8/4/14
62	Remove Existing Control Houses, Breakers, and Switches	25 days	7/30/14	9/3/14
63	Cell 4A-Dewater and Excavate Cell	1 days	8/5/14	8/7/14
64	Install Retaining Wall Micro-Piles Between MH-65 and End of Wall	3 days	8/5/14	8/7/14
65	Cell 4A-Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place Etc.)	5 days	8/8/14	8/14/14
66	Remediation Cell 4B	12 days	8/15/14	9/2/14
67	Cell 4B-Install Sheet Piles, Fabricate and Install 1 Row of Bracing & Corner Struts	4 days	8/15/14	8/20/14
68	Cell 4B-Dewater and Excavate Cell	1 days	8/21/14	8/25/14
69	Cell 4B-Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place Etc.)	5 days	8/16/14	9/2/14
70	Remediation Cell 4C	11 days	9/3/14	9/18/14
71	Cell 4C-Install Sheet Piles, Fabricate and Install 2 Row of Bracing & Corner Struts	4 days	9/3/14	9/8/14
72	Cell 4C-Dewater and Excavate Cell	1 days	9/9/14	9/11/14
73	Cell 4C-Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place Etc.)	5 days	9/12/14	9/18/14
74	Remediation Cell 4D	12 days	9/19/14	10/6/14
75	Cell 4D-Install Sheet Piles, Fabricate and Install 1 Row of Bracing & Corner Struts	4 days	9/19/14	9/24/14
76	Cell 4D-Dewater and Excavate Cell	1 days	9/25/14	9/19/14
77	Cell 4D-Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place Etc.)	5 days	9/30/14	10/6/14

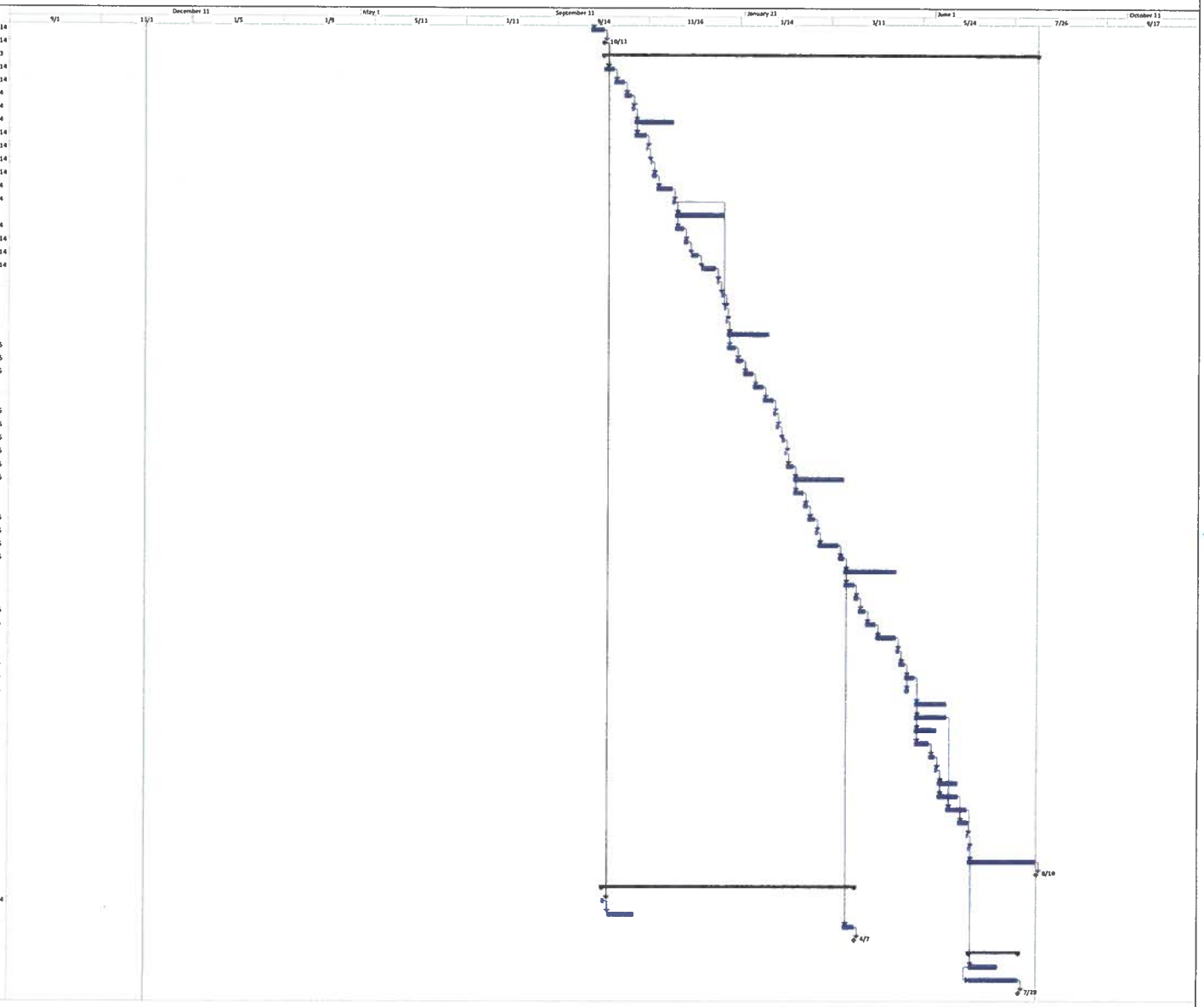


Project: NYSEG Lockport Remedia
Date: 7/1/13

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Deadline | Progress

NYSEG - Remediation
Former Lockport MGP Site

ID	Task Name	Duration	Start	Finish
74	Remove Sheeting	7 days	10/7/14	10/15/14
79	Phase 4 Construction Complete	0 days	10/15/14	10/15/14
80	Phase 5 (Remediation/Transmission/Substation)	207 days	10/16/14	8/10/15
81	Transfer loads from411 to 414 & open 413 & Cut St MH 66	5 days	10/16/14	10/22/14
82	De-energize 414 Cable (Asbestos) Open, Ground & Cut in MH 66	5 days	10/13/14	10/29/14
83	Mobilization	3 days	10/30/14	11/3/14
84	De-energize South 35kV line (506 CKT)	1 days	11/4/14	11/5/14
85	Remediation of Cell 5B	17 days	11/6/14	11/2/14
86	Install Cell 5B Sheet Piles, Fabricate and Install Bracing & Struts, Drill and Install Toe Pins into Bedrock	6 days	11/6/14	11/13/14
87	Expose and Locate Existing Oil Collection System for Installation	1 day	11/14/14	11/14/14
88	Remove and Store Existing Oil Containment System, Relocate Discharge to Current Excavation	1 day	11/17/14	11/17/14
89	Dewater and Excavate Cell	3 days	11/18/14	11/20/14
90	Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place, Geotextile, Etc.)	5 days	11/22/14	17/1/14
91	Install Ground Grid Cell 5B	1 days	12/2/14	17/7/14
91	Remediation of Cell 5C	11 days	12/4/14	1/6/15
93	Install Cell 5C Sheet Piles, Fabricate and Install Bracing & Struts, Drill and Install Toe Pins into Bedrock	4 days	12/4/14	11/9/14
94	Dewater and Excavate Cell	3 days	12/10/14	12/12/14
95	Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place, Geotextile, Etc.)	5 days	12/15/14	12/19/14
96	Install, Core and Strip New Foundations for 15kVA Switch Stands 1 & 1 and 15kVA Vacuum Breaker	6 days	12/12/14	11/31/14
97	Backfill Foundations for 15kVA Switch Stands 1 & 1 and 15kVA Vacuum Breaker	1 day	1/2/15	1/2/15
98	Install Ground Grid Cell 5C	1 days	1/5/15	1/6/15
99	Transfer Load from 108 CKT to Mill 131	1 day	1/7/15	1/7/15
100	De-energize 108 Cable & Cut at MH 66 & MH 65	1 day	1/8/15	1/8/15
101	Remediation Cell 5D	11 days	1/9/15	2/6/15
102	Install Cell 5D Sheet Piles, Fabricate and Install Bracing & Struts, Drill and Install Toe Pins into Bedrock	4 days	1/9/15	2/14/15
103	Dewater and Excavate Cell	3 days	1/15/15	2/19/15
104	Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place, Geotextile, Etc.)	5 days	1/20/15	2/16/15
105	Remove Sheeting	5 days	1/27/15	2/7/15
106	Install Portion of Grout Curtain Wall along Transit Street	5 days	2/3/15	2/9/15
107	Install Bedrock Extraction Wells BR-102, BR-103	2 days	1/10/15	2/11/15
108	Install Ground Grid Cell 5D	1 days	1/17/15	2/11/15
109	Energize South 15kV Line (506 CKT), De-energize North 15kV Line 1505 CKT)	2 days	1/16/15	2/17/15
110	Drive H Piles for Temporary Guy Wire Anchors	1 day	2/18/15	2/18/15
111	Move Guy Wires for the 2 - 34.5kV Transmission Poles to H Piles	1 days	1/19/15	2/13/15
112	Remediation Cell 5E	15 days	1/14/15	3/30/15
111	Install Cell 5E Sheet Piles, Fabricate and Install Bracing & Struts, Drill and Install Toe Pins into Bedrock	5 days	1/24/15	3/7/15
114	Dewater and Excavate Cell	3 days	3/3/15	3/5/15
115	Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place, Geotextile, Etc.)	3 days	3/6/15	3/10/15
116	Install Ground Grid Cell 5E	1 days	1/12/15	3/12/15
117	Install Cell 5E Portion of Retaining Wall Footing, Retaining Wall, Concrete Cure (7 Day/ Backfill)	10 days	3/13/15	3/16/15
118	Backfill New Retaining Wall	1 days	3/17/15	3/30/15
119	Remediation Cell 5F	14 days	3/31/15	5/5/15
120	Install Cell 5F Sheet Piles, Fabricate and Install Bracing & Struts, Drill and Install Toe Pins into Bedrock	5 days	1/31/15	4/8/15
121	Dewater and Excavate Cell	1 days	4/7/15	4/9/15
111	Install Compacted Backfill and Collection Trench System (Including Low Perm Clay, Embankment in Place, Geotextile, Etc.)	3 days	4/10/15	4/14/15
123	Remove Sheeting	5 days	4/15/15	4/11/15
114	Install Cell 5E Portion of Retaining Wall Footing, Retaining Wall, Concrete Cure (7 Day/ Backfill)	10 days	4/13/15	5/5/15
125	Backfill Retaining Wall	1 days	5/6/15	5/7/15
126	Install Ground Grid 5F	1 days	5/8/25	5/11/15
117	Install portion of Grout Curtain Wall Along Transit Street	5 days	5/12/15	5/18/15
114	Install Bedrock Extraction Wells BR-104, BR-105, BR-106	1 days	5/12/15	5/14/15
129	Install Conduits from MH 67 to MH 65	15 days	5/19/15	6/9/15
130	Re-Install Conduit 108 by Installing Cable Directly from MH 67 to MH 65	15 days	5/19/15	6/9/15
111	Install Remaining Conduit for Power Cables from Bank #5 to Lower Side of Breaker	10 days	5/19/15	6/7/15
132	Fence Installation	7 days	5/19/15	5/28/15
133	Install New Guy Wire Anchors and Cables for Northern 15kVA Feed Pole, Put Northern 34.5kVA Feed Back in Service	1 days	5/29/15	6/1/15
134	Energize North 35kV line (505CKT)	1 days	6/2/15	6/1/15
135	Re-install Oil Containment System	10 days	6/4/15	6/17/15
136	Install New Structure on low Side of Bank #5 for Underground Cable Termination	10 days	6/4/15	6/17/15
111	Re-Install CKT 413 By first Cable from MH 47 to MH 64 to Sub, Remove Old Cables	10 days	6/10/15	6/11/15
138	Install and Terminate Power Cable for low Side Bank #5	5 days	6/18/15	6/24/15
139	Transfer Load Back onto Circuit 108 & onto Circuit 413	1 day	6/14/15	6/14/15
140	Energize Bank #5	1 day	6/15/15	6/15/15
141	414 Circuit - Remove 6000' of Lead Cable	33 days	6/25/15	8/10/15
142	Phase 5 Construction Complete	0 days	8/10/15	8/10/15
141	Phase 6 (Remediation)	119 days	10/18/14	4/7/15
144	Mobilize	1 days	10/16/14	10/17/14
145	Install Grout Curtain Wall along LaGrange Street	14 days	10/20/14	11/6/14
146	Install Bedrock Extraction Wells BR-107 thru BR-111	4 days	3/31/15	4/7/15
141	Phase 6 Construction Complete	0 days	4/7/15	4/7/15
148	Phase 7 (Remediation)	84 days	6/26/15	7/29/15
149	Install Grout Curtain Along Canal	14 days	6/26/15	7/15/15
150	Restoration of Site/LaGrange Street	24 days	6/26/15	1/29/15
151	Phase 7 Construction Complete	0 days	7/19/15	7/29/15

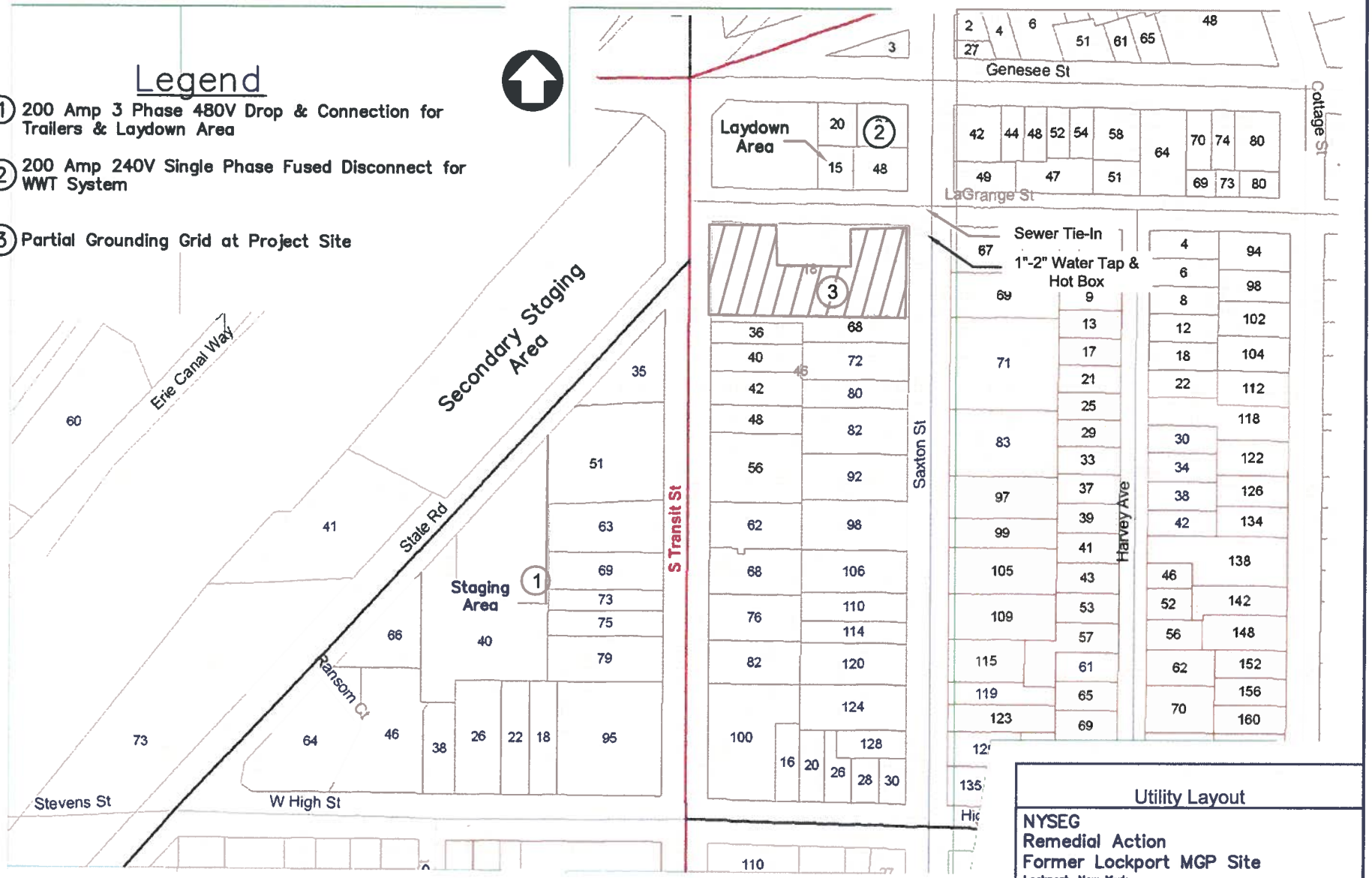


Project: NYSEG Lockport Remedia
Date: 3/1/13

Task | Milestone | Project Summary | External Milestone | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | Deadline
Split | Summary | External Tasks | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | Progress

APPENDIX C

Utility Service Map



Utility Layout

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

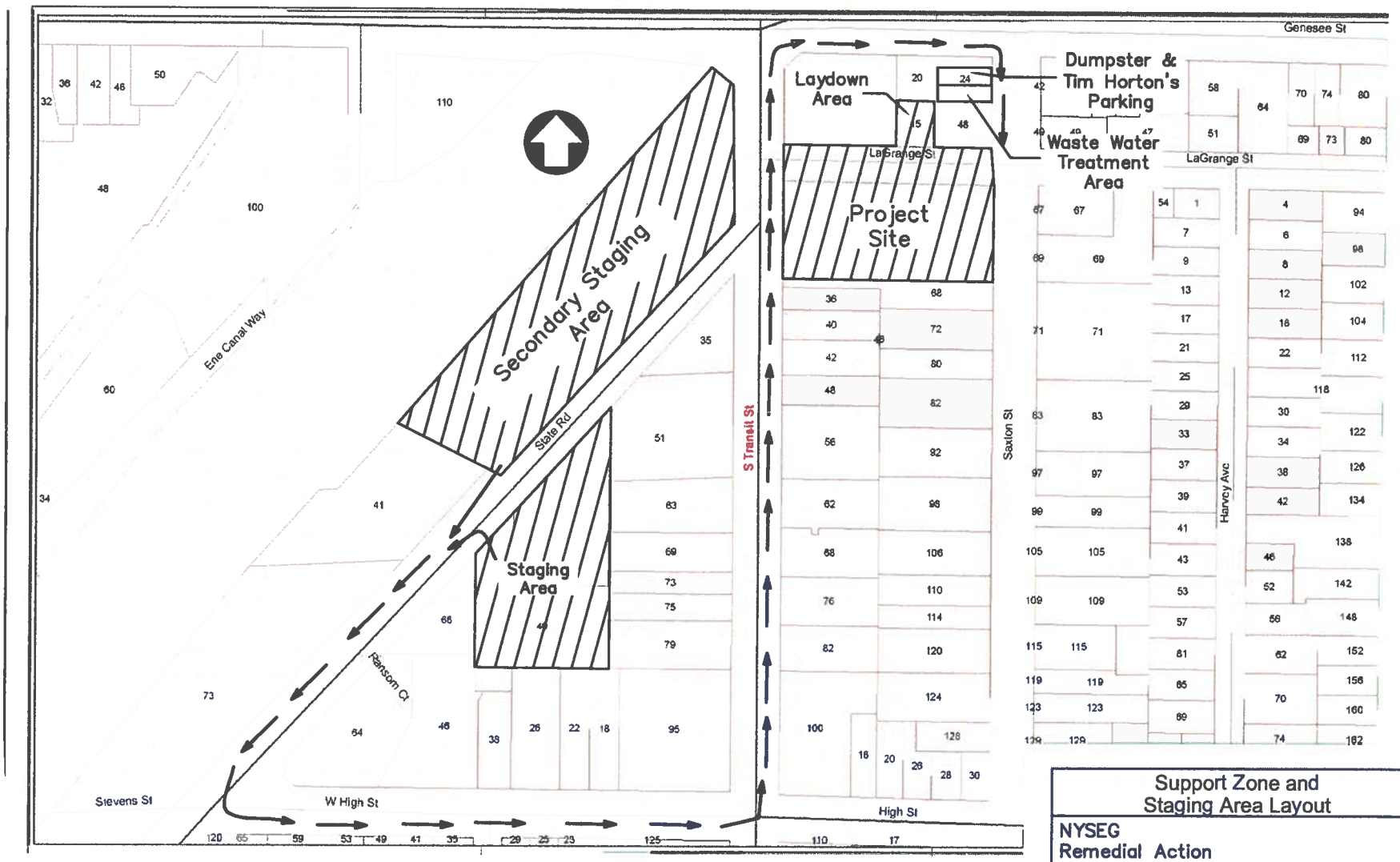
SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 11

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pszderald
CAD FILE:	Utility Layout 11
SCALE:	As Shown

APPENDIX D

Offsite Staging Area Location Map



Legend

Travel Route

200 0 200

SCALE IN FEET

Support Zone and Staging Area Layout

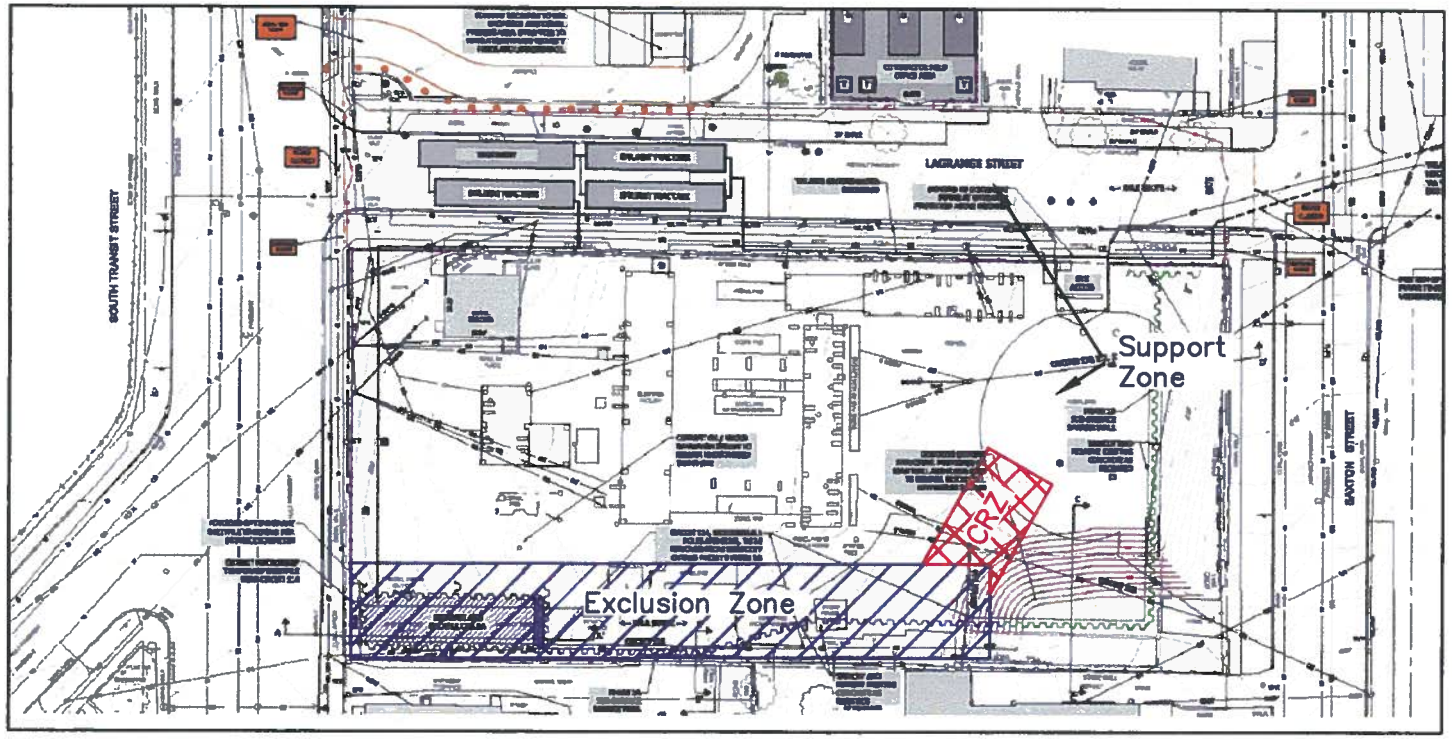
NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 2		
	DATE:	6/10/13
	DRAWN BY:	C. Bigelow
	CHECKED BY:	J. Pazdernik
	CAD FILE:	Support-Staging
	SCALE:	As Shown

