INTERIM REMEDIAL MEASURE WORK PLAN

Vine Street Water Treatment System

Prepared for:

Village of South Corning
Steuben County, NY

Prepared by:

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1.0 BACKGROUND

Finger Lakes EnviroTech, LLC. dba T&R Environmental (T&R) has prepared this Interim Remedial Measure Work Plan (Work Plan) for site excavation for construction of a new water treatment system building located on Vine Street in the Village of South Corning, Steuben County, New York (the "Site") as shown a red box on **Figure 1**. The Work Plan was prepared on behalf of and at the request of the Village of South Corning.

The Site is located in a currently empty lot owned by the Village, adjacent to property owned by the State of New York and New York State Flood Control for the Chemung River. The Village is proposing to excavate for installation of foundation footers for a new building structure measuring 24 feet by 44 feet with adjacent ancillary piping to the rear of the building running to nearby pumphouse. In addition, a 6,500-gallon backwash tank shall be installed underground at the front of the building, on the east side of the property. Upon the start of excavation work in November 2020, unknown fill-type materials were encountered including glass shards, fire brick, wood, and various debris with an unknown location source.

1.1 Environmental Screening Results

T&R performed an environmental screening program of the fill in the anticipated excavation areas of the Site. The environmental screening program included a total of four (4) test pit samples, extracted from the excavation depths anticipated to be disturbed throughout construction. Samples were analyzed based on sampling requirements of the Steuben County Landfill for potential non-hazardous alternate operating cover (AOC) use. The locations of these test pits and sample locations are presented on **Figure 2**. The results of the screening program are as follows:

- No staining, odors, elevated photoionization detector (PID) readings, or other indications of contaminant impacts in fill were observed during the environmental screening program.
- Ignitability analysis (EPA 1030) resulted in a "No Burn" result for all four (4) samples.
- Petroleum Hydrocarbons by Gas Chromatography/Total Petroleum Hydrocarbon (TPH) contamination analysis (NYSDOH 310.13) resulted in samples ranging from non-detect in one (1) sample up to 295 mg/kg for a single sample, all meeting acceptable ranges for non-hazardous soil disposal.
- Reactive Cyanide and Reactive Sulfide (EPA 7.3.3.2 and EPA 7.3.4.2 respectively) were not detected above laboratory reporting limits in any samples.
- The Toxicity Characteristic Leaching Procedure (TCLP) for RCRA/ICP metals including Arsenic, Chromium, Mercury, Selenium and Silver all were not detected above laboratory reporting limits in any samples.
- The TCLP for Barium was detected in three (3) samples and detected in concentrations below RCRA Hazardous Waste levels.
- The TCLP for Cadmium was detected in three (3) samples, one of which exceeds RCRA hazardous waste thresholds at 8.29 mg/L with a regulatory limit of 1 mg/L.

- The TCLP for Lead was detected in two (2) samples, both of which exceeds RCRA hazardous waste thresholds at 44.2 mg/L and 18.9 mg/L respectively with a regulatory limit of 5 mg/L.

Refer to **Table 1**, below for detailed environmental screening analytical results. Due to the results of the environmental screening program, the Village has retained T&R to prepare this Work Plan to implement proper worker and public safety requirements for the material management (characterization, disposal, re-use, and cap) during excavation.

Table 1 –Soil Analytical Summary, Vine Street Water Treatment System, RCRA 8 METALS

Detected Compounds	B01	B02	T03	L04	US EPA Allowable Limits
Arsenic	BDL	BDL	BDL	BDL	5.0
Barium	BDL	BDL	BDL	BDL	100
Cadmium	**8.29**	BDL	BDL	BDL	1.0
Chromium	BDL	BDL	BDL	BDL	5.0
Lead	**44.2**	BDL	**18.9**	BDL	5.0
Mercury	BDL	BDL	BDL	BDL	0.2
Selenium	BDL	BDL	BDL	BDL	1.0
Silver	BDL	BDL	BDL	BDL	5.0

Notes:
1. BDL = Below Method Detection Limit
2. NL = Not Listed
3. BOLD = Concentration above applicable Soil Cleanup Standards (SCOs)
4. SCOs are in parts per million (ppm)

1.2 Project Objectives

The objectives of this Work Plan are listed below and generally include actions necessary to complete site work of the project and for the General Contractor to safely construct the proposed water treatment building and associated project elements.

- General Site preparation activities.
- Procedures for screening fill during excavation with a PID.
- Procedures to collect and submit fill samples for waste characterization laboratory analysis.
- Procedures for management and disposal of fill that, per the results of waste characterization testing, falls above hazardous waste contaminant levels (see Section 2.7.1).

- Procedures for management of fill that does not exceed hazardous waste contaminant levels and will be reused on-Site.
- Provide a one (1) foot soil cap for areas disturbed during site construction activities in accordance with the anticipated commercial use of the site and current commercial zoning. A four-inch cap will be provided where site plans call for an overlying impermeable layer (i.e. concrete or pavement).
- Procedures for delineation, cap, and site stabilization for the General Contractor to safely construct water treatment plant structure with no further soil disturbance.
- Recommendations for groundwater and/or stormwater management.
- Recommendations for health and safety procedures and requirements including a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) for implementation.
- Procedures for Citizen Participation Activities involving the distribution of a Fact Sheet to municipal Officials, interested parties, and adjacent property owners.

2.0 EXCAVATION

All excavation activities shall be performed in general conformance with NYSDEC's DER-10 guidance document. Additional permits that may be required are discussed in Section 2.1 of this document and applicable permits shall be filed for by the General Contractor or T&R, based on the client's preference. A Site-specific HASP and CAMP shall also be created for the excavation work with recommendations for the HASP and CAMP to be found in Sections 2.4 and 2.5, respectively. All excavation activities shall be performed in accordance with this Work Plan, the HASP, and the CAMP.