APPENDIX E

Site Work Zones



Legend

Exclusion Zone

Contamination Reduction Zone

60 0 60

SCALE IN FEET

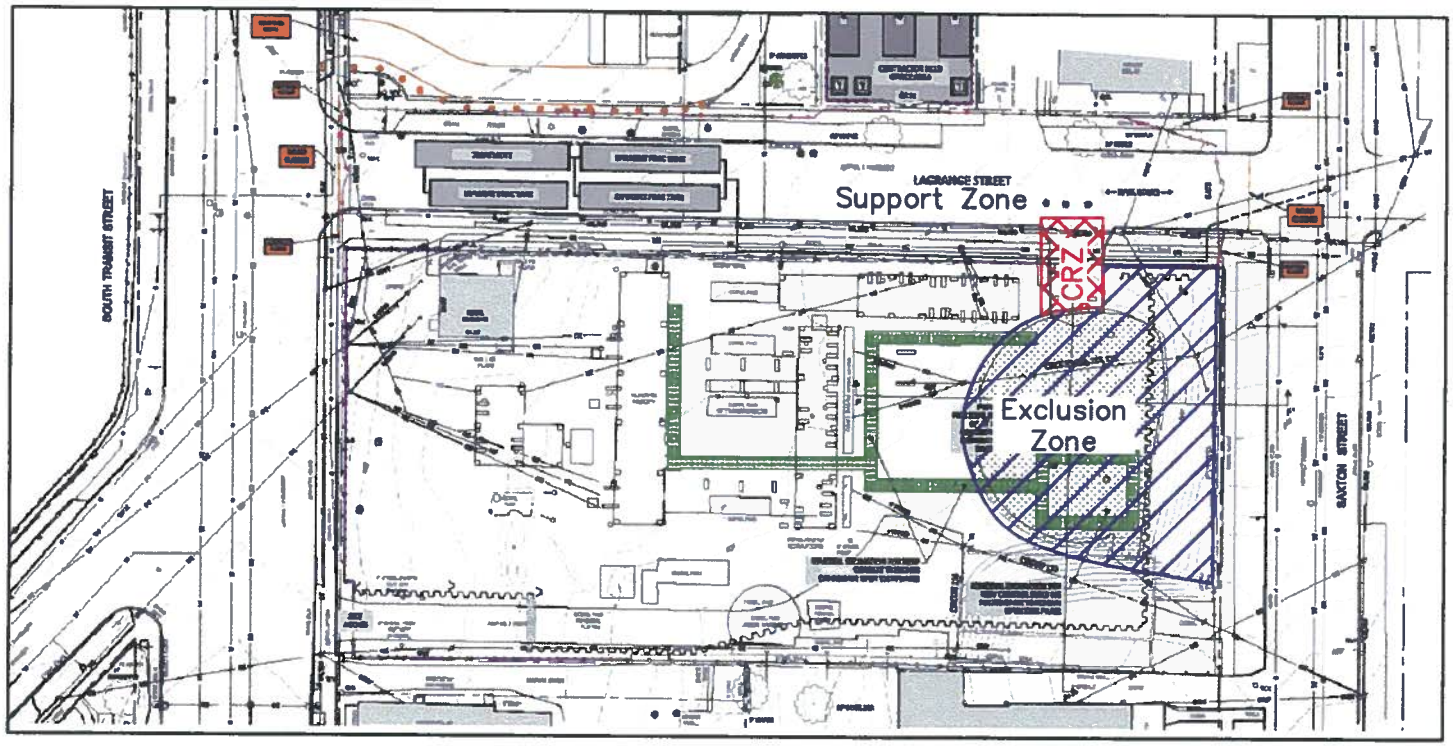
Phase I
Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 5

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazdersld
CAD FILE:	Phase 1 Work
SCALE:	As Shown



Legend

60 0 60

SCALE IN FEET

Exclusion Zone

Contamination Reduction Zone

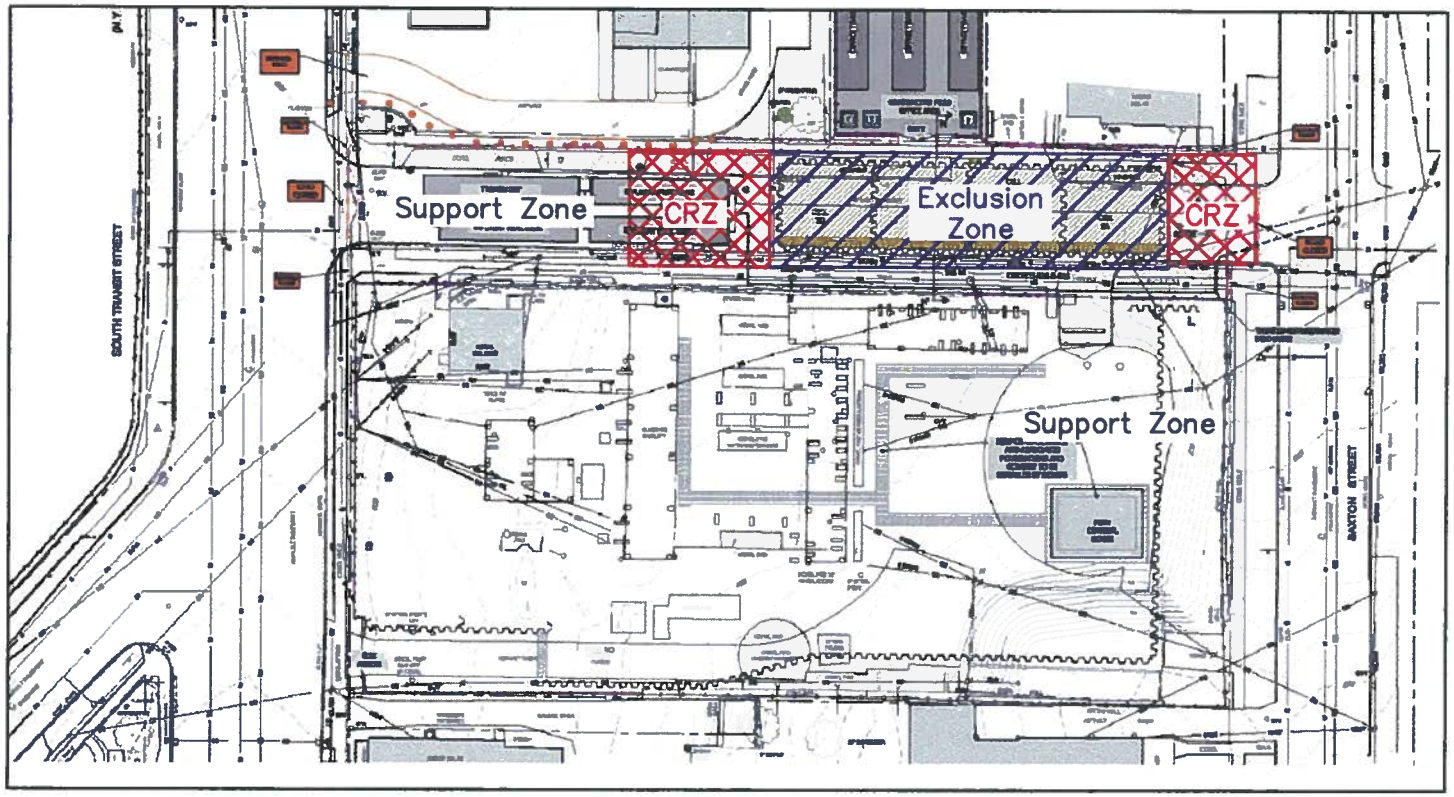
Phase II
Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 6

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazderski
CAD FILE:	Traffic Plan
SCALE:	As Shown



Legend

60 0 60

SCALE IN FEET

Exclusion Zone

Contamination Reduction Zone

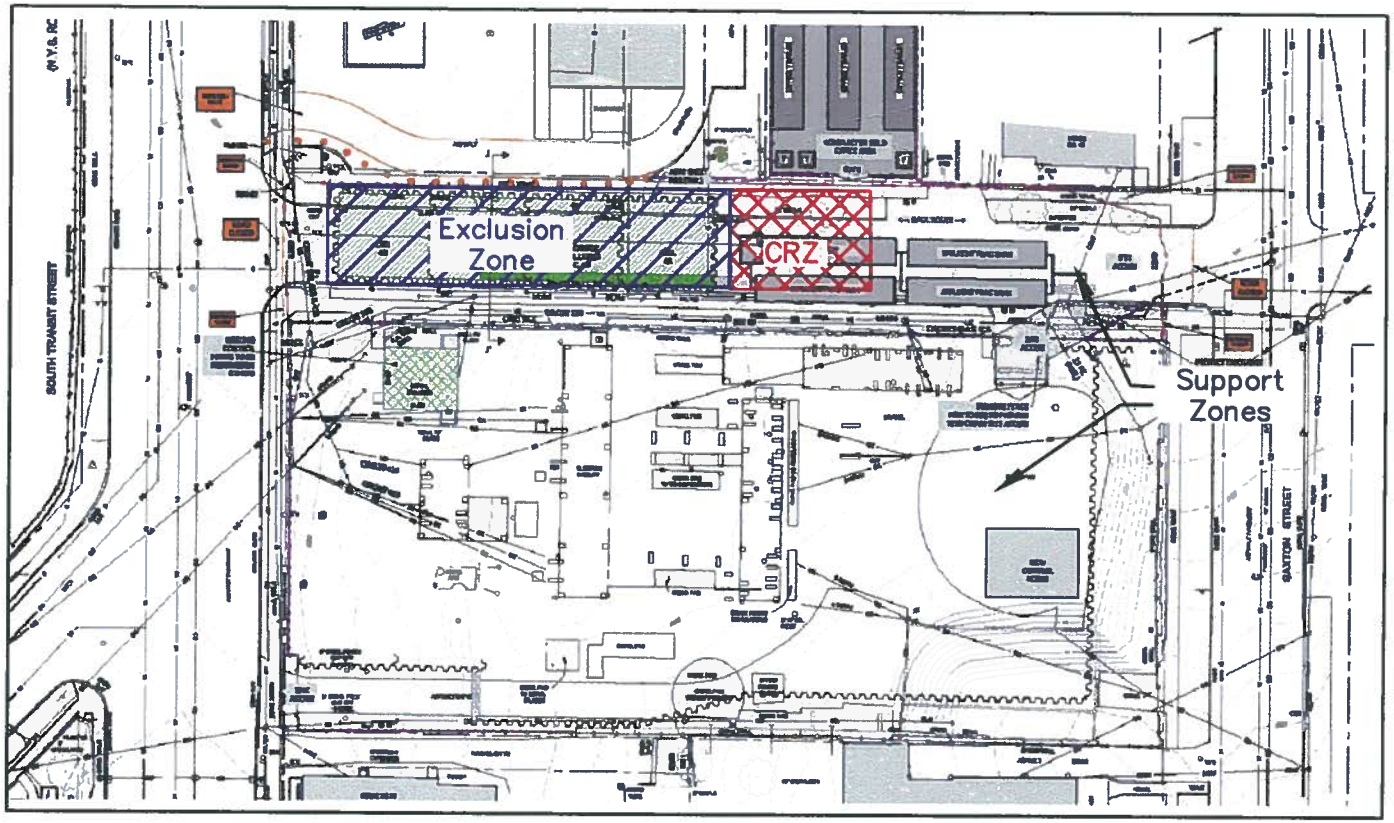
Phase III
Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 7

DATE:	8/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazdersld
CAD FILE:	Phase 3 Work
SCALE:	As Shown



Legend

60 0 60

SCALE IN FEET

Exclusion Zone

Contamination Reduction Zone

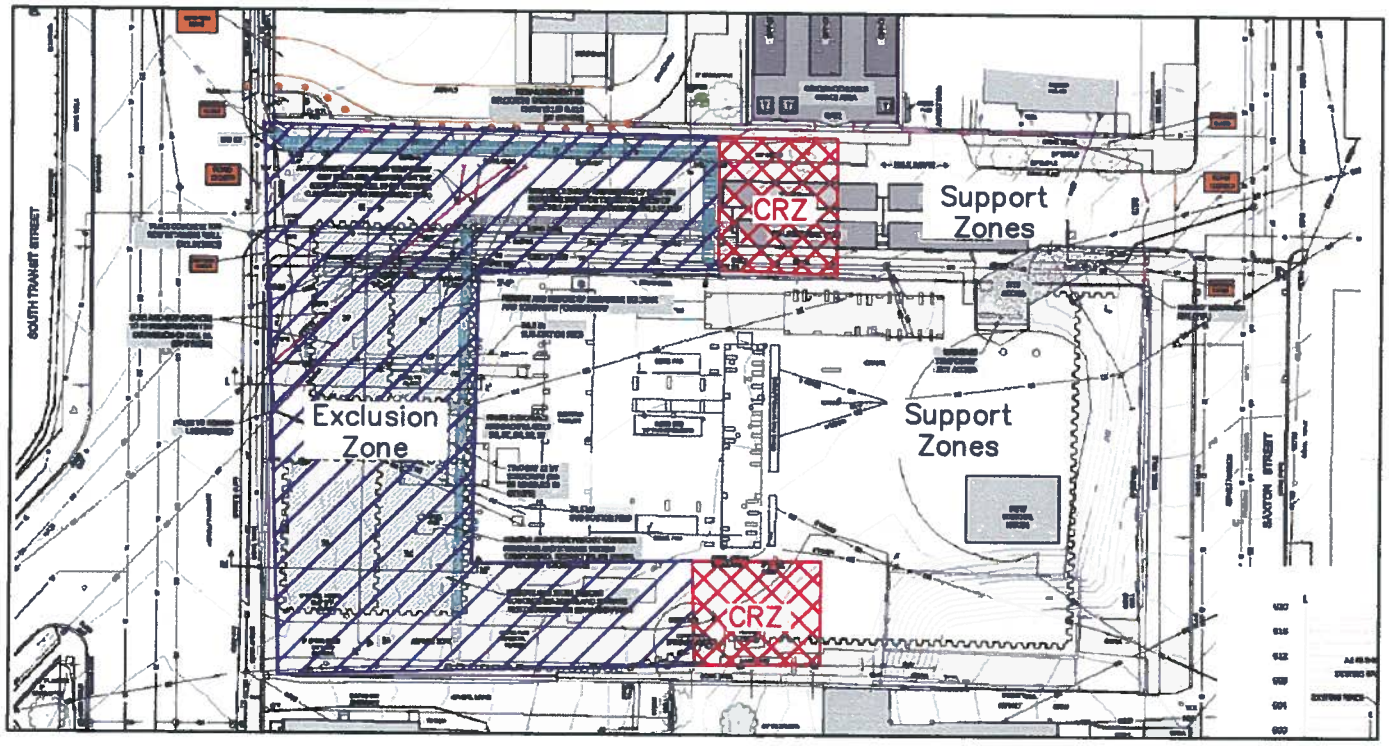
Phase IV
Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 8

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazderski
CAD FILE:	Phase 4 Work
SCALE:	As Shown



Legend

60 0 60

SCALE IN FEET

Exclusion Zone

Contamination Reduction Zone

Phase V
Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

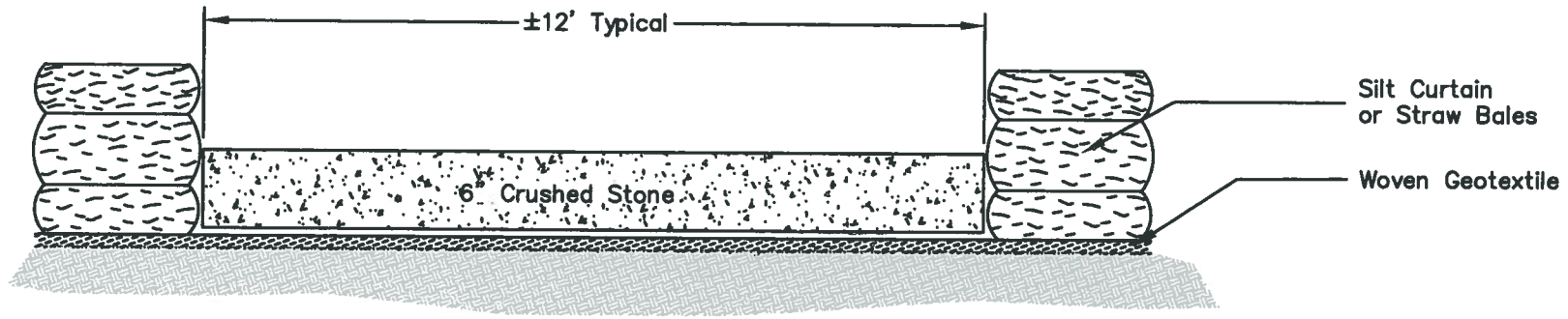
SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 9

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazderski
CAD FILE:	Phase 5 Work
SCALE:	As Shown

APPENDIX F

Road Spur Detail



Detail
Site Access Road

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport , New York

SEVENSON
ENVIRONMENTAL
SERVICES, INC.

DRAWING
1

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazdarski
CAD FILE:	Access-Road
SCALE:	None

APPENDIX G

Pump Specifications

GSP Sub-Prime

Available in 0.5 hp / 0.4 kW (GSP05), 1 hp / 0.75 kW (GSP10), and 2 hp / 1.5 kW (GSP20) models, the GSP Sub-Prime offers flow rates from 70 through 110 gpm (4.4 through 6.9 l/sec) and maximum heads from 39 to 70 feet (11.9 to 21.3 meters). The GSP Sub-Prime line is a selection of portable, electric submersible dewatering pumps available for a wide range of pumping applications on construction, industrial, mining, utility, and municipal job sites. Compact design allows these versatile units to go where other pumps simply would not fit. An optional piggy back single float switch can be supplied as a cost-effective choice for applications requiring automatic operation.

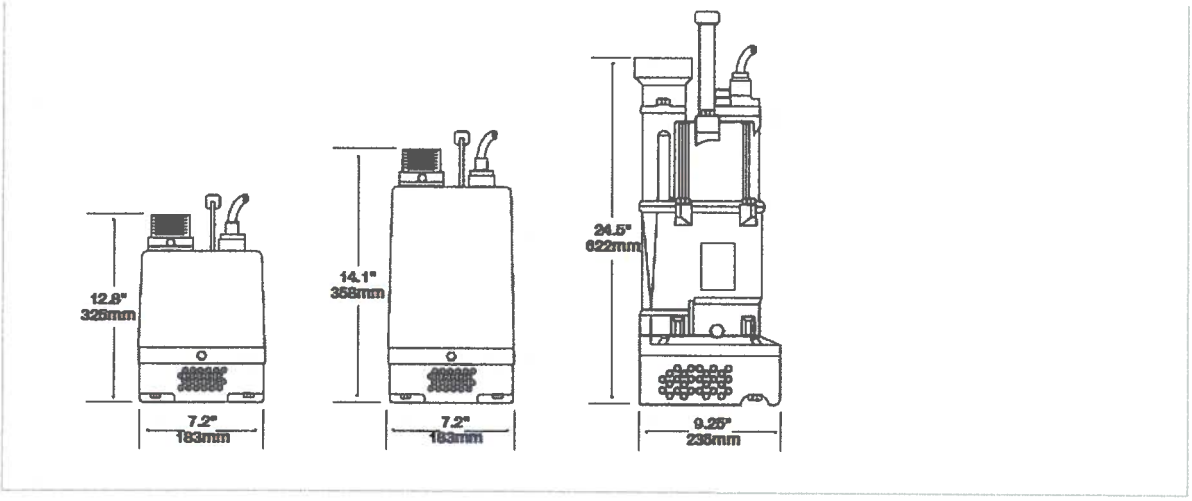
GSP SlimLine Sub-Prime

GSP20SL SlimLine Sub-Prime electric submersible pumps for dewatering applications feature a slim-line design ideal for fitting into caissons or other confined spaces. The 7.09' diameter pump with top discharge design fits into an 8' caisson. Available in single-phase or three-phase options.

(/images/uploads/Godwin_GSP20SL_1012.pdf) Download the GSP20SL Datasheet here (/images/uploads/Godwin_GSP20SL_0213.pdf)

Features (#tabs-1) | Specifications (#tabs-2) | Construction (#tabs-3) | Float Switch (#tabs-4) | Performance Curve (#tabs-5) | Downloads (#tabs-6)

	GSP05	GSP10	GSP20
HP (kW)	0.5 HP/0.4 kW	1.0 HP/.75 kW	2.0 HP/1.5 kW
Max. Flow	70 gpm (4.4 l/sec.)	90 gpm (5.7 l/sec.)	110 gpm (6.9 l/sec.)
Max. Head	39' (11.9M)	60' (18.3M)	70' (21.3M)
Max. Solids	1/3" (9mm)	1/3" (9mm)	1/3" (9mm)
Cable Length	30' (9M)	50' (15M)	50' (15M)
Discharge Size	2" (50mm)	2" (50mm)	3" (75mm)
RPM	3600	3600	3600
Max. Fluid Temp.	90°F (32°C)	90°F (32°C)	104°F (40°C)
PH Range	6.5-8.0	6.5-8.0	6.5-8.0
Voltage	115, 230	115, 230	115/230
Amps	5.8, 3.2	10.3, 5.11	25.9/13.0
Phase	Single	Single	Single
Height	12.8" (325mm)	14.1" (358mm)	24.5" (622mm)
Width	7.2" (183mm)	7.2" (183mm)	9.25" (235mm)
Weight	20 lbs. (9 kg.)	29 lbs. (13 kg.)	61 lbs. (28 kg.)
Max. Sub.	16.5' (5M)	16.5' (5M)	16.5' (5M)


12.8"
326mm
7.2"
183mm
14.1"
358mm
7.2"
183mm
24.5"
622mm
9.25"
235mm

APPENDIX H

Grout Wall Installation Procedures

Pre-Bid Submittal Information, Qualifications & Procedures for Grouting
Lockport Former MGP Site, Niagara County, New York

Qualifications: Nothnagle Drilling, Inc. has been in business since 1981. The company is a diversified drilling operation that has a strong background in grouting and slurry wall installation.
Nothnagle Drilling has been the driller on many NYSEG projects, to include, conducting the pilot study for the "Lockport Transit Street MGP Site". Other recent grouting projects include: grout curtain around intake shaft for Monroe County Westside water intake project, Southland Contractors was the general contractor on project. Our company also installed grout wall at the Middle Falls of the Genesee River for Rochester Gas & Electric. We also installed a grout wall for DuPont Corporation at their Niagara Falls facility.

Proposed Equipment: CME-75 style drill rig, TAM Packers, Chemgrout colloidal mixer. The mixer has a water tank that is used to measure water prior to mixing that is used to control mix ratios.

Proposed Grouting Procedure

1. Drill grout holes to depth (75'), use rotary drilling techniques with water to flush holes and control dust.
2. Flush hole with water to remove any debris.
3. Perform water pressure tests in stages with packers. Perform all water pressure tests at a pressure of 15 psi, regardless of depth. All tests shall be 15 minutes. The general procedure includes these steps:
    A. Set packers.
    B. Connect water lines and gradually open valve and increase water pressure to 15 psi.
    C. When the test pressure has been reached, start timer and simultaneously read (or zero) water meter.
    D. Read water meter at 5, 10, and 15 minutes.
    E. After 15 minutes, test is complete.
    F. Record result as lugeon value for each 5-minute interval. Neglect hydrostatic correction for water table.
4. Use cement-bentonite grout mix. Cement shall be bagged (94 lb) type I/II portland cement. Bentonite shall be Wyoming grade sodium bentonite. Batch cement and water on a volume basis (1bag cement = 1.0 CF). Add bentonite at 2% of cement, on a weight basis.
5. It is anticipated that the following grout mixes will be used, as directed by the engineer:
    A. 2:1 Water : Cement,
    B. 1:1 Water : Cement,
6. Mix grout using a high shear mixer. Store mixed grout in an agitator tank.
7. Select starting grout mix for each stage as follows:
    A. If water take <25 lugeons, use 2:1 water : cement ratio
    B. If water take >25 lugeons, use 1:1 water : cement ratio
8. Grouting shall be performed in stages, starting at the bottom using the upstage method. Grout stages will correspond to the water pressure test stages previously completed.

9. Grouting in each stage shall be continued until refusal. If refusal occurs in less than 30 minutes, a thinner starting mix shall be used for the next stage. If grout takes equal or exceed water takes in the first 30 minutes, or if grouting continues for more than 60 minutes without reduction in take, the grout shall be thickened. The general procedure includes these steps:
    A. Set packer.
    B. Select grout mix.
    C. Select maximum grout pressure.
    D. Connect grout lines and gradually open valve and increase grout pressure to the design pressure. Check for leaks.
    E. When the test pressure has been reached, start timer and simultaneously read (or zero) grout tub.
    F. Read grout takes at approximately 15 minutes intervals.
    G. Review grout takes and adjust grout mix if appropriate.
    H. Continue grouting until refusal, than hold grout pressure for an additional 15 minutes.
    I. Move to next upward state. Continue grouting (no waiting period between stages).
10. Grout pressure shall be 1 psi per foot of depth below top of rock to bottom of stage, as follows:
    A. Stage 1 20 psi
    B. Stage 2 40 psi
    C. Stage 3 60 psi
11. Allow grout to set overnight prior to drilling and grouting secondary grout holes. Repeat procedure outlined above.
12. Repeat as necessary for tertiary and quaternary grout holes and directed by the engineer.
13. The procedures outlined herein are subject to modification by the engineer depending on field conditions.