2.1 Permits

The required permits, if any, shall be obtained from the appropriate agencies or municipalities by the General Contractor or T&R prior to the commencement of work. These may include, but may not be limited to an excavation permit, hydrant use permit, and a water discharge permit. In addition, wastes removed from the Site, whether hazardous or non-hazardous, must be transported by a permitted waste hauler(s) to a properly permitted disposal facility.

2.2 Proposed Sequence of Excavation

The sequence of the environmental portions of the excavation work will include:

- Preparation of stockpile staging area and vehicle decontamination area for segregation and on-Site storage of excavated materials, staging of drums or a water tank for collection and management of excavation water and designation of the route and procedures for eventual egress from the Site and waste container transport vehicles.
- Performance of HASP and CAMP in accordance with this Work Plan.
- Excavation of primary building foundation, parking area, sidewalks including approximately 171 cubic yards (CY) and staged into stockpiles (maximum 175 CY, 250 tons per stockpile) where it will be staged, sampled, and characterized as necessary prior to either reuse in excavation or transportation for disposal off-Site. If any grossly contaminated material is noted, it shall be staged separately from apparently uncontaminated material. Material shall be segregated by both visual means and with the use of a PID to assess the extent of material that may be contaminated (Section 2.3.3).
- Excavation, segregation, and storage process shall be repeated for backwash tank basin, trenching for water, electrical conduit totaling an estimated 339 CY.
- Potential for over-excavation in the event that fill soils in excavation are too unstable to achieve proper compaction for new construction.
- Collection and appropriate management of excavation water and other waste liquids (Section 2.3.4).
- Fill characterization, sampling and analysis for each stockpile to evaluate whether reuse or stabilization (Section 2.7.1) and disposal of the fill is appropriate (Section 2.6.1).

- Import of DER-10 approved base material to place minimum four (4) inch cap beneath an impermeable layer such as asphalt or concrete (or more as directed by General Contractor site plans) and placement of geotextile fabric as delineator. One (1) foot material cap shall be placed on all areas without an engineering control, impermeable layer planned for during construction.
- Off-Site disposal of contaminated fill, liquid wastes and other wastes (Section 2.7).

2.3 Temporary Excavation Facilities

2.3.1 Temporary Fence

A temporary excavation fence shall be erected around the perimeter of the proposed Site-related work, including the excavation and stockpile staging areas as described below. The purpose of the fencing will be to prevent unauthorized entry onto the Site. Backfilling shall be performed as soon as reasonably practicable following completion of the excavation. However, fencing shall be in place at all times until the excavation is brought to grade and Site restoration is complete. Warning signage shall be incorporated on the temporary fencing.

2.3.2 Decontamination Facilities

A temporary decontamination pad shall be used to decontaminate earthwork-related equipment to prevent cross-contamination from the excavation to public areas (roads, highways, support trailer, vehicles etc.). Trucks and equipment leaving the Site that have come in contact with fill must have their tires, undercarriage, tracks, bucket, etc. cleaned to remove any fill materials prior to departing the Site. Decontaminations shall include pressure washing utilizing clean water from a hydrant (a hydrant use permit will be required) or an alternate onsite source of potable water.

The decontamination pad shall be constructed of polyethylene sheeting with a sump for the purpose of collecting wash water. The decontamination pad mush be covered when not in sue to limit the collection of storm water. Wash water shall be stored on-Site in 55-gallon drums or a storage tank.

Stored wash water is to be sampled according to Section 2.6.2 and disposed of on-Site or off-Site in accordance with Section 2.7. If disposed of on-Site, the water shall be discharged to the footprint of the excavation. Accumulated sediments shall be sampled according to Section 2.6.1 and disposed of accordingly (if non-hazardous disposed of on-Site and if hazardous disposed of off-Site). The decontamination pad construction materials will be disposed of off-Site as municipal solid waste at the completion of the project.

2.3.3 Stockpile Staging Area

Staging areas for the excavated fill stockpiled shall be constructed and maintained in the southeastern section of the Site. Each staging area shall be comprised of a 4-inch base

layer constructed of imported gravel with 4-inch by 4-inch timber berms or other approved alternative as its perimeter to prevent runoff of potentially contaminated stormwater. Staging areas will then be lined with ten (10) mil poly sheeting for base and covered daily with six (6) mil poly sheeting prior to placing excavated soils. Each staging area shall not exceed 25-feet by 30-feet (approximately 750 square feet) with a limit of 175 cubic yards (approximately 250 tons) per stockpile. Stockpiles are to be a maximum of 6-feet high. The location of the proposed stockpile staging area is shown on **Figure 2.**

Once a stockpile is started, during non-working hours and during events of heavy rainfall, it must be covered with tarps or additional poly sheeting that are secured or weighed down at the edges and corners. The contractor shall limit the amount of fill exposed at any given time to the greatest extent possible. Stockpiles shall be routinely inspected and damaged covers shall be promptly repaired or replaced. They must be inspected at a minimum of once each week and after each storm event. Results of inspections shall be recorded in a logbook and be made available to NYSDEC for inspection. If sufficient free liquid drains from fill excavated from below the water table, measures shall be taken to collect free liquid and transfer it to the project wastewater storage tank.