Controlling and mitigation of dust will be thru use of water. Noise levels will be controlled thru use of properly maintained engine and exhaust systems.

Transportation, storage and protection of reagents and dry material shall be thru use of company owned trucks and trailers with plastic covering on portland cement and bentonite up to time of use.

Procedure for batch mixes: Fill tank on grouter to correct level (Based on mix design), transfer water to colloidal mixer add sack of cement and bentonite (2 pounds), mix and transfer to discharge tank with paddle mixer. Pump down grout hole, repeat until achieving desired pressure, record amount pumped.

Demonstration Test: Nothnagle Drilling Inc. drilled and conducted the pilot study and has the equipment to do the grout curtain installation,

Estimated grout quantity, we estimate 300 CF

Grouting Procedure and sequencing: We propose to follow the engineers design which calls for the drilling and grouting of 26 injection points, additional points spaced ½ way between injection points should be added if excessive grout is being used, and will be determined in the field based on grouting results.

Contact Water Management, treatment and disposal. We anticipate using potable water from a municipal source for mixing and drilling operations. Nothnagle will contain waters and place in on site tanks supplied by the GC. Disposal by GC.

We estimate 1.5 days per injection point. For drilling and injection activities.

Wash out grout disposal activities, Left over mixed grout shall be contained and disposed of as IDW. Clean potable water will be used to clean grout equipment.

No proposed deviations from the Specification and Drawings.

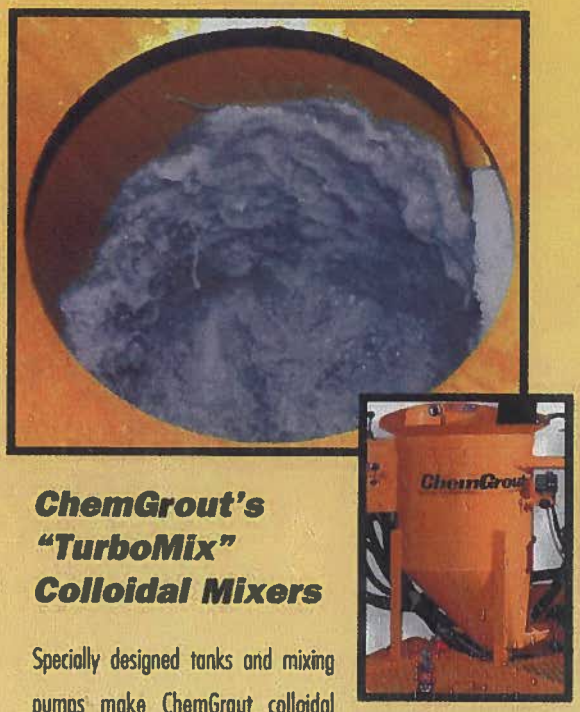
Spill control measures: We will have a spill kit on site containing absorbent pads, and boon for use if needed.

Water will be contained to prevent erosion.

QC, SOP, personnel and equipment: see attached

Equipment Manufacturers, spec's and description: see attached

Timothy M. Nothnagle
President



ChemGrout's "TurboMix" Colloidal Mixers

Specially designed tanks and mixing pumps make ChemGraut colloidal mixing efficient and profitable for the owner. Water and solid materials are drawn through the high speed diffuser type pump rotating at speeds of up to 2,000 RPM to prevent flocculation and achieve complete particle wetness. Mixing time is significantly reduced by the high shear action of the colloidal mixing pump, aided by a unique powered bridge breaker device which enhances flow rate through the pump. These high shear colloidal mixers have been shown to increase apparent fluidity of slurry mixes by 20% over paddle mixers, an important advantage for dam, rock and soil grouting where the ability to penetrate tight formations is necessary. For very sensitive applications such as post tension grouting, the highly efficient colloidal mixer makes possible water to cement ratios down to 0.35 by weight, resulting in very high strength grouts with little or no bleed water release.

Materials

- Neat cements – all types
- Ultra/Micro-fine cements
- Bentonite slurries
- Flyash
- Lime dust
- Post tension grouts

CG-600 Colloidal Grout Plant

20 gpm

The CG-600 is a heavy duty, high volume colloidal grout plant favored for heavy construction projects such as dams and tunnels, as well as for precision post tension grouting. This unit features a high speed mixing pump that thoroughly wets each particle and discharges the mixed material into a 13 cubic foot capacity agitating holding tank. A direct coupled progressing cavity pump delivers slurry at a rate of up to 20 GPM and pressure of up to 261 PSI. The unit easily mixes and pumps slurries of portland cement, flyash, bentonite, and lime flour. All controls are conveniently located on the operator platform for easy one man control. Power options are air, hydraulic, electric/hyd or diesel/hyd.

Specifications

PUMP	
Pump Type	3L6 progressing cavity
Output/Pressure	variable up to 20 gpm, 261 psi
COLLOIDAL MIXER	
Mix Tank	13.0 c.f. with bottom cleanout
Mixing Pump	2 x 3 x 6 diffuser-type centrifugal
Holding Tank	13.0 c.f. paddle agitating
DRIVE POWER	
Air	300 CFM, 100 psi
Hydraulic	20 GPM, 2000 psi
Electric/3-Phase	230/460 V, 77/38 Amp (25HP)
Diesel	24 HP
PHYSICAL SPECIFICATIONS	
Dimensions	96"L x 60"W x 63"H
Weight	1800-2800 pounds

NOTHNAGLE *DRILLING, INC.*

1821 Scottsville-Mumford Road
Scottsville, New York 14546
(585) 538-2328
Fax (585) 538-2357

June 13, 2013

Sevenson Environmental Services
2749 Lockport Road
Niagara Falls, New York 14305

Subject: Company Information

ATTN: Mr. James Pazderski

Dear James:

Enclosed please find an introduction to Nothnagle Drilling Inc. to include: Service Capabilities, Equipment Description and Personnel and Client References.

Our company is a small business concern incorporated in 1981; we are a multi-service drilling company, with a specialty in the environmental, geothermal, and geo-technical fields. Based in Scottsville, New York, we have performed numerous projects throughout the Northeastern United States. We are a service-oriented company with an excellent reputation of executing projects in an efficient, timely manner.

We hope that the enclosed information encourages you to choose Nothnagle Drilling Inc. as your drilling subcontractor. If you would like additional information or would like a quote on any upcoming projects, please contact us at your convenience.

We look forward to servicing your drilling needs.

Sincerely,

Timothy M. Nothnagle
President

SERVICE CAPABILITIES

* **Auger Drilling**
  -Hollow stem to 12 1/4" I.D.
  -Solid flight to 30 inch O.D.

* **Rock Coring**
  -Conventional
  -Wireline

* **Geo-Thermal**
  Wells, HDPE fusion

* **Rotary Drilling**-using mud, air or water

* **Down Hole Hammer Drilling**

* **Shelby Tubes**

* **Packer Testing**

* **ODEX System**-double cased drilling

* **Dewatering Wells**

* **Rock Anchors**

* **Environmental Blasting**

* **Micro-Piles**

* **Flush Joint Casing**
  -Drive and wash or spin techniques

* **Geoprobing**
  - HRC, ORC injection

* **Specific Capacity Tests**

* **Well Installations**
  -PVC, galvanized and stainless steel monitoring wells
  -Multiple telescoping strings

  -Large diameter recovery wells

* **Well Remediation's**

* **Well Abandonments**

* **Test Pits**

* **Pressure Grouting**

* **Marine Sampling**

* **Tie Back Drilling**

* **Blasthole drilling**

EQUIPMENT DESCRIPTION

* **2010 CME 55LC ATV DRILL**
  -Low Overhead Clearance
  -Series 2 Diesel Engine generates negligible CO
  -Remote Control, Track Mounted Carrier
  -9,200 Ft. Lbs. of torque, Automatic SPT hammer, Moyno 3L8

* **2008 Versadrill 2000 NG**
  -500 Feet of on board drill steel, capable of drilling to 5000' BGS
  -All wheel drive carrier, excellent geothermal drill for commercial projects

* **2007 CME 75 DRILL**
  -Conventional and hollow stem augers to 200 Ft., up to 16" hole size
  -Core and rotary drilling to 2500 Ft. (15,000 Ft. Lbs. Torque)
  - Automatic SPT hammer, Moyno 3L8, hydraulic chuck

* **2003 CME 85 DRILL**
  -Conventional and hollow stem augers to 300 Ft., up to 16" hole size
  -Core and rotary drilling to 2500 Ft. (20,000 Ft. Lbs. Torque)
  - Automatic SPT hammer, Moyno 3L10, hydraulic chuck

* **1993 BK-8I (High Torque Rotary Drive)**
  -Conventional and hollow stem augers to depths of 450 Ft. (20,000 Ft. Lbs of Torque)
  -Core and rotary drilling to 2500 Ft., with 15 Ft. hydraulic chuck

* **1993 GUS PECH MITE-E-MITE DRILL (Self Propelled Low Profile Carrier)**
  -Conventional and hollow stem augers to Depths of 350 Ft.
  -Propane Powered for Inside Building Usage
  -Capable of Drilling at 13 Ft. Minimum Headroom

* **6610 DT Geoprobe on rubber tracks**
  - Geoprobe Sampling
  - Auger capable

* **Powerprobe 9100 SK on rubber tracks, probe machine fits thru 36" door**
  - Geoprobe Sampling

(2 each) CME 850 Track Mounted ATV Rigs, Air rotary drills (6 each) T4 size truck machines, (2 each) SK5 AD's, (2 each) Atlas Copco F-7, DM-30, many additional hydraulic and air tracks drill rigs.

PERSONNEL

We employ experienced, qualified drillers, our personnel have been trained as per OSHA requirement 29CFR 1910.120 and participate in a medical surveillance program. Additional certifications include; State and National well drilling certification, fusion certification, geothermal installer certifications, licensed blasters.

Timothy M. Nothnagle: President, CWD
Thirty Years management experience on environmental and construction projects. Licensed NYS Blaster, Certified Geothermal installer, member Society of Explosives Engineers, National Ground Water Association, National Drillers Association, Empire State Water Well Drillers Association, Member NYS Certified Professional Geologist.

Stephen A. DiLaura: Vice President / Geologist / CWD
Twenty Seven years management experience in environmental, and geotechnical drilling industry. Coordinates all size projects, from the initial bidding, to the final invoice, insuring customer satisfaction at every step during the project. Member NYS Certified Professional Geologist, NGWA, ESWWDA.

Stephen J. Loranty: Senior Driller CWD
Twenty Five years environmental drilling experience, familiar with use of all our equipment, does an excellent job at customer satisfaction and work production.

Neal A. Short: Senior Driller CWD
Twenty three years environmental drilling experience. familiar with all types of drilling techniques and aquifer testing apparatus.

Kevin S. Busch: Senior Driller CWD
Twenty Five years environmental drilling experience. highly qualified operator of both soils and air rotary drill rigs.

Stephen Gelser: Senior Driller CWD
Twenty years environmental/ construction experience. Excellent operator on all our equipment.

Dean Degraff: Senior Driller CWD
Fifteen years air rotary/ construction experience. Excellent operator on all our equipment.

Several additional experienced auger and air rotary drill operators and drillers helpers are available as dictated by project requirements.

EXAMPLES OF PROJECTS CONTRACTED AND COMPLETED BY NOTHNAGLE DRILLING

1. **JOB NAME:** **Site Evaluation for Nuclear Plant Construction**
   Oswego, New York

   JOB DESCRIPTION: Project included: deliniating and descriptions of overburden, rock, and ground water. Drilling techniques employed included, split spoon sampling of soils, wireline rock-core, packer testing, and well construction. Additionally deep rock cores and packer testing was conducted in Lake Ontario to define rock characteristics below the Lake floor.

2. **JOB NAME:** **Manufacturing Site Closure**
   Brighton, New York

   JOB DESCRIPTION: Project included; thirty two sample borings arranged in a grid network, installation of four well pairs and one telescoping cased well. Four well pairs consisted of a deep well set at 75 feet and a shallow well set at 30 feet.

3. **JOB NAME:** **Drilling Services**
   Rochester, New York

   JOB DESCRIPTION: Project included installation of vacuum extraction wells inside a manufacturing facility at night under Health & Safety Level "B" conditions and three well clusters installed around the facility perimeter. Tasks performed during project included auger drilling, coring, packer testing, pressure grouting and air rotary drilling techniques. Deep wells called for installation of telescoping casing with 12 inch I.D. casing being grouted to 28 feet, 8 inch steel casing being installed to 60 feet and a nominal 8 inch diameter borehole being drilled to a total depth of over 100 feet.

4. **JOB NAME:** **Site Remediation at former manufacturing facility**
   Geneva, New York

   JOB DESCRIPTION: Used Geoprobe 6610DT and injection pump to inject Zero Valent iron and Newman Zone in 132 probe points using a 10 channel feed system with multiple points.

5. **JOB NAME:** **Geo Thermal Well Field (Rochester Institute of Technology)**
Henrietta, New York

JOB DESCRIPTION: Drilled 60 each, 1.25" HDPE Geo-Thermal Wells to 330' BGS, excavated and fused all the horizontal circuits, per the plans, compacted back-filled and tied circuits into the building under construction.

6. **JOB NAME:** **Industrial Site**
Waterford, New York

JOB DESCRIPTION: Installed two 8 inch stainless steel recovery wells. Site lithology required temporary 18 inch casing to be installed to depths of 127 feet. Recovery wells were constructed within the 18 inch casing which was extracted slowly during placement of well filter pack materials.

7. **JOB NAME:** **New York State Electric and Gas**
Dresden, New York

JOB DESCRIPTION: Drilled and installed five monitoring wells. Well installation included: augering and soil sampling to the bedrock interface, installing 6 inch steel casing, coring, packer testing, reaming NX cores to 6 inch diameter and construction of 2 inch PVC monitoring wells.

8. **JOB NAME:** **Manufacturing Site**
Macedon, New York

JOB DESCRIPTION: Drilled seven well clusters consisting of 2 inch PVC wells set at 75 feet, 60 feet and 30 feet in each of the deep, intermediate and shallow wells respectively.

9. **JOB NAME:** **Gas Vent Wells**
Seneca Meadows Landfill, Waterloo, New York

JOB DESCRIPTION: Drill and install multiple 6" PVC vent wells to 60 feet every year for gas extraction at this landfill.

10. **JOB NAME:** **Micro-Piles**
Seneca Towers, Rochester, New York

JOB DESCRIPTION: Drill and install 11 inch "H" Beams on 8 foot centers, pinned beams into rock using Williams Anchors, and epoxy resin.

APPENDIX I

Robovib Specification and AZ14-770 Sheet Pile Specification

I. GENERAL DESCRIPTION

A. GENERAL

The APE ROBOVIB is a powerful low-frequency vibratory pile driver / extractor designed to drive and extract sheet piles, and wide-flange (H & I) beams. Specially adapted for connection to a hydraulic excavator, the ROBOVIB facilitates economies of operation by eliminating the requirement for leads, a pile driving crane, redundant personnel and a dedicated power unit, on many pile driving applications. It enables the excavator operator to lift, carry, position and drive piles in a continuous motion.

The ROBOVIB operates at frequencies up to 2500 vibrations per minute to provide maximum pile penetration rates in a wide variety of soils. The unit has an eccentric moment of 475 inch-pounds (5.5 kg-M) and produces a maximum amplitude of .31 inch (8 mm). Clamps and jaws allow various types and sizes of piling to be driven or extracted by the ROBOVIB.

B. MANIFOLD ON EXCAVATOR

Hydraulic power to drive the ROBOVIB comes from a spare circuit on the excavator. A specialized control manifold, mounted on the excavator, allows the ROBOVIB drive motor, rotary motor, piling clamps and side tilt, to be activated by a single excavator control lever ("joy stick"). The bucket circuit controls the fore and aft tilt via the existing excavator bucket cylinder. The manifold also permits the ROBOVIB to be used on excavators with various hydraulic system pressures and flows.

I. GENERAL DESCRIPTION

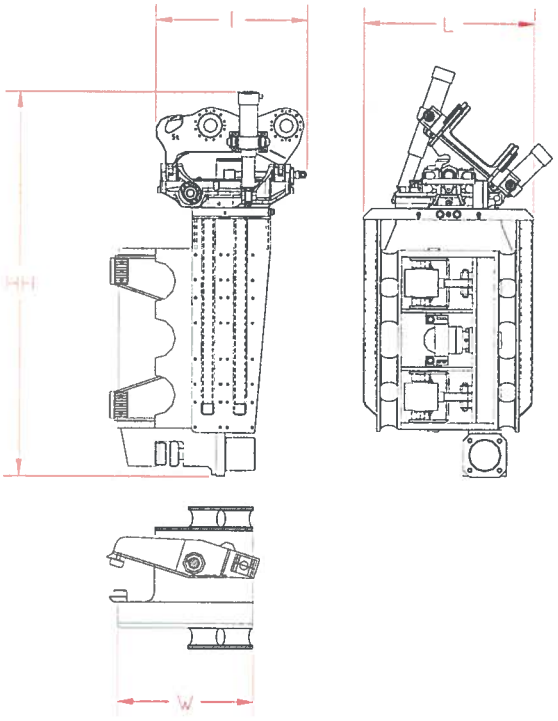
C. SPECIFICATIONS

1. Constant improvement and engineering progress make it necessary that we reserve the right to make specification changes without notice.

2. ROBOVIB VIBRATOR (w/ clamps) Type: Hydraulic

	Units (US)	Units (SI)
Eccentric Moment	475 in-lb	(5.5kg-M)
Frequency (max)	2500 VPM	
Amplitude	0.31 in (8 mm)	
Bottom Clamp Force	85 Tons	(755kN)
Side Arm Clamp Force (total)	76 Tons	(676kN)
Max. Pull for Extraction	50 Tons	(454kN)
Suspended Weight	4,600 lb	(2087kg)
Length **[L]**	39 in	(99 cm)
Width **[W]**	31 in	(79 cm)
Throat Width **[T]**	35 in	(89 cm)
Height with Clamp **[HH]***	88 in	(224 cm)

*Includes Rototilt yoke

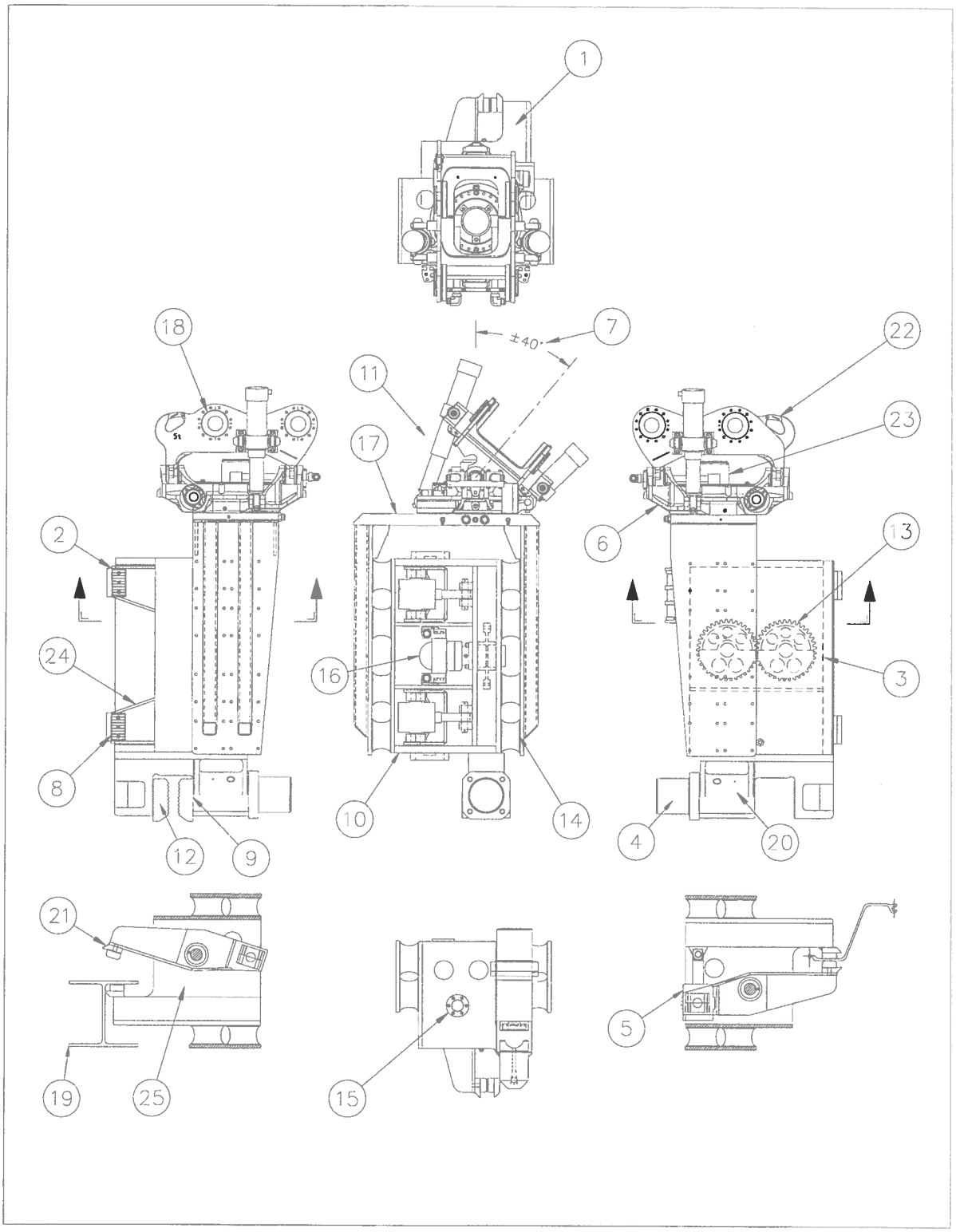


ROBOVIB
VIBRATORY
DRIVER/EXTRACTOR

ROBOVIB FEATURES

1. The ROBOVIB eccentrics are located within the fixed side grip arm. Centerline of dynamic force is much closer to the gripping jaws, reducing off center force input to pile.
2. Vertical distance between side grip jaws is increased to better resists off-center force
3. ROBOVIB eccentric moment is 22% greater than competitive units, producing significantly larger driving amplitude.
4. Each clamp has an individual actuating cylinder. No poorly guided, trouble prone, dual purpose cylinders as in competitive units
5. Side grip cylinders are directly mounted to arms and are hydraulically synchronized.
6. Proven tilt and rotate mechanism is designed for digging duty, and has sealed lubrication for bearings and worm gear. Cast housing and integral rotation motor maintain perfect alignment for worm gear and massive rotation bearing. Dual tilt cylinders are telescopic, providing lower profile and equal left and right tilt torque.
7. ROBOVIB +/- 40 deg tilt is 33% more than the competition, allowing additional reach when loading or unloading piles.
8. Rectangular clamp jaws on side grips provide more clamping area than round jaws.
9. Bottom clamp uses precision-guided slider per accepted vibratory hammer practice. Clamp cylinder is directly aligned with the fixed jaw—no offset.
10. Most components contained within welded steel frame for protection and exceptional strength.
11. No solenoid valves or wiring mounted on ROBOVIB. Valves and wiring are remotely mounted on excavator boom to avoid vibration damage.
12. Standard APE Model 20 bottom clamp jaws are used to minimize inventory. Additionally, all ROBOVIB jaws have the J&M exclusive "Kryponite" coating for exceptional wear life.
13. Two patented APE one-piece eccentrics simplify design and minimize distance between driving force and pile center.
14. Commonly available elastomers isolate vibration from excavator. Extra elastomer mounting positions are provided so spring rate may be optimized for tough pile extraction applications.
15. Lockable adjusting nuts eliminate clearance in side grip arms to reduce vibration wear, and insure long life
16. Commercial, high pressure gear motor is interchangeable to exactly match excavator hydraulic flow to ROBOVIB. No flow controls or restrictions to cause damaging heat buildup in excavator hydraulic system.
17. Gun-drilled hydraulic distribution manifold is integral to suspension yoke to minimize plumbing, and perfectly align hydraulic swivel.
18. Replaceable offset bushings at the excavator connection allow pin diameter and center distance changes to accommodate various brands and sizes of excavators.
19. Minimum width, fixed side clamp arm allows driving of H-piles as small as 10".
20. APE standard bottom clamp w/ chrome plated rod and grease-able via protected fitting.
21. Lips on side grip arms allow "nested" sheet piles to be split for lifting access.
22. Integral sling hook, with safety latch, facilitates lofting piles and other lifting.
23. Large bore hydraulic swivel provides 360 deg continuous rotation, with minimum flow restriction.
24. Wide, T-1 steel side grip arms provide exceptional rigidity to transmit vibratory output force.
25. All hydraulic cylinders are designed for vibratory duty.