Stockpiles covered and bermed as necessary, shall be staged to segregate any grossly contaminated excavated fill from general fill. Segregation of grossly contaminated material will be based on visual observation and field monitoring with Photoionization Detector (PID). For the field monitoring, grab samples shall be collected from every 10th loader/bucket for headspace screening with a PID equipped with a 10.6 eV lamp. Based on the results of the visual and PID screenings, environmental personnel shall direct the excavator whether or not to segregate the excavated materials into a separate stockpile. Environmental field personnel must record the results of the visual observations and PID screenings and the evaluation of general fill or grossly contaminated fill in the Material Management Tracking Table. Separate stockpiles will be used to sort the following classes of material: general fill and grossly contaminated fill. Prior to receiving the results of the waste characterization sampling, segregation of fill will be based on the following criteria:

- Fill exhibiting PID readings of 51 ppm and above and/or fill with an observed sheen and/or odor shall be managed as grossly contaminated fill requiring off-Site disposal at a non-hazardous or hazardous waste landfill until waste characterization laboratory results are reported.
- Fill Exhibiting PID readings of 0 to 50 shall be managed as general fill to be classified as non-hazardous waste until waste characterization laboratory results are reported to evaluate its reuse, or if found to be hazardous, stabilization or disposal off-Site as appropriate.

Based on the results of the environmental screening performed in November 2020, it shall be assumed that all excavated stockpiles will contain fill that does not exceed the standards and SCOs detailed in section 2.6.4. Therefore, fill in all stockpiles shall be listed as non-hazardous unless and until there is analytical data that demonstrated that

the fill contains levels of contaminants that exceed those standards. Fill staged in the stockpiles shall be analyzed as specified in Section 2.6.1 to demonstrate the classification of the fill and evaluate the method in which the fill may be reused or disposed. Disposal methods and facilities for the contaminated fill must be determined by the results of the waste characterization sampling and analysis. Refer to section 2.7 for information on waste characterization and disposal.

2.3.4 Excavation Dewatering

Should groundwater and/or stormwater infiltrate the excavation, it shall be pumped out (as required to allow work to take place) and stored on-Site in a storage tank, similar to the decontamination wash water, but separate from the wash water. Based on excavation depths and average groundwater levels onsite, it is not anticipated that groundwater shall create a disturbance in the excavation schedule.

Excavated fill will be staged on-Site during the excavation activities on a gravel based and poly-covered stockpiles. Measures shall be taken both to collect any stormwater that comes into contact with excavated materials in the staging area and to minimize collection of uncontaminated precipitation water. Stormwater that does collect in the staging area shall be transferred and containerized with water from the excavation.

Steel or poly storage tanks of sufficient capacity shall be kept on-Site during the excavation activities in order to manage the water. All containerized fluids must be sampled using the procedure outlined in Section 2.6.2 and depending on the results, water shall either be discharged to the Site or disposed of off-Site in accordance with the applicable regulations. See Section 2.7 for details.

2.4 Health and Safety Plan

A HASP describes personal safety protection standards and procedures to be followed by excavation personnel and subcontractors during the planned activities. T&R and any other onsite contractors shall be responsible for generating their own Site-specific HASP that includes the following elements:

- OSHA 29 CFR 1910.120 (40-Hour HAZWOPER) trained, qualified and designated personnel.
- Emergency route(s) to local hospital(s).
- Proper personal protective equipment for all personnel coming in contact with the fill and drums or other proper storage for containerizing after use and for the disposal of these items.

It is also recommended that the Contractor address all OSHA excavation-specific rules and regulations in the HASP. The Contractor shall perform all work in accordance with their HASP.

2.5 Community Air Monitoring Plan

The Contractor shall follow the Site-Specific CAMP included as **Appendix B** to this Work Plan. This CAMP and all Contractor activities pertaining to it shall conform to the requirements established by NYSDEC and NYSDOH in DER-10. Air monitoring shall be provided by General Contractor to adhere to DER-10 requirements. Implementation and strict adherence to the CAMP will reduce the likelihood of particulate migrating from the work area. Visual inspection will also help to alert field crews of potential migrating particulate before it reaches the Site's boundaries and exceeds CAMP thresholds.

2.5.1 Dust Control

While the tentative excavation schedule is planned to minimize precipitation during the excavation, this may result in dry conditions that require dust control. If required, T&R shall implement dust suppression measures. In the event that dry, windy and/or heavy traffic conditions increase dust to an unacceptable level according to the CAMP, one or more dust suppression techniques detailed in the CAMP must be utilized to lessen the risk of high particulate levels.

CAMP readings will be provided to NYSDEC and NYSDH on a weekly basis. Particulate exceedances, if any, will be reported to NYSDEC and NYSDOH the same business say with the reason for exceedance (or the next business day if after hours), what was done to correct the issue, and if the corrective measure was effective at reducing airborne particulate concentrations.

2.6 Waste Characterization Samples

2.6.1 Fill Samples

Waste characterization fill samples shall be obtained from each stockpile to demonstrate that it does not contain hazardous waste. Samples shall be obtained at the frequency of one sample per stockpile. Any equipment that is used for fill sampling must either be disposed of as non-hazardous waste or decontaminated by washing with Alconox®, or equivalent, solution and a tap water rinse. Any sediment that accumulated in decontamination facilities shall be sampled at a similar frequency to the stockpiles.

Based upon the analytical results from the environmental screening program, all waste characterization material samples, including the required quality assurance/quality control (QA/QC) samples (See Section 2.6.5) shall be submitted for analysis of TCLP metals (United States Environmental Protection Agency (USEPA) SW-846 method 1331, 3015 and 7470A), PCBs (method 8082A), pH, Ignitability, Total Petroleum Hydrocarbons (TPH) by Gas Chromatography (GC) (NYSDOH 310.13) , Reactive Cyanide (EPA 7.3.3.2), Reactive Sulfide (EPA 7.3.4.2) and percentage solids. Grossly contaminated fill will also require samples for analysis of TCLP volatiles. Laboratory analyses must be

performed by a laboratory accredited pursuant to the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP).