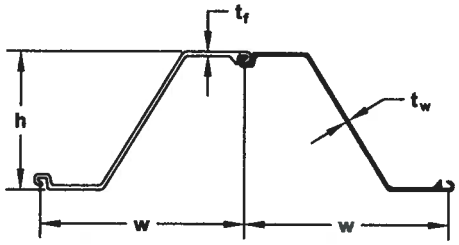
ROBOVIB
VIBRATORY
DRIVER/EXTRACTOR



skylinesteel I
NUCOR company

AZ

AZ Hot Rolled Steel Sheet Pile



SECTION	Width (w) in (mm)	Height (h) in (mm)	THICKNESS Flange (t_f) in (mm)	THICKNESS Web (t_w) in (mm)	Cross Sectional Area in²/ft (cm²/m)	WEIGHT Pile lb/ft (kg/m)	WEIGHT Wall lb/ft² (kg/m²)	SECTION MODULUS Elastic in³/ft (cm³/m)	SECTION MODULUS Plastic in³/ft (cm³/m)	Moment of Inertia in⁴/ft (cm⁴/m)	COATING AREA Both Sides ft²/ft of single (m²/m)	COATING AREA Wall Surface ft²/ft² (m²/m²)
AZ 12-770	30.31 770	13.52 343.5	0.335 8.50	0.335 8.50	5.67 120.1	48.78 72.60	19.31 94.30	23.2 1245	27.5 1480	156.9 21430	6.10 1.86	1.20 1.20
AZ 13-770	30.31 770	13.54 344.0	0.354 9.00	0.354 9.00	5.94 125.8	51.14 76.10	20.24 98.80	24.2 1300	28.8 1546	163.7 22360	6.10 1.86	1.20 1.20
AZ 14-770	30.31 770	13.56 344.5	0.375 9.50	0.375 9.50	6.21 131.5	53.42 79.50	21.14 103.20	25.2 1355	30.0 1611	170.6 23300	6.10 1.86	1.20 1.20
AZ 17	24.80 630	14.92 379.0	0.335 8.50	0.335 8.50	6.53 138.3	45.96 68.40	22.24 108.60	31.0 1665	36.2 1944	231.3 31580	5.64 1.72	1.35 1.35
AZ 18	24.80 630	14.96 380.0	0.375 9.50	0.375 9.50	7.11 150.4	49.99 74.40	24.19 118.10	33.5 1800	39.1 2104	250.4 34200	5.64 1.72	1.35 1.35
AZ 19	24.80 630	15.00 381.0	0.413 10.50	0.413 10.50	7.74 163.8	54.43 81.00	26.34 128.60	36.1 1940	42.3 2275	270.8 36980	5.64 1.72	1.35 1.35
AZ 17-700	27.56 700	16.52 419.5	0.335 8.50	0.335 8.50	6.28 133.0	49.12 73.10	21.38 104.40	32.2 1730	37.7 2027	265.3 36230	6.10 1.86	1.33 1.33
AZ 18-700	27.56 700	16.54 420.0	0.354 9.00	0.354 9.00	6.58 139.2	51.41 76.50	22.39 109.30	33.5 1800	39.4 2116	276.8 37800	6.10 1.86	1.33 1.33
AZ 19-700	27.56 700	16.56 420.5	0.375 9.50	0.375 9.50	6.88 145.6	53.76 80.00	23.41 114.30	34.8 1870	41.0 2206	288.4 39380	6.10 1.86	1.33 1.33
AZ 25	24.80 630	16.77 426.0	0.472 12.00	0.441 11.20	8.74 185.0	61.49 91.50	29.74 145.20	45.7 2455	53.4 2873	382.6 52250	5.91 1.80	1.41 1.41
AZ 26	24.80 630	16.81 427.0	0.512 13.00	0.480 12.20	9.35 198.0	65.72 97.80	31.79 155.20	48.4 2600	56.9 3059	406.5 55510	5.91 1.80	1.41 1.41
AZ 28	24.80 630	16.85 428.0	0.551 14.00	0.520 13.20	9.97 211.1	70.15 104.40	33.94 165.70	51.2 2755	60.5 3252	431.6 58940	5.91 1.80	1.41 1.41
AZ 24-700	27.56 700	18.07 459.0	0.441 11.20	0.441 11.20	8.23 174.1	64.30 95.70	28.00 136.70	45.2 2430	53.5 2867	408.8 55820	6.33 1.93	1.38 1.38
AZ 26-700	27.56 700	18.11 460.0	0.480 12.20	0.480 12.20	8.84 187.2	69.12 102.90	30.10 146.90	48.4 2600	57.1 3070	437.3 59720	6.33 1.93	1.38 1.38
AZ 28-700	27.56 700	18.15 461.0	0.520 13.20	0.520 13.20	9.46 200.2	73.93 110.00	32.19 157.20	51.3 2760	60.9 3273	465.9 63620	6.33 1.93	1.38 1.38
AZ 36-700N	27.56 700	19.65 499.0	0.591 15.00	0.441 11.20	10.20 216.0	79.70 118.60	34.61 169.00	66.8 3590	76.5 4110	656.2 89610	6.76 2.06	1.46 1.47
AZ 38-700N	27.56 700	19.69 500.0	0.630 16.00	0.480 12.20	10.87 230.0	84.94 126.40	37.07 181.00	70.6 3795	81.1 4360	694.5 94840	6.76 2.06	1.46 1.47
AZ 40-700N	27.56 700	19.72 501.0	0.669 17.00	0.520 13.20	11.53 244.0	90.18 134.20	39.32 192.00	74.3 3995	85.7 4605	732.9 100080	6.76 2.06	1.46 1.46
AZ 42-700N	27.56 700	19.65 499.0	0.709 18.00	0.551 14.00	12.22 259.0	95.49 142.1	41.57 203.00	78.2 4205	90.3 4855	766.0 104930	6.76 2.06	1.47 1.47
AZ 44-700N	27.56 700	19.69 500.0	0.748 19.00	0.591 15.00	12.89 273.0	100.73 149.9	43.83 214.00	81.9 4405	94.9 5105	804.1 110150	6.76 2.06	1.47 1.47
AZ 46-700N	27.56 700	19.72 501.0	0.787 20.00	0.630 16.00	13.55 287.0	105.97 157.7	46.08 225.00	85.7 4605	99.5 5350	842.2 115370	6.76 2.06	1.47 1.47
AZ 46	22.83 580	18.94 481.0	0.709 18.00	0.551 14.00	13.76 291.2	89.10 132.60	46.82 228.60	85.5 4595	98.5 5295	808.8 110450	6.23 1.90	1.63 1.63
AZ 48	22.83 580	18.98 482.0	0.748 19.00	0.591 15.00	14.48 306.5	93.81 139.60	49.28 240.60	89.3 4800	103.3 5553	847.1 115670	6.23 1.90	1.63 1.63
AZ 50	22.83 580	19.02 483.0	0.787 20.00	0.630 16.00	15.22 322.2	98.58 146.70	51.80 252.9	93.3 5015	108.2 5816	886.5 121060	6.23 1.90	1.63 1.63

skylinesteel
NUCOR company

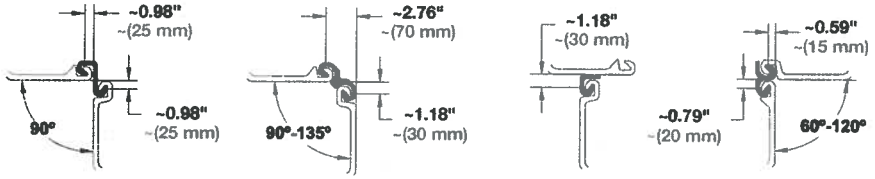
AZ

AZ Hot Rolled Steel Sheet Pile

Available Steel Grades										
AMERICAN			CANADIAN			EUROPEAN			AMLoCor**		
ASTM	YIELD STRENGTH		CSA G40.21	YIELD STRENGTH		EN 10248	YIELD STRENGTH			YIELD STRENGTH	
	(ksi)	(MPa)		(ksi)	(MPa)		(ksi)	(MPa)		(ksi)	(MPa)
A 328	39	270	Grade 260 W	38	260	S 240 GP	35	240	Blue 320	46	320
A 572 Gr. 42	42	290	Grade 300 W	43	297	S 270 GP	39	270	Blue 355	51	355
A 572 Gr. 50	50	345	Grade 350 W	51	355	S 320 GP	46	315	Blue 390	57	390
A 572 Gr. 55	55	380	Grade 400 W	58	400	S 355 GP	51	355			
A 572 Gr. 60	60	415				S 390 GP	57	390			
A 572 Gr. 65	65	450				S 430 GP	62	430			
A 690	50	345				S 460 AP	67	460			
A 690*	57	390									

*Not available for AZ 36-700N and larger. ** Corrosion resistant steel, check for availability

Corner Piles



C 14
Grade: S 355 GP
Weight: 9.68 lb/ft
(14.4 kg/m)

Omega 18
Grade: S 430 GP
Weight: 12.10 lb/ft
(18.0 kg/m)

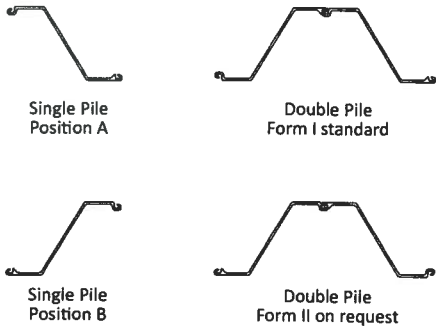
C 9
Grade: S 355 GP
Weight: 6.25 lb/ft
(9.3 kg/m)

Delta 13
Grade: S 355 GP
Weight: 8.73 lb/ft
(13.0 kg/m)

Delivery Conditions & Tolerances

	ASTM A 6		EN 10248	
Mass	± 2.5%		± 5%	
Length	+ 5 inches	– 0 inches	± 200 mm	
Height			± 7 mm	
Thickness			≤ 8.5 mm	± 0.5 mm
			> 8.5 mm	± 6%
Width			± 2%	
Double Pile Width			± 3%	
Straightness			0.2% of the length	
Ends out of Square			2% of the width	

Delivery Forms



Single Pile
Position A

Double Pile
Form I standard

Single Pile
Position B

Double Pile
Form II on request

Maximum Rolled Lengths*

AZ	101.7 feet	(31.0 m)
C 9	59.1 feet	(18.0 m)
C 14	59.1 feet	(18.0 m)
Delta 13	59.1 feet	(18.0 m)
Omega 18	52.0 feet	(16.0 m)

* Longer lengths may be possible upon request.

APPENDIX J

Mabey Bridge and Shoring Super Strut Specification

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SUPER BRACING STRUT
CAPACITY TABLE

Notes: Allowable axial load includes the strut self-weight and an allowance for an accidental concentrated load of 2.25kips.

WITH NO LIMIT ON SCREW EXTENSION				WITH 1.0' LIMIT ON SCREW EXTENSION			
Sheet to sheet (ft.)	Span (ft.)	Span (ins)	Load (kips)	Sheet to sheet (ft.)	Span (ft.)	Span (ins)	Load (kips)
16	13.58	163	281	16	13.58	163	281
17	14.58	175	281	17	14.58	175	281
18	15.58	187	281	18	15.58	187	281
19	16.58	199	281	19	16.58	199	281
20	17.58	211	281	20	17.58	211	281
21	18.58	223	281	21	18.58	223	281
22	19.58	235	281	22	19.58	235	281
23	20.58	247	281	23	20.58	247	281
24	21.58	259	281	24	21.58	259	281
25	22.58	271	281	25	22.58	271	281
26	23.58	283	281	26	23.58	283	281
27	24.58	295	281	27	24.58	295	281
28	25.58	307	281	28	25.58	307	281
29	26.58	319	281	29	26.58	319	281
30	27.58	331	281	30	27.58	331	281
31	28.58	343	281	31	28.58	343	281
32	29.58	355	281	32	29.58	355	281
33	30.58	367	281	33	30.58	367	281
34	31.58	379	281	34	31.58	379	281
35	32.58	391	280	35	32.58	391	281
36	33.58	403	279	36	33.58	403	281
37	34.58	415	278	37	34.58	415	281
38	35.58	427	277	38	35.58	427	281
39	36.58	439	275	39	36.58	439	281
40	37.58	451	274	40	37.58	451	281
41	38.58	463	273	41	38.58	463	281
42	39.58	475	272	42	39.58	475	281
43	40.58	487	271	43	40.58	487	281
44	41.58	499	270	44	41.58	499	281
45	42.58	511	268	45	42.58	511	281

ISSUED: Oct., 2012

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46	43.58	523	267	46	43.58	523	281
47	44.58	535	266	47	44.58	535	281
48	45.58	547	265	48	45.58	547	281
49	46.58	559	264	49	46.58	559	281
50	47.58	571	263	50	47.58	571	281
51	48.58	583	262	51	48.58	583	281
52	49.58	595	260	52	49.58	595	281
53	50.58	607	259	53	50.58	607	281
54	51.58	619	258	54	51.58	619	281
55	52.58	631	257	55	52.58	631	273
56	53.58	643	256	56	53.58	643	262
57	54.58	655	254	57	54.58	655	254
58	55.58	667	244	58	55.58	667	244
59	56.58	679	236	59	56.58	679	236
60	57.58	691	227	60	57.58	691	227
61	58.58	703	219	61	58.58	703	219
62	59.58	715	211	62	59.58	715	211
63	60.58	727	204	63	60.58	727	204
64	61.58	739	197	64	61.58	739	197
65	62.58	751	190	65	62.58	751	190
66	63.58	763	183	66	63.58	763	183
66.8	64.38	773	178	66.8	64.38	773	178

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Call (800) 956-2239 | Request a Quote

Sub

Bracing Struts

Bracing Struts

Mabey bracing struts are required when the load imposed by the ground exceeds the load capacity of the waler. This can occur during very large excavations or anytime that high loads are imposed. As always, Mabey's engineering staff is available for advice and calculations as necessary.

JC Strut

JC Strut

Features Include

- Size range: 1.64′ – 20′
- Capable of supporting 100 kips
- Manually operated screw jack system
- Designed for use with the Mabey PowerBrace system

Mechanical Bracing Strut

Mechanical Bracing Strut

Features Include

- Size range: 7.48′ – 26.21′
- Capable of supporting 90 kips
- Manually operated
- Designed for use with the Mabey PowerBrace system

Hydraulic Bracing Strut

Features Include

Hydraulic Bracing Strut

- Size range: 5.4′ – 30′
- Capable of supporting 81 kips
- Hydraulically powered
- Designed for use with the Mabey PowerBrace system

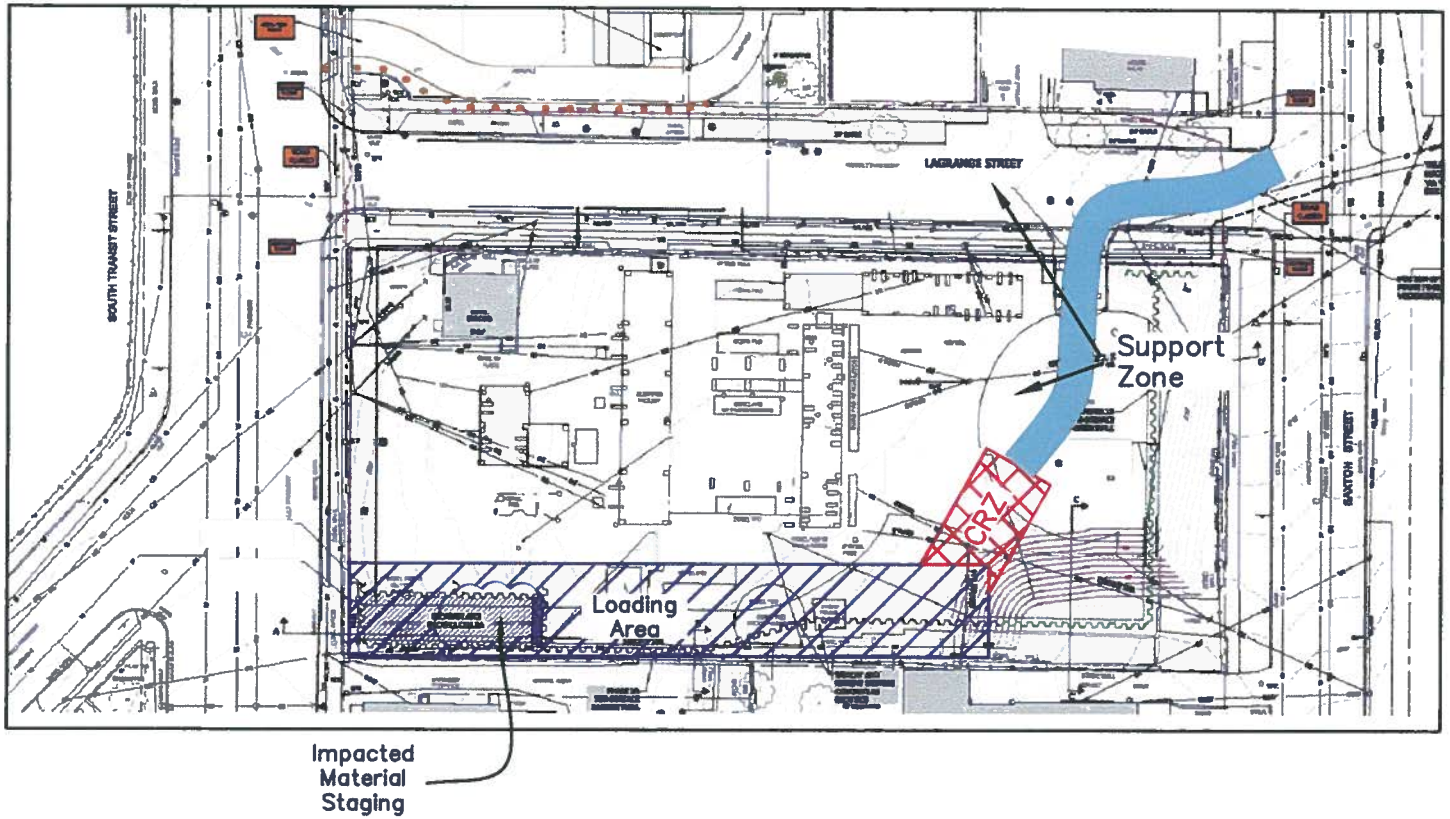
Super Strut

Super Strut

Features Include

- Size range: 13.3′ – 64.4′
- Capable of supporting 281 kips
- Hydraulically assisted removal
- Designed for use with the Mabey PowerBrace system

APPENDIX K
Layout of On Site Stockpile Locations and Loading Areas



Legend

- Exclusion Zone
- Contamination Reduction Zone
- Access Road

60 0 60
SCALE IN FEET

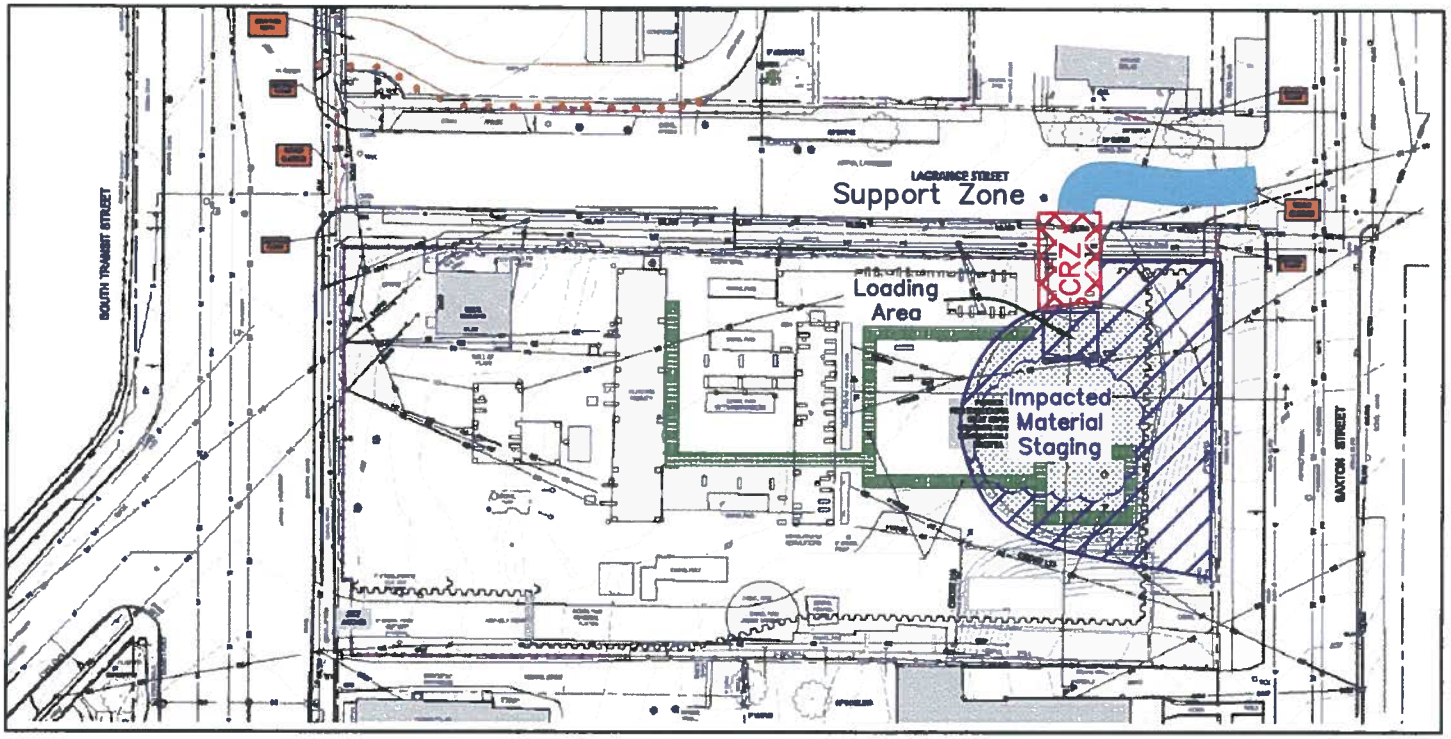
Phase I - Proposed Access Routes and Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 5

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazdersld
CAD FILE:	Phase 1 Work-SR
SCALE:	As Shown



Legend

60 0 60

SCALE IN FEET

- Exclusion Zone
- Contamination Reduction Zone
- Access Road

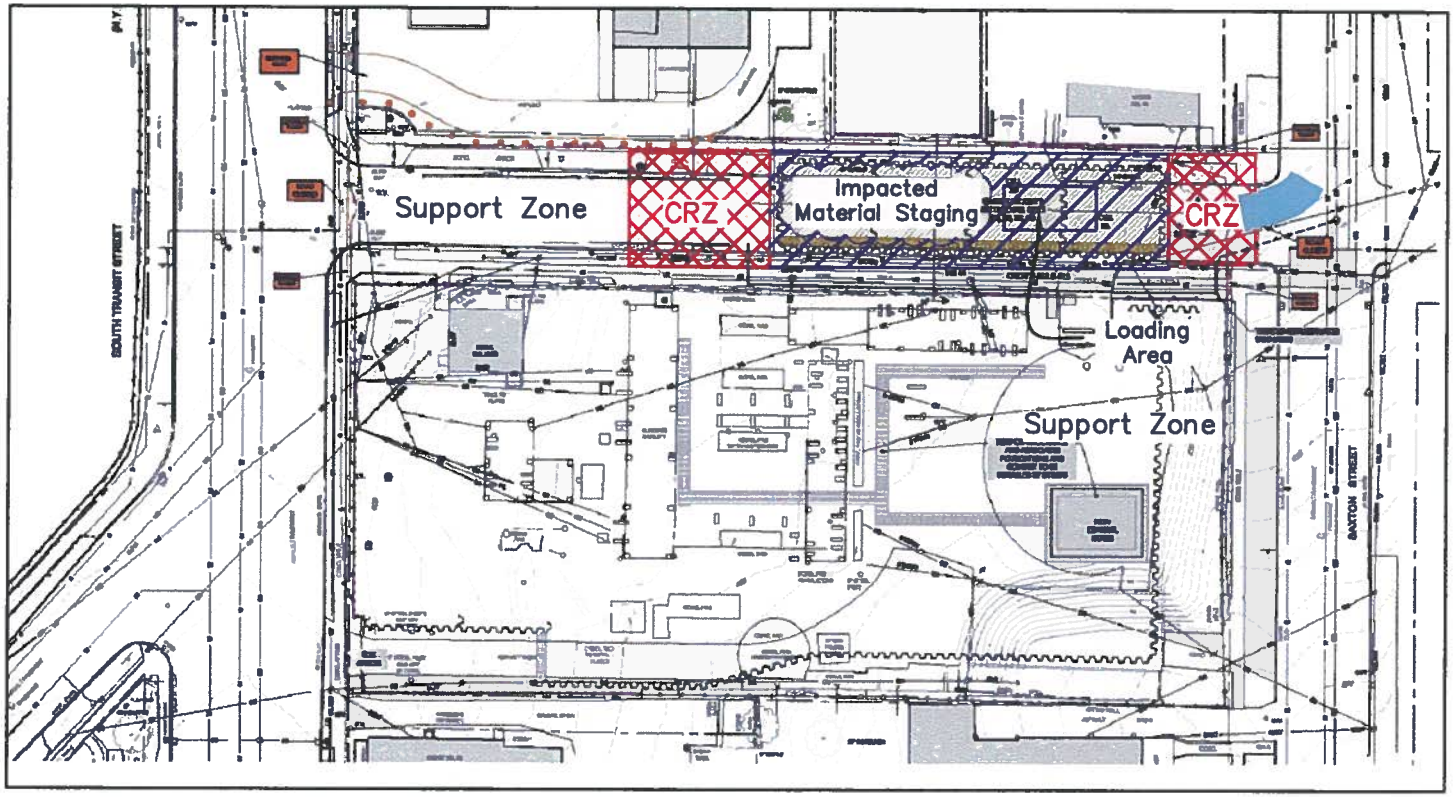
Phase II - Proposed Access Routes and Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 6

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazderski
CAD FILE:	Phase 2 Work--6R
SCALE:	As Shown



Legend

- Exclusion Zone
- Contamination Reduction Zone
- Access Road

60 0 60
SCALE IN FEET

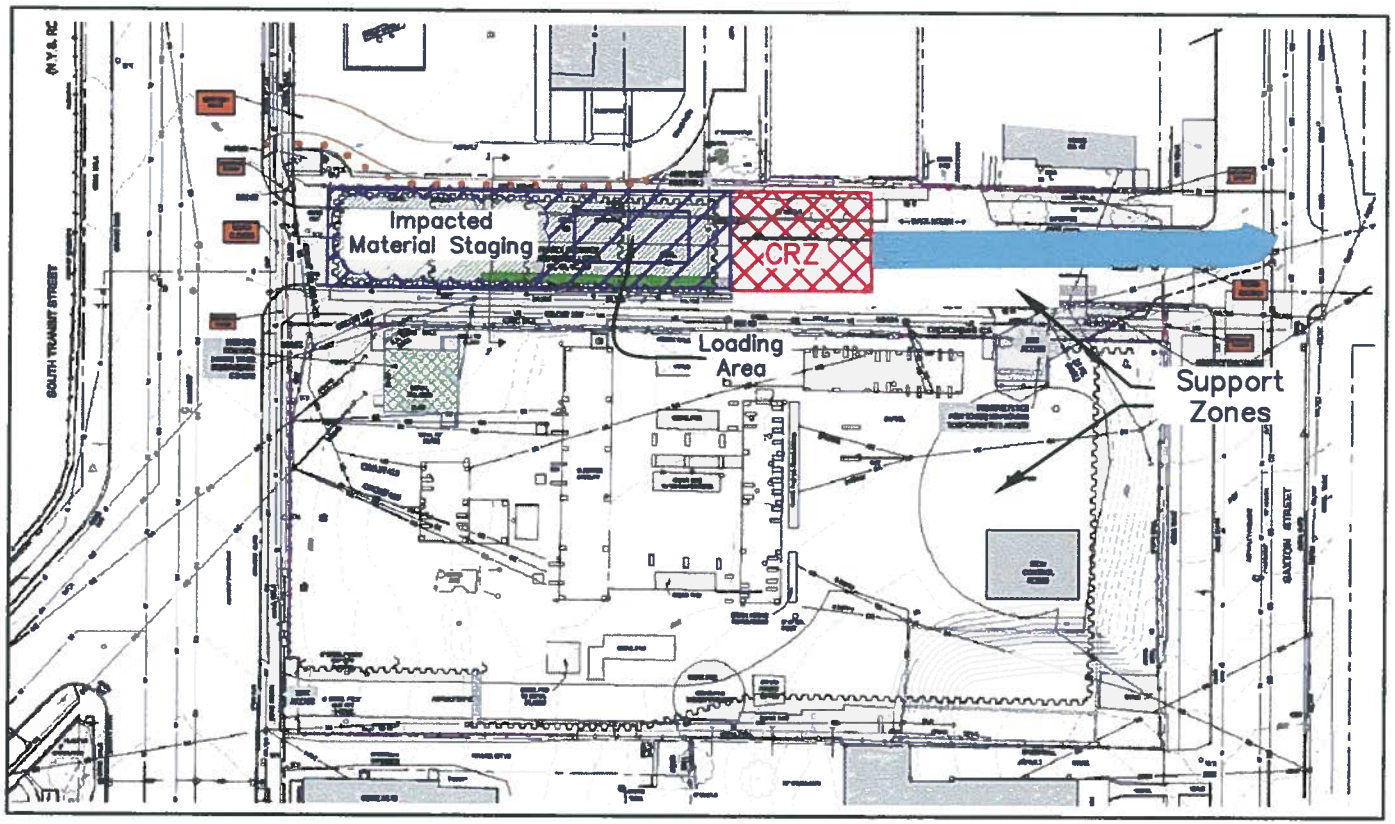
Phase III - Proposed Access Routes and Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 7

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazderski
CAD FILE:	Phase 3 Work-7R
SCALE:	As Shown



Legend

Exclusion Zone

Contamination Reduction Zone

Access Road

60 0 60

SCALE IN FEET

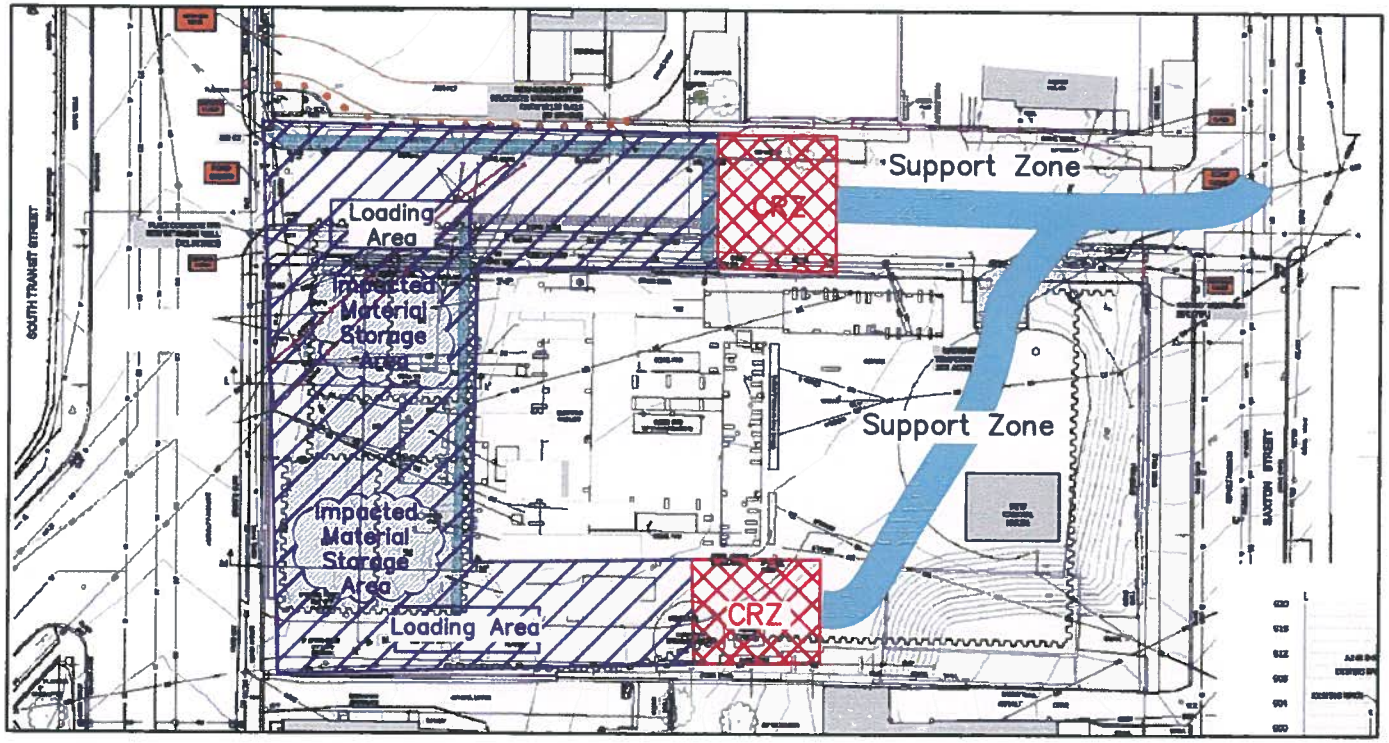
Phase IV - Proposed Access Routes and Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 8

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazderski
CAD FILE:	Phase 4 Work--SR
SCALE:	As Shown



Legend

60 0 60

SCALE IN FEET

- Exclusion Zone
- Contamination Reduction Zone
- Access Road

Phase V - Proposed Access Routes and Site Work Zone Delineation

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 9

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazdersld
CAD FILE:	Phase 5 Work-SR
SCALE:	As Shown

APPENDIX L

Qualifications of Riccelli Trucking

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 7A-434

Pursuant to Article 27,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

RICCELLI TRUCKING, INC.
P.O. BOX 6401
SYRACUSE, NY 13217

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

CONTACT NAME: LUCILLE NICHOLSON/AMANDA POTTER-OFFICE MGR.
COUNTY: ONONDAGA
TELEPHONE NO: (315)701-0002

EFFECTIVE DATE: 06/05/2013
EXPIRATION DATE: 06/04/2014
US EPA ID NUMBER:

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:

The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Albany Rapp Road	Albany , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
AUBURN LANDFILL	AUBURN , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
BRISTOL HILL LANDFILL	FULTON , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
BROOME COUNTY LANDFILL	BINGHAMTON , NY	Non-Hazardous Industrial/Commercial Waste Tires Asbestos Petroleum Contaminated Soil	
C&D HAKES LANDFILL	PAINTED POST , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
Chaffee Landfill	Sardinia , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS: New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: _____ Date: 5 / 13 / 13

NOTICE

This renewed permit is not valid until the effective date listed on the permit

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 7A-434

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SYRACUSE, NY 13217

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☐ NEW
■ RENEWAL
☐ MODIFICATION

CONTACT NAME:	LUCILLE NICHOLSON/AMANDA POTTER-OFFICE MGR.	EFFECTIVE DATE:	06/05/2013
COUNTY:	ONONDAGA	EXPIRATION DATE:	06/04/2014
TELEPHONE NO:	(315)701-0002	US EPA ID NUMBER:	

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY: (Continued)
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
CHEMUNG COUNTY LANDFILL	CHEMUNG , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
CORTLAND COUNTY LANDFILL	MCGRAW , NY	Non-Hazardous Industrial/Commercial Waste Tires	
DEVELOPMENT AUTHORITY OF NORTH COUNTRY	RODMAN , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
High Acres Western Expansion Landfill	Fairport , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
HYLAND LANDFILL	ANGELICA , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
MADISON COUNTY LANDFILL	CANASTOTA , NY	Non-Hazardous Industrial/Commercial Waste Tires Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
MILL SEAT LANDFILL	BERGEN , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
ONEIDA-HERKIMER REGIONAL LANDFILL	BOONVILLE , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Grease Trap Waste Sludge from Sewage or Water Supply Treatment Plant	
ONTARIO COUNTY LANDFILL	STANLEY , NY	Non-Hazardous Industrial/Commercial Asbestos	

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 7A-434

Pursuant to Article 27, Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

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AUTHORIZED WASTE TYPES BY DESTINATION FACILITY: (Continued)
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
ONTARIO COUNTY LANDFILL	STANLEY , NY	Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
OSWEGO COUNTY ENERGY RECOVERY FACILITY	FULTON , NY	Non-Hazardous Industrial/Commercial Waste Tires	
Seneca Meadows LF	Waterloo , NY	Non-Hazardous Industrial/Commercial Waste Tires Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
STEUBEN CO SLF#4	BATH , NY	Non-Hazardous Industrial/Commercial Waste Tires Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
WATERTOWN PCP	WATERTOWN , NY	Septage only (residential) Residential Raw Sewage including Portable Toilet Waste Sludge from Sewage or Water Supply Treatment Plant	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 7A-434

Pursuant to Article 27,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

RICCELLI TRUCKING, INC.
P.O. BOX 6401
SYRACUSE, NY 13217

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

CONTACT NAME: LUCILLE NICHOLSON/AMANDA POTTER-OFFICE MGR.
COUNTY: ONONDAGA
TELEPHONE NO: (315)701-0002

EFFECTIVE DATE: 06/05/2013
EXPIRATION DATE: 06/04/2014
US EPA ID NUMBER:

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:

The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Albany Rapp Road	Albany , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
AUBURN LANDFILL	AUBURN , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
BRISTOL HILL LANDFILL	FULTON , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
BROOME COUNTY LANDFILL	BINGHAMTON , NY	Non-Hazardous Industrial/Commercial Waste Tires Asbestos Petroleum Contaminated Soil	
C&D HAKES LANDFILL	PAINTED POST , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
Chaffee Landfill	Sardinia , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS: New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: _____ Date: 5 /13 /13

NOTICE

This renewed permit is not valid until the effective date listed on the permit

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The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
CHEMUNG COUNTY LANDFILL	CHEMUNG , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
CORTLAND COUNTY LANDFILL	MCGRAW , NY	Non-Hazardous Industrial/Commercial Waste Tires	
DEVELOPMENT AUTHORITY OF NORTH COUNTRY	RODMAN , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
High Acres Western Expansion Landfill	Fairport , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
HYLAND LANDFILL	ANGELICA , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
MADISON COUNTY LANDFILL	CANASTOTA , NY	Non-Hazardous Industrial/Commercial Waste Tires Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
MILL SEAT LANDFILL	BERGEN , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
ONEIDA-HERKIMER REGIONAL LANDFILL	BOONVILLE , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Grease Trap Waste Sludge from Sewage or Water Supply Treatment Plant	
ONTARIO COUNTY LANDFILL	STANLEY , NY	Non-Hazardous Industrial/Commercial Asbestos	

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DIVISION OF MATERIALS MANAGEMENT

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COUNTY:	ONONDAGA	EXPIRATION DATE:	06/04/2014
TELEPHONE NO:	(315)701-0002	US EPA ID NUMBER:	

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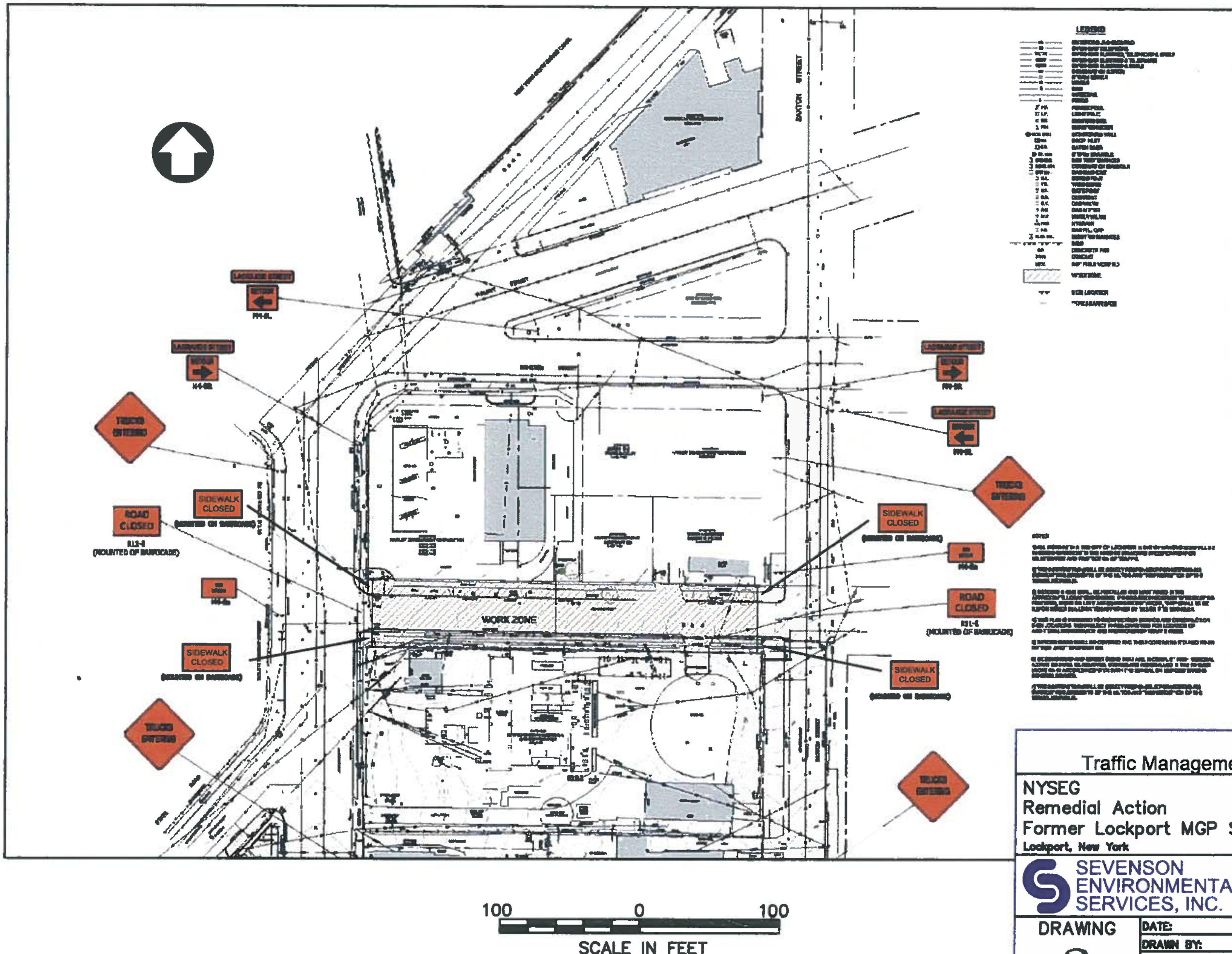
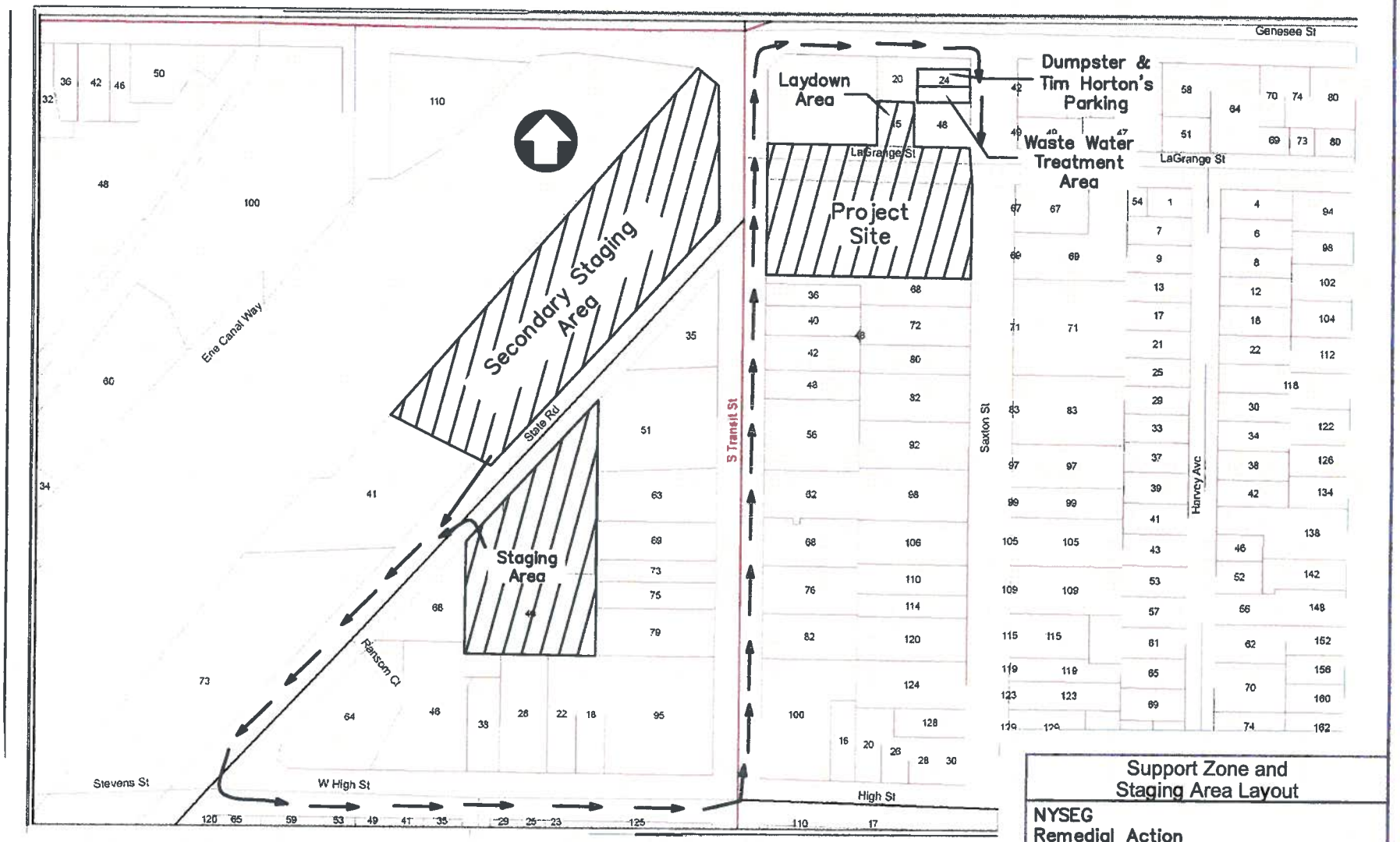
APPENDIX M

Traffic Control Plan Layout and Proposed On Site and Off Site Haul Routes



Traffic Management Plan	
NYSEG Remedial Action Former Lockport MGP Site Lockport, New York	
SEVENSON ENVIRONMENTAL SERVICES, INC.	
DRAWING 3	DATE: 6/10/13 DRAWN BY: C. Bigelow CHECKED BY: J. Pazderski CAD FILE: Traffic Plan SCALE: As Shown



Legend

Travel Route

200 0 200

SCALE IN FEET

Support Zone and Staging Area Layout

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING 2

DATE:	6/10/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazderski
CAD FILE:	Support-Staging
SCALE:	As Shown

mapquest

Trip to:
425 Perinton Pkwy
Fairport, NY 14450-9104
86.17 miles / 1 hour 44 minutes

Notes

ROUND TRIP TO
HIGH ACRES LANDFILL
425 PERINTON PARKWAY
FAIRPORT, NY 14450

18 S TRANSIT St, Lockport, NY 14094-4349

1. Start out going **south** on **S TRANSIT St / RT-78** toward **W High St**. Map	**0.1 Mi** *0.1 Mi Total*
2. Take the 1st **left** onto **High St**. Map	**1.0 Mi** *1.2 Mi Total*
3. Turn **slight right** onto **Akron St**. Map	**0.7 Mi** *1.9 Mi Total*
4. **Akron St** becomes **Akron Rd**. Map	**5.1 Mi** *7.0 Mi Total*
5. Turn **slight right** onto **Akron Rd / RT-93 E**. Map	**1.5 Mi** *8.5 Mi Total*
6. Turn **slight left** onto **Akron Rd / RT-93**. Continue to follow **RT-93**. Map	**6.2 Mi** *14.7 Mi Total*
7. Turn **left** onto **Carney Rd**. Map	**1.9 Mi** *16.6 Mi Total*
8. Turn **right** onto **Scotland Rd**. Map	**2.2 Mi** *18.8 Mi Total*
9. Turn **sharp left** onto **Indian Falls Rd**. Map	**0.8 Mi** *19.7 Mi Total*
10. **Indian Falls Rd** becomes **Akron Rd**. Map	**3.4 Mi** *23.0 Mi Total*
11. Turn **right** onto **Alleghany Rd / RT-77**. Map	**1.6 Mi** *24.6 Mi Total*
12. Take the **I-90** ramp toward **Thruway**. Map	**0.2 Mi** *24.8 Mi Total*
13. Merge onto **I-90 E / New York State Thruway E** toward **Albany** (Portions toll). Map	**50.6 Mi** *75.4 Mi Total*
14. Take the **I-490** exit, **EXIT 45**, toward **Victor / Rochester**. Map	**0.8 Mi** *76.2 Mi Total*