2.6.1.1 Fill Samples for Reuse

Stockpiles deemed non-hazardous fill material shall be reused as applicable onsite for use as un-regulated fill. Based on stockpile analysis, all materials deemed non-hazardous shall remain staged onsite at completion of remedial activities for backfill usage by General Contractor. Excess fill materials unable to be reused shall be disposed of off-Site in accordance to Section 2.7.

2.6.1.2 Fill Samples Post-Stabilization

Stockpiled soils deemed hazardous based on waste characterization analysis shall be treated with Blastox 215® as determined in Section 2.7.1. A SDS for Blastox is included in **Appendix C**. Following stabilization, soils shall be resampled based on DER-10 sample frequency requirements. Based on a 175 CY stabilized stockpile, this includes one composite soil sample (collected from 3-5 discrete locations). Such samples will then be analyzed at TCLP and Multiple Extraction Method (MEM) digestion methods and the resultant extracts shall be analyzed for the 8 RCRA metals. All TCLP inorganic laboratory analyses will be performed utilizing SW-846 Test Method 1311. All MEM inorganic laboratory analyses will be performed utilizing SW-846 Test Method 1310. In the event that the stockpile requires a reapplication of Blastox®, such sampling shall be repeated but only for the hazardous TCLP contaminant, likely to be lead.

2.6.2 Water Samples

Waste Characterization water samples shall be obtained from each storage vessel to demonstrate if the water will need to be disposed of off-Site or can be discharged to the excavation footprint on-Site. All water samples, including the required QA/QC samples must be submitted to a NYSDOH ELAP-certified laboratory for analysis of Target Compound List (TCL) and Commissioner's Policy (CP)-51 List VOCs.

2.6.3 Clean Imported Soil

The clean imported material shall meet the allowable constituent levels for Commercial use provided in DER-10, Appendix 5, unless the material is determined to be exempt from sampling per DER-10, Section 5.4(e) 5. Exempt materials include washed gravel, rock, stone and recycled concrete and brick not exhibiting fines. Commercial constituent levels specified in DER-10 Appendix 5 are included as **Appendix A** to this Work Plan.

Samples of the clean imported soil shall be collected at the required frequency to confirm that the material meets the levels specified in **Appendix A**. Where a compound is detected which is not on the appended table, the on-Site environmental monitor shall consult with NYSDEC to determine an allowable constituent level. A minimum of one (1) sample shall be collected and analyzed from every new source. To analyze for volatile

organic compounds (VOCs), grab (discrete) samples are allowed. To analyze for semi-volatile organic compounds (SVOCs), inorganics, PCBs and pesticides, composite samples must be collected. The composite samples shall meet the requirements established in DER-10, Section 5.4(e)10. Specifically, composite samples must be comprised of 3-5 discrete samples from different locations in the volume of soil to be tested. Samples shall be collected at the frequency of:

- Seven (7) discrete samples (VOCs) and two (2) composite samples (SVOCs, Inorganics, PCBs and pesticides) for the first 1,000 CY and;
- Two (2) discrete samples and one (1) composite sample for each additional 1,000 CY, as needed.

Imported soil shall also meet the requirements of 6 NYCRR 375-6.7(d) and it must be free of extraneous waste.

2.6.4 Results Evaluation

Sample and analytical results shall be compared to the following criteria:

- Metals: NYSDEC, Title 6 of the New York State Codes, Rules and Regulations (NYCRR) Part 371.3 Characteristics for Hazardous Waste.
- PCBs: SCOs for RR and POGW specified in NYSDEC's Part 375 Environmental Remediation Program regulations and NYSDEC CP-51 Supplemental SCOs.

Any sample (and its related stockpile or water storage vessel) that exceeds the hazardous levels specified in the soil cleanup guidelines shall be classified as hazardous and must be handled, treated and/or disposed of accordingly. Any sample (and its related stockpile) that exceeds 1 ppm for total PCBs but less than 50 ppm total PCBs, will still be considered non-hazardous. Prior to disposal, the PCB exceedance will be discussed with the selected non-hazardous landfill to ensure that they are properly permitted to accept the PCB waste. Analytical reports shall be prepared in accordance with the NYSDEC Analytical Services Protocol (ASP) Category B requirements. A data usability evaluation will not be required for the material management of this excavation.

2.6.5 Quality Assurance/Quality Control Sampling

Field QA/QC samples to be collected include field duplicates. Field duplicates shall be collected at a rate of one per ten (10) stockpile field samples collected.

2.7 Waste Characterization, Stabilization and Disposal

Wastes anticipated include the following:

- Excavated fill that is characterized as hazardous by the waste characterization laboratory analysis.
- Containerized groundwater and/or stormwater resulting from excavation dewatering.
- Decontamination fluids.

- Polyethylene sheeting, sampling materials, and PPE.

Disposal of wastes shall be conducted in accordance with applicable regulations. Analyses performed on each of the waste streams will be dictated by requirements of the disposal facility (s). Excavated fill shall be stockpiled to facilitate discrete sampling for characterization analyses. Wastes shall be transported only be permitted haulers. Contaminated waste disposal will include the following:

- Excavated, staged, and confirmed hazardous waste shall be stabilized on-site and disposed in accordance with Section 2.7.1. All stabilized soils shall be disposed of off-Site at a NYSDEC Part 360 permitted disposal landfill.
- Non-hazardous solid waste generated during remedial activities shall be disposed off-Site at a NYSDEC Part 360 permitted disposal landfill.
- Containerized water (groundwater and stormwater collected from the excavation, decontamination rinse water and free liquids collected from fill staging) that is confirmed non-hazardous shall be discharged to the excavation footprint after subbase installation. If the containerized water is found to be hazardous, it shall be properly transported and disposed of off-Site at a properly permitted facility.
- Non-hazardous excess soil/fill material unable to be reused shall be disposed of off-Site at a NYSDEC Part 360 permitted disposal landfill, potentially as Alternate Operating Cover (AOC) pending a Beneficial Use Determination (BUD).