15. Take the **RT-96** exit, **EXIT 29**, toward **Victor**. Map	**0.4 Mi** *76.5 Mi Total*
16. Turn **right** onto **RT-96 N / Pittsford Victor Rd / Victor Rd**. Map	**1.0 Mi** *77.5 Mi Total*
17. Turn **right** onto **Turk Hill Rd**. Map	**2.7 Mi** *80.2 Mi Total*
18. Turn **right** onto **Palmyra Rd / RT-31 / Pittsford Palmyra Rd**. Continue to follow **RT-31**. Map	**3.7 Mi** *83.9 Mi Total*
19. Turn **left** onto **N Wayneport Rd**. Map	**1.5 Mi** *85.4 Mi Total*
20. Turn **left** onto **Quaker Rd**. Map	**0.5 Mi** *86.0 Mi Total*
21. **Quaker Rd** becomes **Perinton Pky**. Map	**0.2 Mi** *86.2 Mi Total*
22. **425 PERINTON PKWY**. Map	
425 Perinton Pkwy, Fairport, NY 14450-9104	

Total Travel Estimate: **86.17 miles - about 1 hour 44 minutes**

mapquest

Trip to:
18 S TRANSIT St
Lockport, NY 14094-4349
89.39 miles / 2 hours 11 minutes

Notes

ROUND TRIP TO MILL SEAT LANDFILL
303 BROWN ROAD
BERGEN, NY 14416

	A	**18 S TRANSIT St**, Lockport, NY 14094-4349	
		1. Start out going **south** on **S TRANSIT St / RT-78** toward **W High St**. Map	**0.1 Mi**
		2. Take the 1st **left** onto **High St**. Map	**1.0 Mi**
		3. Turn **slight right** onto **Akron St**. Map	**0.7 Mi**
		4. **Akron St** becomes **Akron Rd**. Map	**5.1 Mi**
		5. Stay **straight** to go onto **Bunker Hill Rd / RT-93**. Continue to follow **Bunker Hill Rd**. Map	**2.1 Mi**
		6. Turn **right** onto **Royalton Center Rd**. Map	**0.7 Mi**
		7. Turn **left** onto **Arnold Rd**. Map	**0.5 Mi**
		8. Turn **right** onto **Ernest Rd**. Map	**0.3 Mi**
		9. **Ernest Rd** becomes **Lewiston Rd**. Map	**11.4 Mi**
		10. Turn **slight right** to stay on **Lewiston Rd**. Map	**1.9 Mi**
		11. Turn **slight left** onto **Maltby Rd**. Map	**2.1 Mi**
		12. Turn **right** onto **Fisher Rd**. Map	**1.1 Mi**
	262	13. Turn **left** onto **RT-262 / Drake St**. Map	**3.0 Mi**
	98	14. Turn **right** onto **RT-98 / RT-262 / S Main St**. Continue to follow **RT-98 / RT-262**. Map	**0.2 Mi**
	262	15. Take the 1st **left** onto **RT-262 / Ford Rd**. Continue to follow **RT-262**. Map	**12.6 Mi**
	19	16. Turn **right** onto **S Lake Ave / RT-19**. Map	**0.3 Mi**

17. Turn **left** onto **Buffalo Rd / RT-33**. Map		**0.4 Mi**
18. Stay **straight** to go onto **RT-33A**. Map		**0.5 Mi**
19. Turn **right** onto **Brew Rd**. Map		**0.7 Mi**
20. **303 BREW RD** is on the **right**. Map		

A to **B** Travel Estimate: **44.86 mi - about 1 hour 4 minutes**

B **303 Brew Rd**, Bergen, NY 14416-9310

1. Start out going **north** on **Brew Rd** toward **Chili Riga Center Rd / RT-33A**. Map		**0.7 Mi**
2. Turn **left** onto **RT-33A / Chili Riga Center Rd**. Continue to follow **RT-33A**. Map		**0.5 Mi**
3. **RT-33A** becomes **Buffalo Rd / RT-33**. Map		**0.4 Mi**
4. Turn **right** onto **S Lake Ave / RT-19**. Map		**0.3 Mi**
5. Turn **left** onto **RT-262 / Townline Rd**. Continue to follow **RT-262**. Map		**12.6 Mi**
6. Turn **right** onto **RT-98 / RT-262 / Oak Orchard Rd**. Continue to follow **RT-98 / RT-262**. Map		**0.2 Mi**
7. Take the 1st **left** onto **RT-262 / Drake St**. Map		**3.0 Mi**
8. Turn **right** onto **Fisher Rd**. Map		**1.1 Mi**
9. Turn **left** onto **Maltby Rd**. Map		**2.1 Mi**
10. Stay **straight** to go onto **Lewiston Rd**. Map		**14.0 Mi**
11. Turn **left** onto **Chestnut Ridge Rd / RT-77**. Continue to follow **RT-77**. Map		**6.6 Mi**
12. Turn **left** onto **Rochester Rd / RT-31**. Continue to follow **RT-31**. Map		**2.3 Mi**
13. Turn **left** onto **Washburn St / RT-31**. Map		**0.09 Mi**
14. Take the 1st **right** onto **Walnut St / RT-31**. Map		**0.6 Mi**
15. Turn **left** onto **S TRANSIT St / RT-78**. Map		**0.05 Mi**
16. **18 S TRANSIT ST** is on the **left**. Map		

B to **C** Travel Estimate: **44.53 mi - about 1 hour 6 minutes**

C **18 S TRANSIT St**, Lockport, NY 14094-4349

Total Travel Estimate: **89.39 miles - about 2 hours 11 minutes**

mapquest

Trip to:
18 S TRANSIT St
Lockport, NY 14094-4349
222.07 miles / 4 hours 9 minutes

Notes
ROUND TRIP TO
SENECA MEADOWS
1786 SALMAN ROAD
WATERLOO, NY 13165

	A	**18 S TRANSIT St**, Lockport, NY 14094-4349	
●		1. Start out going **south** on **S TRANSIT St / RT-78** toward **W High St**. Map	**0.1 Mi** *0.1 Mi Total*
↰		2. Take the 1st **left** onto **High St**. Map	**1.0 Mi** *1.2 Mi Total*
↗		3. Turn **slight right** onto **Akron St**. Map	**0.7 Mi** *1.9 Mi Total*
↑		4. **Akron St** becomes **Akron Rd**. Map	**5.1 Mi** *7.0 Mi Total*
↗	EAST 93	5. Turn **slight right** onto **Akron Rd / RT-93 E**. Map	**1.5 Mi** *8.5 Mi Total*
↖	93	6. Turn **slight left** onto **Akron Rd / RT-93**. Continue to follow **RT-93**. Map	**6.2 Mi** *14.7 Mi Total*
↰		7. Turn **left** onto **Carney Rd**. Map	**1.9 Mi** *16.6 Mi Total*
↱		8. Turn **right** onto **Scotland Rd**. Map	**2.2 Mi** *18.8 Mi Total*
↰		9. Turn **sharp left** onto **Indian Falls Rd**. Map	**0.8 Mi** *19.7 Mi Total*
↑		10. **Indian Falls Rd** becomes **Akron Rd**. Map	**3.4 Mi** *23.0 Mi Total*
↱	77	11. Turn **right** onto **Alleghany Rd / RT-77**. Map	**1.6 Mi** *24.6 Mi Total*
RAMP		12. Take the **I-90** ramp toward **Thruway**. Map	**0.2 Mi** *24.8 Mi Total*
↑	EAST 90	13. Merge onto **I-90 E / New York State Thruway E** toward **Albany** (Portions toll). Map	**74.1 Mi** *98.9 Mi Total*
42 EXIT ↗	SOUTH 14	14. Merge onto **RT-14 S** via **EXIT 42** toward **Geneva / RT-96 / Clifton Springs**. Map	**0.9 Mi** *99.8 Mi Total*

15. Merge onto **RT-96 S** toward **Waterloo**. Map	**6.6 Mi** *106.4 Mi Total*
16. Turn **right** onto **Virginia St / RT-96**. Continue to follow **RT-96**. Map	**1.2 Mi** *107.6 Mi Total*
17. Turn **right** onto **W River St / RT-96**. Map	**0.03 Mi** *107.7 Mi Total*
18. Welcome to **WATERLOO, NY**. Map	

A to **B** Travel Estimate: **107.67 mi - about 2 hours 2 minutes**

B **Waterloo, NY**

1. Start out going **east** on **W River St / RT-96** toward **Washington St**. Map	**0.03 Mi** *107.7 Mi Total*
2. Take the 1st **left** onto **Washington St / RT-96**. Continue to follow **RT-96**. Map	**1.2 Mi** *108.9 Mi Total*
3. Turn **left** onto **North Rd / RT-96**. Continue to follow **RT-96**. Map	**6.2 Mi** *115.1 Mi Total*
4. Merge onto **RT-14 N**. Map	**0.5 Mi** *115.5 Mi Total*
5. Merge onto **I-90 W / New York State Thruway W** via the ramp on the **left** toward **Buffalo** (Portions toll). Map	**90.4 Mi** *206.0 Mi Total*
6. Take the **RT-78** exit, **EXIT 49**, toward **Depew / Lockport**. Map	**0.9 Mi** *206.9 Mi Total*
7. Turn **left** onto **RT-78 / TRANSIT Rd**. Continue to follow **RT-78**. Map	**15.2 Mi** *222.1 Mi Total*
8. **18 S TRANSIT ST** is on the **right**. Map	

B to **C** Travel Estimate: **114.40 mi - about 2 hours 6 minutes**

C **18 S TRANSIT St**, Lockport, NY 14094-4349

mapquest

Notes

Trip to:
18 S TRANSIT St
Lockport, NY 14094-4349
222.07 miles / 4 hours 9 minutes

mapquest

Trip to:
18 S TRANSIT St
Lockport, NY 14094-4349
611.20 miles / 10 hours 58 minutes

Notes
ROUND TRIP TO
EMSI
304 TOW PATH ROAD
FORT EDWARD, NY 12828

	A	**18 S TRANSIT St**, Lockport, NY 14094-4349	
●		1. Start out going **south** on **S TRANSIT St / RT-78** toward **W High St**. Map	**0.1 Mi** *0.1 Mi Total*
↰		2. Take the 1st **left** onto **High St**. Map	**1.0 Mi** *1.2 Mi Total*
↗		3. Turn **slight right** onto **Akron St**. Map	**0.7 Mi** *1.9 Mi Total*
↑		4. **Akron St** becomes **Akron Rd**. Map	**5.1 Mi** *7.0 Mi Total*
↗	EAST 93	5. Turn **slight right** onto **Akron Rd / RT-93 E**. Map	**1.5 Mi** *8.5 Mi Total*
↖	93	6. Turn **slight left** onto **Akron Rd / RT-93**. Continue to follow **RT-93**. Map	**6.2 Mi** *14.7 Mi Total*
↰		7. Turn **left** onto **Carney Rd**. Map	**1.9 Mi** *16.6 Mi Total*
↱		8. Turn **right** onto **Scotland Rd**. Map	**2.2 Mi** *18.8 Mi Total*
↰		9. Turn **sharp left** onto **Indian Falls Rd**. Map	**0.8 Mi** *19.7 Mi Total*
↑		10. **Indian Falls Rd** becomes **Akron Rd**. Map	**3.4 Mi** *23.0 Mi Total*
↱	77	11. Turn **right** onto **Alleghany Rd / RT-77**. Map	**1.6 Mi** *24.6 Mi Total*
RAMP		12. Take the **I-90** ramp toward **Thruway**. Map	**0.2 Mi** *24.8 Mi Total*
↑	EAST 90	13. Merge onto **I-90 E / New York State Thruway E** toward **Albany** (Portions toll). Map	**218.9 Mi** *243.7 Mi Total*
28 EXIT ↗		14. Take **EXIT 28** toward **RT-30A / RT-5S / Johnstown / RT-5 / Gloversville**. Map	**0.6 Mi** *244.3 Mi Total*

15. Turn **left** onto **Riverside Dr**. Map	**0.6 Mi** *244.9 Mi Total*
16. Turn **right** onto **RT-30A / S Bridge St**. Map	**0.4 Mi** *245.3 Mi Total*
17. Turn **left** onto **E Main St / RT-30A / RT-5**. Map	**0.4 Mi** *245.6 Mi Total*
18. Take the 3rd **right** onto **Broadway / RT-30A**. Continue to follow **RT-30A N**. Map	**5.3 Mi** *250.9 Mi Total*
19. Turn **right** onto **RT-29**. Pass through 1 roundabout. Map	**31.2 Mi** *282.1 Mi Total*
20. Turn **left** onto **Broadway / US-9 / RT-50 / RT-29**. Continue to follow **Broadway / US-9 / RT-50**. Map	**0.4 Mi** *282.5 Mi Total*
21. Turn **slight right** onto **US-9 / RT-50**. Continue to follow **RT-50**. Map	**1.9 Mi** *284.4 Mi Total*
22. Merge onto **I-87 N** via the ramp on the **left**. Map	**10.0 Mi** *294.4 Mi Total*
23. Merge onto **Saratoga Rd / US-9 N** via **EXIT 17N** toward **South Glens Falls**. Map	**1.7 Mi** *296.1 Mi Total*
24. Turn **right** onto **Reynolds Rd / RT-197**. Continue to follow **RT-197**. Map	**4.7 Mi** *300.8 Mi Total*
25. Turn **left** onto **US-4**. Map	**0.2 Mi** *300.9 Mi Total*
26. Take the 2nd **right** onto **East St**. Map	**0.3 Mi** *301.2 Mi Total*
27. Turn **left** onto **Wing St**. Map	**0.1 Mi** *301.4 Mi Total*
28. Take the 1st **right** onto **Culver St**. Map	**0.07 Mi** *301.5 Mi Total*
29. Turn **left** onto **McIntyre St**. Map	**0.1 Mi** *301.6 Mi Total*
30. Take the 2nd **right** onto **Towpath Ln**. Map	**0.5 Mi** *302.1 Mi Total*
31. **304 TOWPATH LN** is on the **right**. Map	

A to **B** Travel Estimate: **302.10 mi - about 5 hours 27 minutes**

B **304 Towpath Ln**, Fort Edward, NY 12828-1754

1. Start out going **southwest** on **Towpath Ln** toward **Factory St**. Map	**0.3 Mi** *302.4 Mi Total*
2. Turn **slight left** onto **Factory St**. Map	**0.4 Mi** *302.8 Mi Total*
3. Take the 2nd **left** onto **Wing St**. Map	**0.2 Mi** *302.9 Mi Total*
4. Turn **right** onto **East St**. Map	**0.3 Mi** *303.2 Mi Total*
5. Turn **left** onto **US-4**. Map	**0.2 Mi** *303.4 Mi Total*
6. Take the 2nd **right** onto **Bridge St / RT-197**. Continue to follow **RT-197**. Map	**4.7 Mi** *308.1 Mi Total*
7. Turn **left** onto **Saratoga Rd / US-9 S**. Map	**1.5 Mi** *309.6 Mi Total*
8. Merge onto **I-87 S** toward **Albany**. Map	**10.4 Mi** *320.1 Mi Total*
9. Merge onto **RT-50 S** via **EXIT 15** toward **RT-29 W / Saratoga Springs**. Map	**1.9 Mi** *322.0 Mi Total*
10. Turn **slight left** onto **US-9 / RT-50 / Broadway**. Map	**0.4 Mi** *322.4 Mi Total*
11. Turn **right** onto **Washington St / RT-29**. Continue to follow **RT-29**. Pass through 1 roundabout. Map	**31.2 Mi** *353.6 Mi Total*
12. Turn **left** onto **N Comrie Ave / RT-29 / RT-30A**. Continue to follow **RT-30A S**. Map	**5.3 Mi** *358.9 Mi Total*
13. Turn **left** onto **W Main St / RT-30A / RT-5**. Map	**0.4 Mi** *359.3 Mi Total*
14. Take the 2nd **right** onto **S Bridge St / RT-30A**. Map	**0.4 Mi** *359.6 Mi Total*
15. Turn **left** onto **Riverside Dr**. Map	**0.5 Mi** *360.1 Mi Total*
16. Merge onto **I-90 W / New York State Thruway W** toward **Buffalo** (Portions toll). Map	**234.9 Mi** *595.1 Mi Total*
17. Take the **RT-78** exit, **EXIT 49**, toward **Depew / Lockport**. Map	**0.9 Mi** *596.0 Mi Total*
18. Turn **left** onto **RT-78 / TRANSIT Rd**. Continue to follow **RT-78**. Map	**15.2 Mi** *611.2 Mi Total*
19. **18 S TRANSIT ST** is on the **right**. Map	

B to **C** Travel Estimate: **309.10 mi - about 5 hours 31 minutes**

C **18 S TRANSIT St**, Lockport, NY 14094-4349

mapquest

Notes

Trip to:
18 S TRANSIT St
Lockport, NY 14094-4349
611.20 miles / 10 hours 58 minutes

mapquest

Trip to:
18 S TRANSIT St
Lockport, NY 14094-4349
39.75 miles / 1 hour 1 minute

Notes
ROUND TRIP TO
COVANTA NIAGARA
100 56TH STREET
NIAGARA FALLS, NY 14304

A 18 S TRANSIT St, Lockport, NY 14094-4349

1. Start out going **north** on **S TRANSIT St / RT-78** toward **State Rd**. Map	**0.05 Mi** *0.05 Mi Total*
2. Turn **left** onto **RT-31 / W Genesee St**. Continue to follow **RT-31 W**. Map	**7.7 Mi** *7.7 Mi Total*
3. Turn **left** onto **Shawnee Rd / RT-425**. Map	**1.1 Mi** *8.8 Mi Total*
4. Turn **right** onto **Lockport Rd**. Map	**6.5 Mi** *15.3 Mi Total*
5. Stay **straight** to go onto **Packard Rd**. Map	**1.7 Mi** *16.9 Mi Total*
6. Merge onto **I-190 S / Niagara Expy** via the ramp on the **left**. Map	**2.3 Mi** *19.2 Mi Total*
7. Take the **RT-384 / Buffalo Ave** exit, **EXIT 21**. Map	**0.2 Mi** *19.4 Mi Total*
8. Turn **right** onto **Buffalo Ave / RT-384**. Map	**0.5 Mi** *19.9 Mi Total*
9. Turn **right** onto **56th St**. Map	**0.01 Mi** *19.9 Mi Total*
10. **100 56TH ST** is on the **left**. Map	

A to **B** Travel Estimate: **19.90 mi - about 30 minutes**

B 100 56th St, Niagara Falls, NY 14304-3806

1. Start out going **south** on **56th St** toward **Buffalo Ave / RT-384**. Map	**0.01 Mi** *19.9 Mi Total*
2. Turn **left** onto **Buffalo Ave / RT-384**. Map	**0.5 Mi** *20.4 Mi Total*
3. Merge onto **I-190 N / Niagara Expy** via the ramp on the **left** toward **Lewiston**. Map	**2.3 Mi** *22.8 Mi Total*

4. Take the **Packard Rd** exit, **EXIT 23**, toward **RT-182 / Porter Rd**. Map	**0.1 Mi** *22.9 Mi Total*
5. Turn **right** onto **Packard Rd**. Map	**1.6 Mi** *24.5 Mi Total*
6. **Packard Rd** becomes **Lockport Rd**. Map	**6.5 Mi** *30.9 Mi Total*
7. Turn **left** onto **Shawnee Rd / RT-425**. Map	**1.1 Mi** *32.0 Mi Total*
8. Turn **right** onto **Saunders Settlement Rd / RT-31 E**. Continue to follow **RT-31 E**. Map	**7.7 Mi** *39.7 Mi Total*
9. Turn **right** onto **S TRANSIT St / RT-78**. Map	**0.05 Mi** *39.8 Mi Total*
10. **18 S TRANSIT ST** is on the **left**. Map	

B to **C** Travel Estimate: **19.86 mi - about 30 minutes**

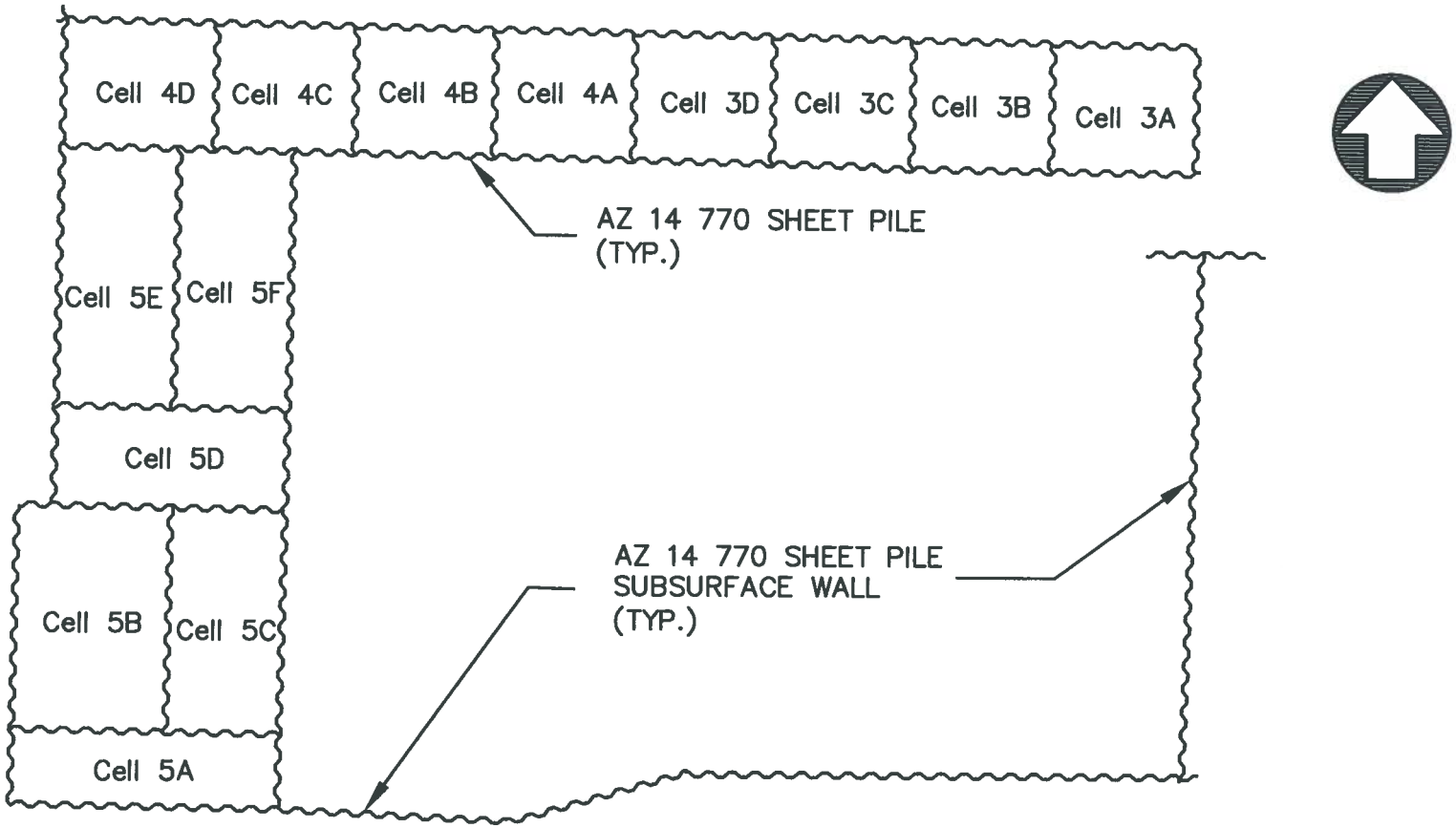
C **18 S TRANSIT St**, Lockport, NY 14094-4349

Total Travel Estimate: **39.75 miles - about 1 hour 1 minute**

APPENDIX N

Additional Project Plans

Proposed Sheet Pile Layout and Bracing Plan



40 0 40

SCALE IN FEET

Sheet Pile Layout Plan

NYSEG
Remedial Action
Former Lockport MGP Site
Lockport, New York

SEVENSON ENVIRONMENTAL SERVICES, INC.