2.7.1 Soil Stabilization

Stockpile(s) which are confirmed hazardous waste following waste characterization analysis shall be stabilized with Blastox 215® (Blastox®) soil stabilizer for heavy metals. Each of the 175 CY stockpiles shall be stabilized based upon the manufacturer's recommendation of a 3% dosage by weight. The soil additive will be uniformly mixed into the stockpile by way of the excavator bucket and a mixing tub until the stockpile is visually homogenized based on a color change that will be visually lighter. Approximately 7.5 tons (five 1.5-ton supersacks) of Blastox® is anticipated to be sufficient to stabilize each stockpile. Following mixing for stabilization, the stockpile(s) shall be resampled in accordance with Section 2.6.1.2. In the event that the results indicate continued hazardous metal concentrations following stabilization, T&R shall reapply Blastox® at a 1% mixture by weight to the 175 CY stockpile (two (2) 1.5-ton supersacks) by the same process. All stabilized soils shall be disposed of off-Site at a NYSDEC Part 360 permitted disposal landfill.

2.8 Site Restoration/Stabilization

Following the completion of excavation work, T&R shall install a geotextile demarcation layer in all excavated areas. On top of the demarcation, a minimum four-inch cap shall be placed of DER-10 approved material as directed by the General Contractor underlying an impermeable layer (concrete or asphalt). The demarcation fabric and four-inch cap shall serve as a protective buffer for all intended building construction to be completed. The excavation fill that has tested as non-hazardous during waste characterization sampling shall be utilized as backfill as needed by the General Contractor. Any excess soil not used at project completion shall be disposed of

off-Site at a NYSDEC Part 360 permitted disposal landfill. The stockpile staging area shall be removed and restored with proper turf establishment. No further new excavation shall be performed onsite following site stabilization and turnover to General Contractor.

2.8.1 Over-Excavation

Following the excavation work completed per the drawings as specified by the General Contractor, T&R shall evaluate the fill materials immediately below the excavation area to evaluate for compaction abilities and/or future health and safety issues in the event that VOCs are detected at any point during excavation. Evaluation shall include screening soils with a PID to determine if VOCs are present. If PID screening of base soils indicate the presence of VOCs above background levels, T&R shall over-excavate an additional two (2) feet of soils for installation of geotextile fabric demarcation layer and two (2) feet of crusher run material devoid of fines (<10% by weight passing the #80 sieve). This action, if deemed necessary, would serve as a compacted base for future building foundation as well as reducing the risk for potential future soil-vapor intrusion, if any.

2.9 Report

Following the completion of the excavation and restoration activities, a Construction Completion Report (CCR) shall be drafted. The CCR shall include the following:

- Total volumes of fill excavated, reused, disposed of as non-hazardous and hazardous and accompanying laboratory results to support the reuse and disposal options of each stockpile.
- Total volume of clean imported fill and accompanying laboratory results to support its use onsite.
- Locations along excavation boundaries where fill material containing ash, brick, and/or glass were encountered and remain in place.
- Total volume of water (including decontamination, dewatered excavation groundwater, and collected stormwater) contained and discharged, as well as accompanying laboratory date.
- Water treatment techniques, volume treated and discharged and accompanying laboratory results to support its final discharge (if applicable).
- Summary of the CAMP (to be provided as addendum from Site air monitor).
- Field notes and photographs of excavation, stockpiling and filling.
- Any alternative stockpiling, stabilization and/or disposal means undertaken to properly contain and dispose of any grossly contaminated stockpiled (if applicable).
- Summary of Citizen Participation Activities.

The CCR shall be submitted to NYSDEC within 90 days of the completion of excavation and restoration activities.

A Soil Groundwater Management Plan (SGMP) and Interim Site Management Plan (ISMP) shall also be developed upon completion of work to provide guidance for future work at the Site.

3.0 IMPLEMENTATION SCHEDULE

Excavation activities shall be initiated within 90 days of the Department's approval of this Work Plan. It is anticipated that once the Work Plan is approved, approximately 30 days will be needed to obtain required permits and contract any necessary subcontractors. However, on-Site remedial activities shall not begin until winter weather has ceased and frost/snow levels are favorable for construction to start. It is anticipated that on-Site remedial activities would be performed in April-June. It is estimated that the total remedial project duration will be approximately two (2) months. An environmental easement package will be submitted to the Department within 60 days of completion of the on-Site remedial activities.

4.0 PROJECT ORGANIZATION

A Project contact list is provided in **Table 2,** below.

Table 2 – Project Contact List

Name	Organization	Title	Phone	Email
Jim Thomas	Village of South Corning	Mayor	607-936-3642	jimthomas@stny.rr.com
Tim Good	Village of South Corning	Superintendent	607-936-2783	scorningsandw17@gmail.com
Mike O'Connell	Larson Design Group	PE/Project Manager	607-590-6750	MOConnell@larsondesigngroup.com
Lauren Case	T&R Environmental	Project Manager	607-368-1970	caselh@trenviro.com
Kyle Sutton	T&R Environmental	Project Manager	607-725-2855	suttonk@trtowandservice.com
Samantha Salotto	NYSDEC	Division of Environmental Remediation	518-956-3794	Samantha.Salotto@dec.ny.gov
Mark Stirpe	Streeter Associates	General Contractor/ Project Manager	607-857-3732	MS@streeterassociates.com

5.0 CITIZEN PARTICIPATION

Citizen Participation activities will involve generating a Fact Sheet regarding the Interim Remedial Measure and coordinating its distribution with the NYSDEC's Regional Citizen Participation Specialist. The Fact Sheet will be distributed to local officials, interested parties and residents adjacent to the Site.

A certification of mailing will be sent by the Village to the NYSDEC project manager following the distribution of the Fact Sheet and notice that includes:

- Certification that the Fact Sheet was mailed.
- The date it was mailed.
- A copy of the Fact Sheet.
- A list of recipients.

No changes will be made to the Fact Sheet that is approved and authorized for release by NYSDEC without written consent from the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing.

FIGURES

TOWN OF CORNING

TOWN OF CORNING

CITY OF CORNING

CATON ROAD
BAILEY CREEK RD.
OWEN ST.
SUMMIT STREET
DRIVE
BROWN ROAD
SPEER DRIVE
SOUTH ELM STREET
SOUTH MAPLE STREET
GULLIVER ST.
ORCHARD
BOWER PLACE
SAGE ST.
EMILY DRIVE
CATON ROAD
CLARK STREET
BAILEY CREEK
St. MARY'S ROMAN CATHOLIC CEMETERY
GLEN AVENUE
MALLORY AVE.
ROUSE AVE.
ERIE ST.
ROBERTS AVENUE
TUXILL AVENUE
EVERGREEN DR.
HOPE CEMETERY
BROAD ST.
PARK AVENUE
PARK AVENUE
GARDEN STREET BYLD.
WICKS
FLOWER AVE.
VINE ST.
MAYNARD ST.
ERWIN DRIVE
RIVER ROAD
100 YEAR STORM LIMIT
POWER LINE
FLOODWAY
CHEMUNG RIVER

R-1
R-2
C
PMRD
C
C
R-T
R-2
C-L
R-1
PD
C
R-T
R-2
CO

ZONING DISTRICT LEGEND

R-1	RESIDENTIAL - LOW DENSITY
R-2	RESIDENTIAL - MODERATE DENSITY
R-T	RESIDENTIAL TRANSITION
C	COMMERCIAL
C-L	COMMERCIAL LIGHT INDUSTRIAL
CO	CONSERVATION
PD	PLANNED DEVELOPMENT
PMRD	PLANNED MULTIPLE RESIDENCE DISTRICT

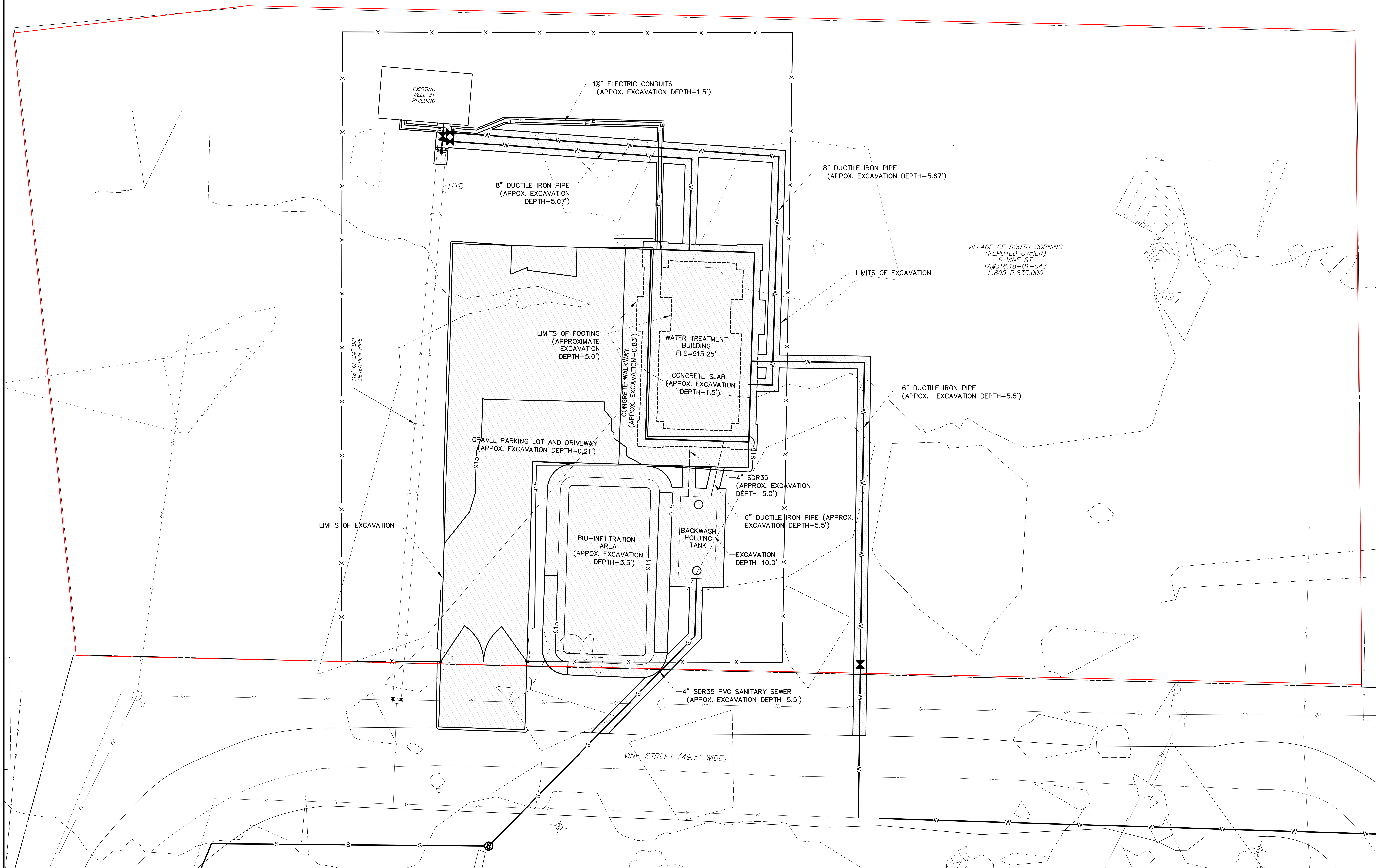
Revised 9/9/2005 by Hunt Engineers, Architects & Land Surveyors, P.C. to change tax map parcel numbers 318.18-03-050.120 & 318.18-03-009.000 from R-2 to Commercial District per the Village of South Corning Local Law No. One (Introductory) 2005.