DRAWING
13

DATE:	7/1/13
DRAWN BY:	C. Bigelow
CHECKED BY:	J. Pazderski
CAD FILE:	Sheet-Layout -AZ-14
SCALE:	As Shown

Sheeting Installation Plan and Sequencing for NYSEG Former MGP Site Remediation

Prior to the start of sheeting in any area of site the following procedures will be followed:

1. Ensure all utilities have been properly marked, abandoned or relocated as necessary prior to the start of work.
2. A Safe Plan of Action will be reviewed by the Site Health and Safety Officer to ensure all employees are aware of site hazards and the procedures in place to address them.
3. All equipment and rigging will be inspected to ensure that it is properly tagged and in good working order prior to the start of work.
4. Surveyors will locate and mark all proposed sheeting alignments in advance of the start of work to ensure the sheeting is installed at the required location and grade of the design.
5. Sevenson will use a PC220 excavator with a hoe ram to break and remove concrete within the sheeting alignment as required.
6. Sevenson will use a PC200 with an auger attachment to predrill the sheeting alignment to loosen the hardpan, to identify obstructions, and also to identify footer locations of existing retaining walls so the final sheeting alignment can be confirmed in the field.
7. Approximately one day after the start of clearing the alignment for the sheeting, a PC300 excavator with a Robovib, vibratory impact attachment will be used to initiate the installation of the sheeting.
8. Due to the requirement for the joints to be sealed, prior to each sheet being installed, laborers will have installed a bead of DeNeef swell seal prior to the operator placing the sheet.
9. On sheeting requiring toe pins, 3" pipes will have been installed on the piles prior to their delivery on site to facilitate the completion of rock drilling and pin installation.

The sequencing of the sheeting will proceed as follows:

1. Install the entire foot print of the Cell 5A sheeting alignment with walers, pins, etc.
2. Upon completion of Cell 5A, remove the southern, eastern and western sheeting walls which will be used for the installation of the cells in phase 3. The north wall will be left in place as those sheets will be required for the remediation of cells 5B and 5C.
3. Permanent sheeting for the vertical barrier wall will be installed in phases as required. After the utilities have been relocated for the completion of work in phase 1A, the permanent wall will be installed between the southeast corner of cell 5A and the southwest corner of the buttress. The installation will be completed in Phase 1B after the utilities have been relocated, the building has been demolished and the slab has been removed. Sevenson is aware of the overhead utilities that will remain near the north east entrance of the site and will field splice short sheets as necessary in this area to facilitate installation while maintaining safe clearance from the wires.
4. The sheets extracted from cell 5A plus an additional 270 linear feet of sheeting will be installed to encompass the entire foot print of cells 3A, 3b, 3C, and 3D at one time.
5. Once the remediation of phase 3 has been completed, the sheeting from Phase 3 will be removed and installed in its entirety in phase 4.

6. Upon the completion of phase 4, the sheeting will be installed in Cells 5B, 5C and 5D so that work can be performed as required.
7. Upon the completion of work in Cells 5B, 5C, and 5D the sheets will then be removed and installed one last time in cells 5E and 5F to facilitate the completion of the final phase of remediation.

The walers and struts will be purchased for cell 5A; 3A and 3B and then reused for the remainder of the project. As not all of the waler lengths are the same, after phase 4, Sevenson will send the walers purchased for Phases 1A and 3 back to their fabrication shop will they will be sized as required for the completion of work in Phase 5.

Vibration Monitoring Plan

Integrated Geotechnical Solutions, Inc.

June 17, 2013

Mr. James Pazderski
Sevenson Environmental Services, Inc.
2749 Lockport Road
Niagara Falls, New York 14305

Re: Proposed Vibration Monitoring Plan
NYSEG former Lockport MGP Site, Longport, NY

Dear Mr. Pazderski:

In accordance with your request, Integrated Geotechnical Solutions, Inc. (IGS) provides the following plan for monitoring vibration resulting during pile driving and extraction at the referenced site.

Section 02460, 3.11 VIBRATION MONITORING.

I. Equipment.

IGS recommends the installation of a minimum of six (6) remote vibration monitoring systems (RVMS) to simultaneously monitor and record vibration at the adjacent structures during pile installation and extraction.

Each RVMS consists of a weatherproof enclosure housing an Instantel® Minimate Plus™ vibration monitor and accessories to provide automated, continuous monitoring and data transmission with alert notification in the event vibration exceeds the threshold limit. The systems will be powered by A/C, battery, or solar power. The systems may be relocated as needed by Sevenson Environmental Services.

Instantel Minimate Plus™ vibration monitor specification is provided as Attachment A.

II. Monitoring Locations.

IGS recommends monitoring adjacent structures located at 4 S. Transit, 36 S. Transit, 68 Saxton Street and out building, 67-69 Saxton St, and 54 Saxton St. The geophones will be installed at each premise at the closest location on the structure to the work. The systems may be relocated in accordance with work or to areas of complaints at the discretion of the RE. Additional monitors will be supplied as needed at the rates indicated in the proposal.

Recommended locations are identified on the drawing provided as Attachment B.

III. Method of Monitoring.

Installation: In accordance with the manufacturer's recommended monitoring procedures, the geophones will be buried in the ground next to the structure at the closest point to the work and weighted with approximately 25 lbs. of sand in order to ensure proper coupling. The triaxial geophone measures ground vibration in three independent planes of motion (longitudinal, vertical and transverse). Upon installation, an internal calibration will be conducted prior to ensure proper operation.

The vibration monitors will be programmed for combination histogram / waveform monitoring mode and to record the highest peak particle velocity (PPV) during normal working hours. This mode of monitoring allows for (1) recording all vibration as a histogram event report in bar graph format at predetermined intervals providing clear documentation of the maximum vibration levels recorded and (2) recording of a

waveform event of vibration exceeding the threshold "trigger" limit. The threshold limit for this project as dictated in Section 02460, 3.11, is 0.75 in/sec.

The RMVS will be programmed to transmit data on a daily basis, typically at the end of each work day, and to immediately transmit data if vibration exceeds the PPV threshold limit of 0.75 in/sec to specified personnel.

IV. Reporting.

Vibration results recorded by each RMVS will be submitted to Sevenson Environmental for reporting and distribution.

If you have any questions or require additional information, please do not hesitate to call me. We look forward to the opportunity to work with your company.

Sincerely,

INTEGRATED GEOTECHNICAL SOLUTIONS, INC.

Robbi Kavalek
President

Attachments

Minimate Plus™

ATTACHMENT A

Advanced Vibration and Overpressure Monitor

Range of Applications:

- Blast-monitoring for compliance
- Near-field blast analysis
- Pile driving
- Construction activity
- Demolition activity
- Heavy Transportation
- Bridge monitoring
- Structural analysis
- Underwater blast monitoring
- 4 or 8 channel data acquisition
- Remote monitoring - Auto Call Home™
- Structural monitoring - Flex™

When we asked what you wanted in a vibration monitor, you said "Everything." So, we designed the **Instantel® Minimate Plus™** vibration and overpressure monitor. Ever since, it has become a favourite of contractors, consultants, engineers and blasters, because it offers unrivalled features and versatility in a rugged and easy-to-use package.

Versatile

Use the **Minimate Plus** monitor with an **Instantel Standard Triaxial Geophone** (ISEE or DIN version) and an overpressure microphone (Linear or A Weight) to provide a rugged, reliable compliance monitoring system. Add the **Instantel 8-Channel** option and a single monitor may be used with two triaxial geophones and two microphones.

For more demanding monitoring applications, the **Instantel Blastware® Advanced Module** software provides the capability to monitor a broad selection of vibration and overpressure sensors, as well as sensors for structural and environmental measurements. Monitor vibration, ambient environmental conditions, and the movement of structural cracks, all at the same time, all using the same **Minimate Plus** monitor.

Intelligent

For remote installations, the **Instantel Auto Call Home™** feature will automatically transfer event files from field to office as they are recorded using a variety of wired or wireless modems. From there, the **Blastware Mail** feature of the **Blastware** software automatically distributes files or summary information to multiple e-mail or text messaging addresses.

Easy to use

Even with all of these features, the **Minimate Plus** system is still easy for anyone to use. A high-contrast LCD, eight-key tactile keypad, coupled with simple menu-driven operations, provides complete control and confidence.

Minimate Plus - everything you need and more.

Key Features

- **Instantel Histogram Combo™** mode allows capture of full waveform records while recording in histogram mode.
- **Auto Call Home** feature automates remote monitoring applications.
- Sample rates from 1,024 to 16,000 S/s, per channel with up to 65,000 S/s available on a single channel.
- Available **Instantel 8-channel** option allows for two standard geophones and two microphones to be operated from one **Minimate Plus** monitor.
- Non-volatile memory with standard 300-event storage capacity (optional 1,500-event capacity).
- Records waveform events up to 100 seconds long with standard setup, or up to 500 seconds with advanced setup.
- Continuous monitoring means zero dead time, even while the unit is processing.
- Any channel can be matched to a wide variety of sensors - geophones, accelerometers, or hydrophones.

Minimate Plus™

General Specifications	Minimate Plus
Channels	Microphone and Triaxial Geophone or 4 independent user-configurable channels (two Microphones and two Triaxial Geophones or 8 independent channels with optional 8-channel upgrade)
Vibration Monitoring (with Standard Triaxial Geophone)	
Range	Up to 254 mm/s (10 in/s)
Resolution	0.127 mm/s (0.005 in/s) or 0.0159 mm/s (0.000625 in/s) with built-in preamp
Accuracy (ISEE / DIN)	+/- 5% or 0.5 mm/s (0.02 in/s), whichever is larger, between 4 and 125 Hz / DIN 45669-1 standard
Transducer Density	2.13 g/cc (133 lbs/ft^3)
Frequency Range (ISEE / DIN)	2 to 250 Hz, within zero to -3 dB of an ideal flat response / 1 to 315 Hz
Maximum Cable Length (ISEE / DIN)	75 m (250 ft) / 1,000 m (3,280 ft)
Air Overpressure Monitoring	
Weighting Scales	Linear or A-weight
Linear Range	88 to 148 dB (500 Pa (0.072 PSI) Peak)
Linear Resolution	0.25 Pa (0.0000363 PSI)
Linear Accuracy	+/- 10% or +/- 1 dB, whichever is larger, between 4 and 125 Hz
Linear Frequency Response	2 to 250 Hz between -3 dB roll off points
A-weight Range	50 to 110 dBA
A-weight Resolution	0.1 dBA

Waveform Recording

Record Modes	Manual, Single-shot, Continuous
Seismic Trigger	0.125 to 254 mm/s (0.005 to 10 in/s)
Acoustic Triggers	
Linear	100 to 148 dB
A-weight	55 to 110 dBA
Sample Rate	1,024 to 16,384 S/s per channel (independent of record time), up to 65,536 S/s in single-channel mode with advanced software (max 8,192 S/s per channel for 8 channels)
Record Stop Mode	Fixed record time, **Instantel® AutoRecord™** record stop mode
Record Time	1 to 100 seconds (programmable in one-second steps) or 500 seconds plus 0.25 seconds pre-trigger
AutoRecord Time	Auto window programmable from 1 to 9 seconds, plus a 0.25 second pre-trigger. Event is recorded until activity remains below trigger level for duration of auto window, or until available memory is filled.
Cycle Time	Recording uninterrupted by event processing - no dead time
Storage Capacity	
Full Waveform Events	300 one-second events at 1,024 S/s sample rate (1,500 event capacity with optional memory upgrade)
Event Summaries	1,750 (8,750 event capacity with optional memory upgrade)

Histogram Recording

Record Modes	Histogram and **Instantel Histogram Combo™** (monitor captures triggered waveforms while recording in Histogram mode)
Recording Interval	2, 5 or 15 seconds; 1, 5 or 15 minutes
Storage Capacity	46,656 intervals - 3 days at 5-second intervals or 102 days at 15-minute intervals (with memory upgrade - 15 days at 5-second intervals or 540 days at 15-minute intervals)

Physical Specifications

Dimensions	81 x 91 x 160 mm (3.2 x 3.6 x 6.3 in)
Weight	1.4 kg (3 lbs)
Battery	Rechargeable 6 V sealed gel cell - capacity for 210 hours of continuous monitoring
User Interface	8-key keypad with domed tactile keys
Display	4-line x 20-character, high-contrast, backlit LCD
PC Interface	RS-232
Auxillary Inputs and Outputs	External Trigger, Remote Alarm, coordinate download from GPS
Environmental	
LCD Operating Temperature	-10 to 50°C (14 to 122°F)
Electronics Operating Temperature	-20 to 60°C (-4 to 140°F)
Remote Communications	Compatible with Telephone, GSM, Cellular, RF, Satellite, Short-haul modems and Ethernet® device servers. Automatically transfers events when they occur through the **Instantel Auto Call Home™** feature.
Additional Features	Monitor start/stop timer

Corporate Office:
309 Legget Drive,
Ottawa, Ontario K2K 3A3
Canada

US Office:
808 Commerce Park Drive,
Ogdensburg, New York 13669
USA

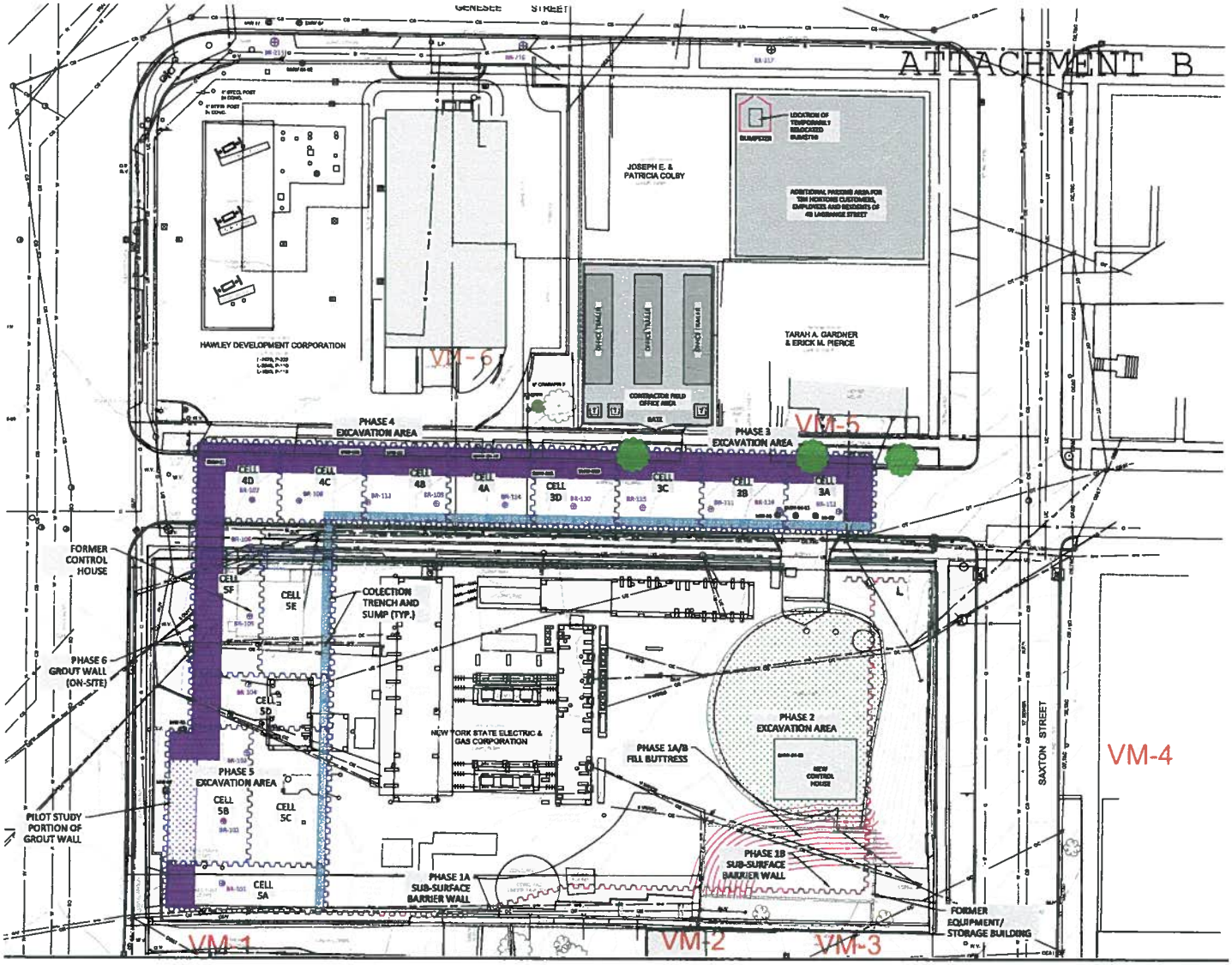
Toll Free: (800) 267 9111
Telephone: (613) 592 4642
Facsimile: (613) 592 4296
Email: sales@instantel.com

71480052 Rev 07 - Product Specifications are Subject to Change

Instantel

The World's Most Trusted Vibration Monitors

ATTACHMENT B



Odor Control Plan

SEVENSON ENVIRONMENTAL SERVICES INC'S

ODOR CONTROL PLAN
(OCP)

FOR

REMEDIATION OF NYSEG'S
FORMER MGP SITE, LOCKPORT, NEW YORK

June 2013

ODOR CONTROL PLAN

TABLE OF CONTENTS

Page No.

ATTACHMENTS

1.0 INTRODUCTION

This Odor Control Plan (OCP) provides a description of the engineering controls that shall be implemented to reduce odor-causing emissions, in support of the Remedial Action Design associated with NYSEG'S Former MGP Site located in the City of Lockport, Niagara County, New York. The purpose of the OCP is to address odor reduction which is the basis for odor control operations and response actions that shall be in place before the excavation of source material can take place.

Odors will be controlled during any work related to the excavation and handling of soils. All complaints concerning odors will be immediately reported to NYSEG's Project Manager and investigated by Sevenson so that the source of the odors can be ascertained with appropriate engineering controls implemented promptly.

2.0 MONITORING METHODS

To monitor vapor, odor, and particulate emissions in the work area, real time air monitoring will be performed continuously during excavation and material handling operations by Sevenson's Health and Safety Officer using a Multi Rae combination meter and a Dust Trak particulate monitor. The Multi Rae meter will monitor for volatile organic compounds, hydrogen cyanide, carbon monoxide, oxygen deficiency, and explosives. The Dust Trak is used specifically to monitor for particulate migration from the work area during construction operations. The work area monitoring program will be conducted in conjunction with the perimeter air monitoring that is to be performed by the engineers to ensure that the odor threshold limits set forth in the Community Air Monitoring Program are not being exceeded, and that both the workers and the community are protected from potentially harmful odors.

As both real time instruments have data logging capabilities continuous readings will be collected and downloaded at the end of each shift to provide 15 minute time weighted averages that have been collected throughout the day. These meters also have audible alarm settings to immediately notify the safety officer when an action level has been exceeded. This data will be generated daily and included as an attachment to the daily report.

Since each person perceives odor differently, the sense of smell is extremely subjective and qualitative in comparison to calibrated instruments which can detect and quantify compounds in the parts per billion. Also, the ability to smell and detect odors is affected by our age, allergies, viral infections, gender, time of day, diet, etc. With these drawbacks in mind and in an attempt to detect odors that may be objectionable to the adjacent community, as a secondary measure of prevention human detection will be performed by project over-site personnel routinely during the course of material handling operations to determine whether olfactory senses are picking up any odors that may not be strong enough to be indicated on the meters. During active material handling and excavation operations, Sevenson's oversight personnel will walk the downwind perimeter of the site to ensure that the pre-emptive measures that are being implemented to control odors are working effectively.

3.0 CLIMATOLOGICAL IMPACT

Climatological factors that can influence odor transport and dispersion include temperature, cloud cover, humidity, precipitation, atmospheric pressure, wind direction and wind speed. These factors need to be evaluated together as they can work in concert and have either a positive or a negative impact on odor generation and transport, depending on the magnitude of each. As such, weather forecasts will be evaluated each morning during material handling operations to determine if conditions are likely to increase the potential for the offsite migration of odors so additional measures can be implemented as appropriate to enable work to continue.

4.0 ODOR CONTROL MEASURES

4.1 <u>On-Site Pre-Emptive Odor Control Measures</u>

Odor suppression agents will be water soluble, non-toxic, non-reactive, and non-volatile. Covers for excavated areas and stockpiled material will be polyethylene sheets. Material data will be provided for each odor suppressant material prior to it being used on site. The data will consist of product literature, Material Safety Data Sheets, and any other pertinent information.

The following steps will be undertaken to control emissions in situ, at the point of excavation, and during soil handling:

- A 6% concentration of Biosolve® will be sprayed on any aromatic soil during excavation. Product information for Biosolve is provided in Attachment 1.
- Rusmar® AC-645 long duration foam will be used as necessary during and after material excavation operations if it has been determined that the Biosolve material alone does not completely control the odors being emitted from the impacted material. Product information for Rusmar® foam is provided as Attachment 2. Although it is Sevenson's intent to direct load excavated material into trucks for offsite T&D, any remaining impacted material within the active cell, and the balance of the remaining excavation will be foamed and covered with poly at the end of each day.
- During the loading of trucks, Biosolve will be sprayed on the material that is being loaded into the truck. When loading is complete, a tarp will be secured over the entire bed of the truck as an additional measure of erosion control in preparation for transport off site.

4.2 Odor Release Mitigation Steps

This section includes a list of response steps to be taken by Sevenson if an odor is detected at the site perimeter. Climatological considerations and related impacts to the community are critical concerns in evaluating odor problems and in undertaking these steps.

- If an odor complaint has been received, verify the complaint and follow the steps outlined below:
- Identify the operational activities that were performed, at the time of complaint and identify the source of the odor.
- Ensure that all on-site pre-emptive odor control measures are in place and functioning properly.
- Ensure that the correct equipment is being used to distribute the odor control products and at the correct dosage.
- Make all reasonable attempts to mitigate the odor at the source if it is determined to originate from the work site.

- Alteration of the odor control delivery systems can include one or more of the following examples:
  (a) Increase delivery frequency.
  (b) Alter nozzle spacing and placement from the odor source.
  (c) Alter application rate as a function of wind direction and intensity
- If it is determined that Biosolve® is not sufficiently effective in controlling odors then Rusmar® foam will be used.
- Pre-emptive odor control measures described above may need to be refined (e.g., reduce further the open excavation size, reduce further the amount of time that excavations are open to the atmosphere, etc.)
- If the above measures are not sufficient, excavation will be stopped and the exposed area will be covered with foam, plastic, and/or non-impacted soil until climatological conditions are conducive to excavation.

5.0 Excavation Protocols

During excavation operations, Sevenson shall monitor the work space to ensure action levels specified in the Site Specific Health and Safety Plan are observed and that the proper level of personal and respiratory protective equipment is utilized by employees.

During active excavations Sevenson shall have the labor, equipment, and material on hand to apply odor control and vapor suppressant foam to all areas within 5 minutes when directed by the owner or the engineer. Sufficient material and equipment will also remain on site to deliver and apply odor controls to the excavation face and as directed during the entire excavation period as necessary when soil disturbance is taking place.

All exposed area and stockpiles left untouched for greater than 2 hours shall be covered with a secured polyethylene tarp. All remaining material left in the excavation cell overnight shall tarped as well.

The engineer will notify Sevenson when real time monitoring being performed at the site perimeter indicates levels have breached 10@ of the actions levels specified in the CAMP for a 10 minute period. Upon notification, Sevenson will augment odor/vapor reduction controls as necessary.

6.0 Communication

All odor complaints from the public will be directed to the Sevenson's on-site Superintendent, NYSEG's on-site project coordinator, or the NYSDEC on-site representative who's names and contact information can be found in Attachment 3 of this document which includes a list of the personnel that are to be notified in the event odors are noted off site. All odor complaints will be documented the day of the complaint by Sevenson personnel and maintained in a log on-site.

ATTACHMENT 1

Biosolve® Product Information

Material Safety Data Sheet

Case Summary from Sydney Tar Ponds, Nova Scotia, Canada

Application Information Sheet

Vapor Suppression

BioSolve Pinkwater offers a safe, simple and cost effective method for suppressing VOC (volatile organic compound) emissions from hydrocarbon contaminated soils at remediation sites or other projects (e.g., brownfield excavation sites). Such emissions may simply be a nuisance odor or could pose a health hazard to workers and the general public.

Pinkwater works by encapsulating hydrocarbons and "locking" VOCs in the soil, thus allowing work to continue unabated. In tests conducted by the Energy & Environmental Measurement Corporation on gasoline spiked soil, a 6% solution of Pinkwater reduced VOCs by 97% in about 15 minutes during three separate tests. BioSolve provides both long-term effectiveness for stockpiles and short-term effectiveness on active sites.