Revised 04/14/2006 by Hunt Engineers, Architects & Land Surveyors, P.C. to change tax map parcel numbers 336.06-01-22 & 23 from R-1 to Commercial District per the Village of South Corning Local Law No. Three (Tentatively) 2006.

ZONING MAP

CORPORATE LIMITS OF THE
VILLAGE OF SOUTH CORNING

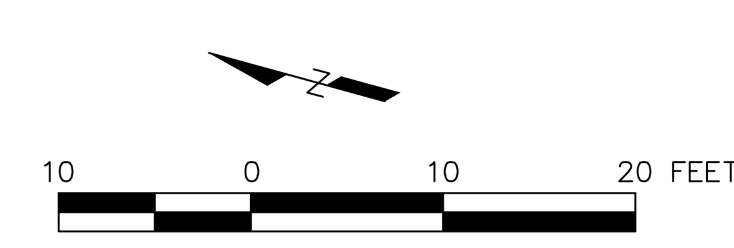
NOVEMBER 1993
REVISED MAY 1998
REVISED SEPTEMBER 2005
REVISED APRIL 2006



EXISTING WELL #1 BUILDING
1½" ELECTRIC CONDUITS (APPOX. EXCAVATION DEPTH–1.5')
HYD
8" DUCTILE IRON PIPE (APPOX. EXCAVATION DEPTH–5.67')
8" DUCTILE IRON PIPE (APPOX. EXCAVATION DEPTH–5.67')
VILLAGE OF SOUTH CORNING (REPUTED OWNER) 6 VINE ST TA#318.18–01–043 L.805 P.835.000
LIMITS OF EXCAVATION
LIMITS OF FOOTING (APPROXIMATE EXCAVATION DEPTH–5.0')
118' OF 24" DIP DETENTION PIPE
CONCRETE WALKWAY (APPOX. EXCAVATION–0.83')
WATER TREATMENT BUILDING FFE=915.25'
CONCRETE SLAB (APPOX. EXCAVATION DEPTH–1.5')
6" DUCTILE IRON PIPE (APPOX. EXCAVATION DEPTH–5.5')
GRAVEL PARKING LOT AND DRIVEWAY (APPOX. EXCAVATION DEPTH–0.21')
4" SDR35 (APPOX. EXCAVATION DEPTH–5.0')
6" DUCTILE IRON PIPE (APPOX. EXCAVATION DEPTH–5.5')
LIMITS OF EXCAVATION
BIO–INFILTRATION AREA (APPOX. EXCAVATION DEPTH–3.5')
BACKWASH HOLDING TANK
EXCAVATION DEPTH–10.0'
4" SDR35 PVC SANITARY SEWER (APPOX. EXCAVATION DEPTH–5.5')
VINE STREET (49.5' WIDE)

EXCAVATION PLAN

SCALE: 1" = 10'



NO.	DATE	ISSUE / REVISIONS	BY	CHKD
1	11/17/20	CONTRACT 1C – FIELD ORDER 1	AWK	MDO
0	07/30/20	CONFORMED CONSTRUCTION DRAWINGS COMMENTS	TWS	AWK

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EXCAVATION PLAN
PROPOSED TREATMENT BUILDING
PHASE II WATER SYSTEM IMPROVEMENTS
VILLAGE OF SOUTH CORNING, STEUBEN COUNTY, NEW YORK

Village of South Corning
7 Clark Street
Corning, NY 14830
PHONE 607.936.3642

Larson Design Group ▪ Architects Engineers Surveyors
1 West Market Street ▪ Suite 301
Corning, NY 14830
PHONE 607.936.7076 TOLL FREE 877.323.6603
FAX 607.936.7086 ▪ www.larsondesigngroup.com

SHEET NO.: C2.02A

PROJECT NO.: 6475–009

EXISTING WELL #1 BUILDING

1½" ELECTRIC CONDUITS (APPOX. EXCAVATION DEPTH–1.5')

X T04

8" DUCTILE IRON PIPE (APPOX. EXCAVATION DEPTH–5.67')

8" DUCTILE IRON PIPE (APPOX. EXCAVATION DEPTH–5.67')

HYD

VILLAGE OF SOUTH CORNING
(REPUTED OWNER)
6 VINE ST
TAX#318.18–01–043
L.805 P.835.000

LIMITS OF EXCAVATION

X B01

LIMITS OF FOOTING (APPROXIMATE EXCAVATION DEPTH–5.0')

CONCRETE WALKWAY (APPOX. EXCAVATION–0.83')

WATER TREATMENT BUILDING FFE=915.25'

CONCRETE SLAB (APPOX. EXCAVATION DEPTH–1.5')

X B02

118' OF 24" RIP DETENTION PIPE

6" DUCTILE IRON PIPE (APPOX. EXCAVATION DEPTH–5.5')

GRAVEL PARKING LOT AND DRIVEWAY (APPOX. EXCAVATION DEPTH–0.21')

4" SDR35 (APPROX. EXCAVATION DEPTH–5.0')

6" DUCTILE IRON PIPE (APPROX. EXCAVATION DEPTH–5.5')

X T03

BACKWASH HOLDING TANK

EXCAVATION DEPTH–10.0'

LIMITS OF EXCAVATION

BIO–INFILTRATION AREA (APPOX. EXCAVATION DEPTH–3.5')