Protocol for Large Sites

On large remediation sites, typically involving excavation or in-situ stabilization, contractors may use a combination of mobile sprayers and stationary misters to suppress VOCs. Mobile sprayers work closely with equipment operators (excavators, in-situ mixers) to apply Pinkwater as contaminated soil is first exposed to the air. Stationary misters may be located on the perimeter – often "downwind" from the work area to capture low-lying fugitive vapors.

For most sites, a commercial pressure washing system works well. Pinkwater solution can be prepared in any standard poly mixing tank. The solution may be fed to the sprayer through a gasoline powered pump. When using such a system, adjust pressure and nozzle for a coarse spray sufficient to reach contaminated areas; high-pressure application is not necessary.

Sydney Tar Ponds, Nova Scotia

Sprayer application rate (nozzle size and spraying time) together with weather conditions (temperature, humidity and wind), contaminant concentration and volatility will all influence the amount of Pinkwater concentrate required.

The "Estimating Pinkwater Requirements (Example)" below illustrates one approach to determining the volume of Pinkwater In most situations a 3% solution of Pinkwater will be adequate to keep vapor emissions within acceptable limits and control odor problems

Estimating Pinkwater Requirements (Example)

- Days of active excavation – 10 days
- Actual spraying time to control vapors/odors – 4 hours (240 minutes) per day
- Sprayer nozzle size – 2 gpm
- Number of sprayers per excavator – 1 person
- **Gallons of solution required – 4,800 gallons**
- Pinkwater concentration – 4%
- **BioSolve Pinkwater concentrate required – 192 gallons**

» PROVEN EFFECTIVE » EASY TO USE » SAFE FOR WORKERS & ENVIRONMENT

"BioSolve Pinkwater helped solve a big VOC emission issue, keeping the project on schedule"

on contact. For some heavily contaminated soils or for highly volatile products (e.g., gasoline) a 5% Pinkwater solution may be needed.

Protocol for Smaller Projects and Soil Stockpiles

For smaller projects or for intermittent use on isolated stockpiles of contaminated soil, Pinkwater can be applied evenly to the surface until it is completely saturated. As a general rule, 1 gallon of dilute solution will treat about 25 – 35 sq. ft. of surface area. Actual coverage will depend on site conditions and local environmental factors. Solution may be applied with a hand sprayer, power sprayer, water truck, etc., whichever method best suits site conditions. Reapplication may be required periodically, depending on weather conditions. BioSolve may also be applied to truckloads of contaminated material to control VOCs prior to being transported offsite.

BioSolve Pinkwater is sold as a concentrate and must be diluted before use.

Pinkwater contains a food-grade red fluorescent dye that allows detection during application. BioSolve Clear is available for applications that may be sensitive to the dye.

MGP Site in Homer, NY

The Pinkwater Advantage

- Effective in wet or windy conditions
- Effective on vertical surfaces
- Can be applied to active worksites
- Solution easy to handle; no foam mess

Foam Challenges

- Application requires special equipment
- Not effective in wet or windy conditions
- Effectiveness requires unbroken physical barrier
- Best suited for stationary cover

THE BioSolve™ COMPANY

329 Massachusetts Avenue | Lexington, MA 02420 USA +1 (800) 225-3909

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Chemical Product: BioSolve Pinkwater® **Date Prepared:** 01/01/2012

Manufacturer: The BioSolve Company
329 Massachusetts Avenue
Lexington, MA 02420 USA

Emergency Phone: **(800) 255-3909** US, Canada, Mexico and Puerto Rico
+1 (781) 482-7900 All other locations

Section 2 – Composition/Information on Ingredients

BioSolve Pinkwater CAS# 138757-63-8 Formulation with nonionic surfactants
Concentration: ~32% active ingredients

Note: This product is considered non-hazardous as defined by CERCLA, according to OSHA, Massachusetts Right to Know Law and California Prop 65.

Section 3 – Hazards Identification

Overview: Non-flammable, non-hazardous, water-based surfactant formulation

Appearance: Dyed: Deep red liquid
Clear: light golden liquid

Odor: Mild, pleasant odor

Potential Health Effects

Eye Contact: May cause mild, temporary irritation and redness
Skin Contact: May cause temporary irritation, redness and drying of the skin
Inhalation: Inhalation of concentrated vapors resulting from heating or spraying in confined or poorly ventilated areas may cause irritation of nose and throat
Ingestion: May cause abdominal discomfort, nausea or diarrhea

Pre-existing skin and eye disorders may be aggravated by contact

Section 4 – First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Seek medical attention.

Skin: Rinse exposed area and wash with mild soap and water for several minutes. Seek medical attention if irritation develops.

Ingestion: Seek medical attention.

Inhalation: None considered necessary.

Other Instructions: None.

Section 5 – Fire Fighting Measures

Flash Point: Not applicable

Flammability Limits:

Lower – Not applicable

Upper – Not applicable

Special Protective Equipment for Firefighters: None necessary

Unusual Fire or Explosive Hazards: None

Solvent for Cleanup: Water

Section 6 – Accidental Release Measures

In case of accidental release, breakage or leakage: Eliminate or contain source with inert material, such as sand, earth, absorbent pads, etc. Transfer liquid to suitable containers for recovery, re-use or disposal. Wipe up or mop up using water. Hard surfaces (e.g., floors, driveways) may be slippery; so use care to avoid falling.

Rinse area with water. Avoid discharging to natural streams and lakes. Note: Always check with local regulations before discharging effluent to storm drains or sewers.

Avoid prolonged contact with skin, eyes or clothing.

Material Safety Data Sheet

Section 7 – Handling and Storage

Handling: Minimize periods of exposure to extreme temperatures. Keep from freezing. If frozen, separation may occur; thaw and stir thoroughly prior to use.

Storage: Recommended storage temperature: 35° – 120° F (1° – 48° C)

Shelf Life: If unopened, more than 10 years

Section 8 – Exposure Controls / Personal Protection

Eyes/Face: Safety glasses, chemical goggles, or face shield recommended

Skin: Rubber or latex gloves recommended

Respiratory: None required, except if application results in significant misting of product. Use MSHA/NIOSH approved half mask air purifying respirator

Footwear: No special requirements

Clothing: Wear a chemical apron or coveralls; launder clothing if contaminated

Other: Eye wash station

Engineering Controls: For indoor use, general (mechanical) room ventilation is expected to be satisfactory

Section 9 – Physical and Chemical Properties

Appearance: Light golden, unless dyed deep red

Odor: Mild, pleasant fragrance

Concentration: ~32% active ingredients as sold

Boiling Point	265°F/129°C	**Vapor Pressure mm/Hg**	Not applicable
Melting/Freezing Point	28°F/-2°C	**Vapor Density (Air=1)**	Not applicable
Surface Tension 6% sol'n	29 Dyne/cm @25°C	**Viscosity (concentrate)**	490 centipoise
Reactivity with Water	None	**Viscosity (6% solution)**	15 centipoise
Evaporation Rate	Not determined	**Solubility in Water**	Complete
Specific Gravity	1.00 +/- .01	**VOC Content**	Not determined
Pounds per Gallon	8.38	**pH**	9.1 +/- 0.3

Section 10 – Stability and Reactivity

Stability:	Stable
Conditions to Avoid:	Prolonged exposure to heat may cause product degradation. Freezing conditions should also be avoided as discussed in Section 7.
Incompatible Materials:	Normally unreactive. However, avoid strong alkalis at high temperature, strong acids, strong oxidizing agents and materials with reactive hydroxyl compounds. These compounds could damage the product and reduce its effectiveness during application.
Hazardous Decomposition Products:	None
Hazardous Polymerization:	Will not occur.

Section 11 – Toxicological Information

Health Effects: No adverse health effects expected if product handled in accordance with the Material Safety Data Sheet. See Section 3 for discussion of potential Health Effects

Section 12 – Ecological Considerations

Avoid contaminating waterways; at high concentrations may interfere with fish respiration.

Aquatic Toxicity: Low potential to effect aquatic organisms
Menidia beryllina: LC50 = 247 ppm @3% solution
Mysidopsis bahia: LC50 = 185 ppm @3% solution

Chemical Fate: Biodegradable

Section 13 - Disposal

This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if disposed of in its original form. However, the intended use of this product as a remediation and/or surface washing agent may render the effluent hazardous and should be disposed of accordingly. Note: Always obtain approval from local and federal regulatory agencies prior to discarding this product into public sewers or storm drains.

Section 14 – Transportation Information

USDOT Freight Class 55 (Liquid Cleaning Compound, Non-Hazardous)
This product is not regulated by USDOT or Canadian TDG when shipped domestically by land.

North American Industry Classification System (NAICS) # 325613

U.S. ITC, Harmonized Tariff Schedule B Classification: 3402.90.30.00

Section 15 – Regulatory Information

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws.

This product is considered non-hazardous as defined by CERCLA, according to OSHA, Massachusetts Right to Know Law and California Prop 65.

Section 16 – Other Information

National Fire Protection Association Ratings

Health:	**1**
Flammability:	**0**
Reactivity:	**0**
Personal Protection:	**Gloves, Safety glasses**

BioSolve Pinkwater® is listed on the US EPA's NCP Product Schedule (#SW-20). This listing does not mean that EPA approves, recommends, licenses, certifies or authorizes the use of BioSolve Pinkwater on any oil discharge. This listing means only that data has been submitted to EPA as required by Subpart J of the National Contingency Plan, 300.915.

For more information, visit: www.biosolve.com

bio solve PINKWATER
HYDROCARBON MITIGATION AGENT

Case Study

Vapor Suppression at Sydney Tar Ponds

Solidification and stabilization operations

On May 12, 2004 the Government of Canada and the Province of Nova Scotia signed a cost-sharing agreement for the *Sydney Tar Ponds and Coke Oven Clean-Up.* At a cost of over $400 million, the project is one of the largest environmental remediation projects ever undertaken in North America. Almost 100 years of steel and coke operations on the eastern shore of Sydney Harbor had left behind more than a million metric tons of soil and sediment heavily contaminated with polycyclic aromatic hydrocarbons (PAHs).

After a long process of investigations and public hearings, and after an abortive first attempt at remediation involving incineration, the clean-up method selected was *"Solidification and Stabilization"* (S/S) with Portland cement.

The Sydney Tar Ponds Agency (STPA), a special agency set up to implement the cleanup, awarded Nordlys Environmental LP with a $52 million contract to undertake S/S operations at Sydney Tar Ponds (Oct 2009). Nordlys is a joint venture of ECC from Marlborough, Massachusetts and J&T Van Zutphen Contruction from Mabou, Nova Scotia). The S/S operation at Sydney Tar

Project Summary Sydney Tar Ponds & Coke Oven Clean Up	
Scale	> 1 mm MT soil heavily contaminated with PAHs
Contract Administrator	Sydney Tar Ponds Agency
Remediation Contractors	ECC (Marlborough, MA) & J&T Van Zutphen (Nova Scotia)
Project Budget	$400 million
Remediation Contract	$52 million
Remediation Method	Solidification & Stabilization

Ponds involved delineating the 77 acre site into 2,500 cells, each with a sediment volume of about 200 cubic meters. Large excavators were used to mix concrete and hardening agents into the contaminated soil, one cell at a time. With three teams operating, the project completed an average of 12 cells per day.

A major element of the Nordlys contract was to minimize the release of airborne volatile organic compounds during the soil/cement mixing process. The massive volume of aromatic organic contaminants, trapped

Engineer checks air evaluation monitor

beneath water and sediments for many decades, rapidly volatilized upon contact with air during the mixing process. Emitted odors were highly unpleasant and had the potential to be hazardous to both workers and residents in neighborhoods abutting the property.

Nordlys' project design called for two well-known foam products to be used for vapor suppression. As soil/cement mixing operations progressed on the South Tar Pond in the spring of 2010 and air temperatures steadily increased, volatilization of the PAH contaminates became hard to control. STPA began receiving complaints from neighbors and strident articles appeared in *The Halifax Herald* and *The Cape Breton Post*.

Responding to the concerns of the community and Nova Scotia Environment, STPA and Nordlys sought effective new solutions to the odor problem. During early summer, the Nordlys Project Manager contacted The BioSolve Company to discuss using BioSolve Pinkwater as a vapor suppressant at Sydney Tar Ponds. By August of 2010, application BioSolve Pinkwater had become an integral part of S/S operations at Sydney Tar Ponds.

BioSolve Pinkwater was diluted to about 4% in water and staged in 1,000 liter mixing tanks. The solution was applied by pressure washers directed at the soil being actively excavated. From one to three pressure washer operators were required per cell, depending on weather and soil conditions.

With this new procedure for vapor suppression in place, complaints and controversy faced by STPA relating to odors began to subside. During the following summers of 2011 and 2012, complaints involving odor problems caused by S/S operations no longer appeared in the news. Pinkwater continues to be used by Nordlys as the primary product for vapor suppression as their contract progresses towards the end date of December 2012.

THE BioSolve™ COMPANY

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ATTACHMENT 2

Rusmar® Product Information

Material Safety Data Sheet for AC 645

REMEDIATION PRODUCT DATA SHEET

PNEUMATIC FOAM UNIT 400/25

A completely self-contained and portable foam generating system designed to withstand the rugged demands and harsh elements found at remediation sites. Quick start-up time means that emission control is available when you need it. Recommended for small to medium size remediation projects, dredging operations and hazardous waste sites. Can be towed around site with a pick-up truck. Foam is applied using a hand-line.

System includes air compressor, pump, hoses, nozzles, solution storage tank and proprietary foam generating technology. Unit has freeze protection for outdoor storage year-round.

FEATURES

- Simple to operate
- Durable, rugged construction
- No clean-up necessary
- Can be filled and placed aside until needed

SPECIFICATIONS

Solution Storage Tank.....400 Gallons
Coverage Rate.....270 Sq. Ft./Min. @3" depth
Coverage Area per fill.....2,000 - 6,000 Sq. Ft.
Size.....16'8" L x 8'6" W x 7'8" H
Dry Weight.....6,880 Pounds
Hose.....200 Feet of 1-1/2" Diameter
Products.....All Long Duration and Soil Equivalent Foam Products
Freeze Protection System.....120V or 230V, 30 amp, single phase

RUSMAR INCORPORATED • 216 Garfield Avenue • West Chester, PA 19380
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PRODUCT DATA SHEET

LONG DURATION FOAM AC-645

GENERAL DESCRIPTION

AC-645 Long Duration Foam is a patented product which produces a thick, long-lasting, viscous foam barrier for immediate control of dust, odors and volatile organic compounds (VOCs). AC-645 is designed for use with Rusmar Pneumatic Foam Units.

AC-645 foam is recognized by the Environmental Protection Agency and the U.S. Army Corps of Engineers as providing superior emission control for a period up to 17 hours. AC-645 has been specified for use at Superfund and other hazardous waste sites across the United States and Canada.

FEATURES

- Biodegradable
- Will not add to treatment costs
- No ambient temperature limitations
- Easy to use
- More effective than tarps
- Non-reactive
- Non-hazardous
- Safe for workers and the environment
- Requires only water dilution
- No clean up necessary
- Non-combustible
- Covers any contamination source

APPLICATIONS

The primary application for AC-645 is control of odors, VOCs and dust during active excavation and for overnight coverage of contaminated soils at hazardous waste sites. AC-645 can also be applied on top of liquid surfaces.

SPECIAL ODOR CONTROL PROBLEMS

The remediation of hazardous waste sites often includes excavation of soil contaminated with odorous compounds. AC-645 has little or no odor itself, although a pleasant wintergreen or vanilla scent can be added. It forms a barrier between contaminants and the atmosphere and can be applied during active excavation to provide an immediate and effective barrier to minimize odors. It is completely biodegradable and poses no threat to workers, neighboring residents or ground water. AC-645 will not add to soil volume or treatment costs.

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PRODUCT DATA SHEET

LONG DURATION FOAM AC-645

AC-645 can also be applied on top of trucks for emission control during transport of materials such as contaminated soils or sewage sludge. Ammonia tests performed on trucks containing sewage sludge resulted in a drop of concentration levels from 170 ppm prior to foaming down to 6 ppm after coverage with AC-645.

- Minimizes worker exposure
- Maintains fence-line odor and VOC emission limits
- Works on lagoon and pond closures
- Can be applied to near vertical or liquid surfaces

FUGITIVE DUST

At hazardous waste sites, fugitive dust can present a health hazard. AC-645 can be applied on top of the dusty material to prevent any wind-borne emissions. There is no need to mobilize equipment to immediately cover with soil or tarps. The Pneumatic Foam Unit can be filled and placed at the site to be used at a moment's notice.

EMERGENCY SPILL CLEAN UP

In emergency spills, odor and VOC control is often difficult because of the terrain and accident conditions. AC-645 Long Duration Foam can be applied to any shaped object, as well as steep slopes, water, mud, snow and ice. It is non-flammable and non-reactive - difficult spill problems can be accommodated.

METHOD OF APPLICATION

AC-645 Long Duration Foam is supplied in either 450 pound (55 gal.) drums or by bulk load (approximately 46,000 pounds). Bulk shipments can be stored outside in a Rusmar Bulk Storage-Dilution System. The Bulk Storage and Dilution system is comprised of a 7000 gallon heated and stirred chemical storage tank and a microprocessor to accurately dilute and transfer the chemical. AC-645 is designed to be applied with a Rusmar Pneumatic Foam Unit. The Pneumatic Foam Units are available in a variety of sizes to accommodate a range of site conditions and application needs.

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RUSMAR INCORPORATED

EQUIPMENT SELECTION GUIDE

Pneumatic Foam Unit	Self-Contained?	Freeze-Protected?	Throw Range	Coverage/min. at 3" Depth	Tank Capacity	Approximate Coverage per Tank with 600 Series	Approximate Coverage per Tank with 900 Series	Compatible with all Products?	Self-Propelled?
NTC/8	No. Requires compressed air supply.	No	25 Feet	86 ft^2/min.	Varies. Customer Supplied	Varies.	Varies.	No. Not compatible with AC-667SE	No. Skid Mounted
PFU 400/25	Yes	Yes	35 Feet	267 ft^2/min.	400 Gallon	4,500 ft^2 @3" depth	5,600 ft^2 @2" depth	Yes	No. Trailer Mounted
PFU 1600/40	Yes	Yes	60 Feet	428 ft^2/min.	1,600 Gallon	18,000 ft^2 @3" depth	22,400 ft^2 @2" depth	Yes	No. Trailer Mounted
PFU 2500/60	Yes	Yes	80 Feet or Spray Manifold	642 ft^2/min.	2,500 Gallon	28,000 ft^2 @3" depth	35,000 ft^2 @2" depth	Yes	Yes

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MATERIAL SAFETY DATA SHEET

LONG DURATION FOAM AC-645

SECTION I: GENERAL INFORMATION

- Manufacturer's Name: RUSMAR INCORPORATED
- Manufacturer's Address: 216 Garfield Avenue • West Chester, PA 19380
- Manufacturer's Phone No.: 610-436-4314
- Chemical Family: Aqueous anionic surfactant mixture
- Trade Name: RUSMAR AC-645

SECTION II: HAZARDOUS INGREDIENTS

- Paints, Preservatives, and Solvents - None
- Alloys and Metallic Coatings - None
- Hazardous Mixtures and Other Materials - None

SECTION III: PHYSICAL DATA

- Boiling Point: 100° C
- Vapor Pressure: 25mm Hg at 25° C
- Vapor Density (Air = 1): N/A
- Water Solubility: Complete
- Specific Gravity: 1.01 to 1.06
- % Volatile, By Volume: None
- Evaporation Rate: N/A
- Appearance/Odor: Translucent, white, milk-like, odorless, viscous liquid

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

- Flash Point (Method): Nonflammable
- Flammable Limits: N/A
- Extinguishing Media: N/A
- Special Fire Fighting Procedures: None
- Unusual Fire and/or Explosion Hazards: None

SECTION V: HEALTH HAZARD DATA

- Threshold Limit Value: Not Determined
- Effects of Overexposure: This material is not expected to present an inhalation or ingestion hazard. It may cause an eye or skin irritation upon direct contact.
- Emergency and First Aid Procedures: Wash thoroughly with clean water

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MATERIAL SAFETY DATA SHEET

LONG DURATION FOAM AC-645

SECTION VI: REACTIVITY DATA

- Material is stable
- No material incompatibility
- Hazardous Decomposition Products: Low levels of sulfur oxides on exposure to high temperatures (concentrate). Foam is non-combustible.
- Polymerization will not occur

SECTION VII: SPILL OR LEAK PROCEDURES

- Steps to be taken in case material is released or spilled: If spilled indoors on a hard surface, the spill area may be slippery and should be thoroughly washed with water. Contain spill and absorb material with dirt or other appropriate absorbent.
- Waste Disposal Method: This material is completely biodegradable and can be disposed of in a sanitary landfill according to local regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

- Respiratory Protection: None required for normal operations
- Ventilation: No special requirements
- Protective Gloves: Not required, but recommended
- Eye Protection: Not required, but recommended
- Other Protective Equipment: None

SECTION IX: SPECIAL PRECAUTIONS

- Storing/Handling Precautions: Avoid excessive heat. Material will freeze, but thawing will not cause changes in the product.
- Other Precautions: None

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ATTACHMENT 3

Odor Control Notification List

Sevenson Project Superintendent

Paul Gallo

716 – 864 - 1630

NYSEG Project Manager

Tracy Blazicek

607 – 762 – 8839

NYSDEC Representative

Richard Dana

518- 402 – 9662

Demolition Plan

Demolition Plan for NYSEGS Former MGP Site in Lockport, New York

Prior to the start of demolition, Sevenson will ensure that the appropriate permits are in place, and that all of the impacted utilities have been marked, abandoned, or relocated as required for the performance of this work.

It is Sevenson's understanding that the entire structure is to have been emptied by others prior to their arrival on site.

The first step in the demolition process after the permit and utility issues have been addressed will be the removal of the asbestos material contained in the rolled roofing. Sevenson has retained the services of Metro Environmental to come in and complete this work in its entirety prior to the initiation of demolition operations. As the asbestos report included in the bid documents did not indicate that there was asbestos in the mastic, only the rolled roofing material itself will be removed and transported off site as asbestos containing material. Metro Environmental will provide a turnkey service for this operation and will perform all of the necessary monitoring, removal, disposal, and reporting as required.

After the asbestos has been removed, Sevenson will first ensure that appropriate dust control measures are in place which will include a laborer on a high pressure garden hose that will wet down the structure prior to the start of work and continuously during demolition operations. Sevenson will utilize a PC200 with a grapple attachment to remove the remaining metal roofing material and supports. This material will be placed in a stockpile where laborers will use torches to cut it to size as required for recycling. After the roofing system and interior metal components have been removed, a PC200 with a CP80 pulverizer attachment will be used to fold the walls onto themselves within the footprint of the garage slab, and then to process the concrete down to size for off site transport and disposal. After the walls are removed, a hoe ram attachment will be installed on the PC200 excavator to demolish the floor slab for the garage and the gas holder foundation as required to facilitate excavation work in phase 2. Once the hoe ram has broken the floor slab up into manageable sizes, the CP 80 attachment will be reinstalled as required to complete material processing operations prior to off site disposal.

Asbestos Abatement Plan

METRO ENVIRONMENTAL

ASBESTOS OPERATING PROCEDURES / WORK PLAN

1) Abatement Activities: This project consists of approximately 1656 Sq. Ft of asbestos containing Rolled Roofing Materials

2) Abatement / Control Methods: All work is to be performed in accordance with Industrial Code Rule 56. . Abatement activities will begin after the proper work area preparation and waiting periods have been observed. A cable will be installed so that workers can tie off while working within 6 lineal feet of roof edge.

3) Waste Handling and Disposal: All removed materials will be loaded directly into a poly lined roll of dumpster, covered and then taken to Modern Landfill in Lewiston NY.

4) Schedule / Sequence Exterior removals will be performed from roof down. The work area will be established by posting signage/danger tape.

5) Health and Safety Plan: Hepa Filter respirators and Tyvek suits will be utilized.

6) Notifications: NYS DOL Notification and Building Notices will be posted.

7) Personal Air Monitoring: Daily OSHA personal air monitoring will be conducted.

8) Security: The work area will be established by posting signage / danger tape. Decontamination Unit will be pad locked along with disposal container.

9) Fire and Emergency Response: Metro will have in place an emergency evacuation plan in place and posted our decontamination unit with assembly points.

10) Waiting period will be observed before visual inspection by third party project monitor and site supervisor. Final air clearance samples will be collected upon completion of satisfactory visual inspection. Metro will tear down work areas to ensure there is no visual debris remaining after passing air samples have been reported.

11) All work will be performed in strict accordance with the NYSDOL, OSHA and EPA rules and regulations.

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Niagara Falls, New York 14305-2307
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email: info@metroenvironmental.com