4" SDR35 PVC SANITARY SEWER (APPOX. EXCAVATION DEPTH–5.5')

VINE STREET (49.5' WIDE)

915 914

EXCAVATION PLAN

SCALE: 1" = 10'

10 0 10 20 FEET

SCALE: 1"=10'

NO.	DATE	COMMENTS	BY	CHKD
			AWK	MDO
			TWS	AWK
1	11/17/20	CONTRACT 1C – FIELD ORDER 1		
0	07/30/20	CONFORMED CONSTRUCTION DRAWINGS		

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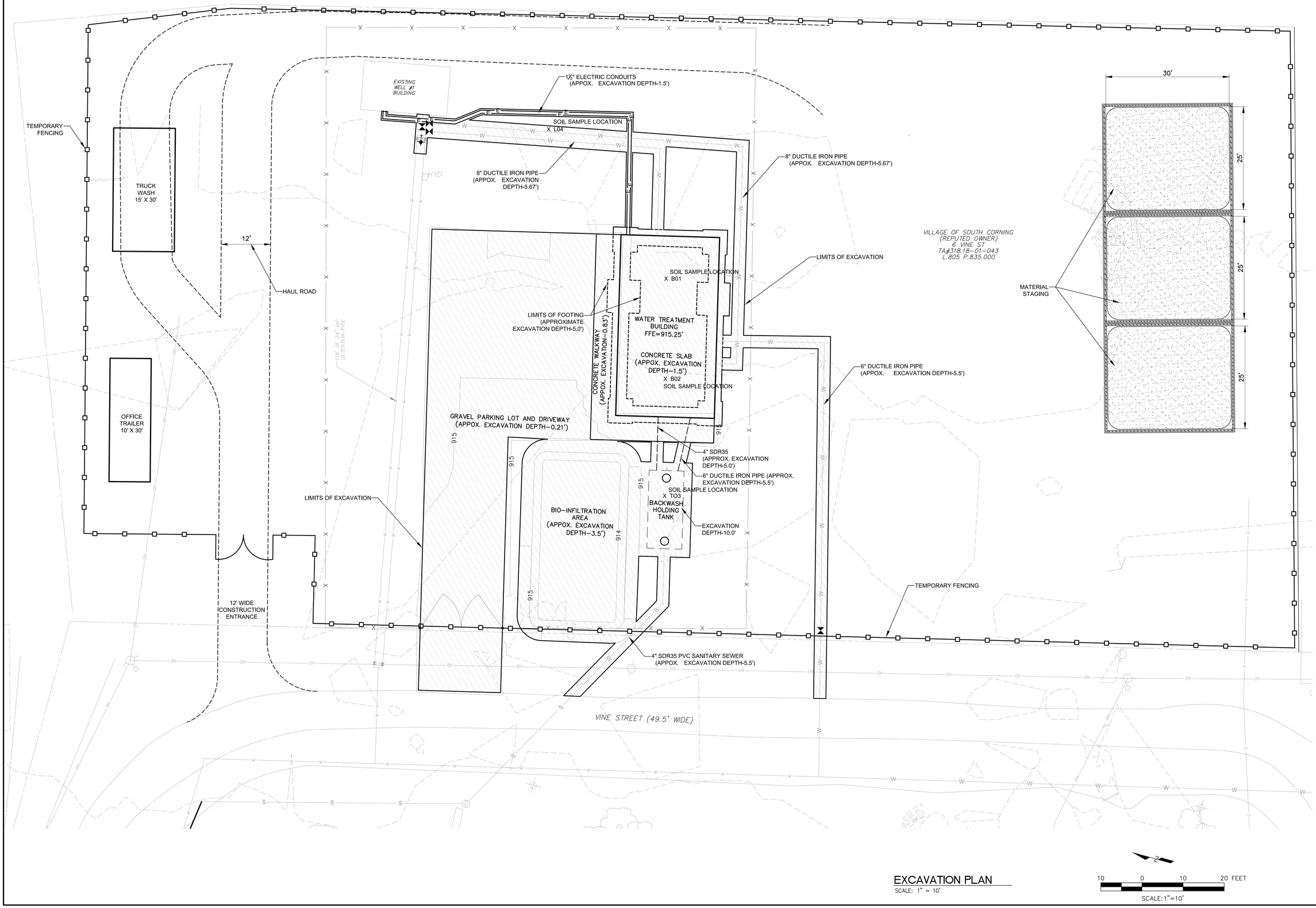

EXCAVATION PLAN
SCALE: 1" = 10'

10 0 10 20 FEET
SCALE: 1"=10'

NO.	DATE	COMMENTS	BY	CHKD
1	03/29/21	ISSUED TO NYSDEC	KAB	MDO

ISSUE / REVISIONS

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EXCAVATION PLAN
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PROJECT NO.: 6475-009

MATERIAL.

4. EXCAVATED MATERIAL SHALL BE LOADED IN MANAGEABLE VOLUMES TO PREVENT SPILLAGE DURING HANDLING ON-SITE AND TRANSPORTING. ANY SPILLED MATERIAL SHALL BE CLEANED UP NO LATER THAN THE END OF DAY IT IS SPILLED. IN THE EVENT OF RAIN, THE SPILLED MATERIAL SHALL BE CLEANED UP IMMEDIATELY.

5. STOCKPILES SHALL BE ROUTINELY INSPECTED AND DAMAGED COVERS SHALL BE PROMPTLY REPAIRED OR REPLACED. STOCKPILES SHALL BE INSPECTED AT A MINIMUM ONCE EACH WEEK AND AFTER EVERY STORM EVENT. RESULTS OF INSPECTIONS SHALL BE RECORDED IN A LOGBOOK AND AVAILABLE FOR INSPECTION BY NYSDEC.

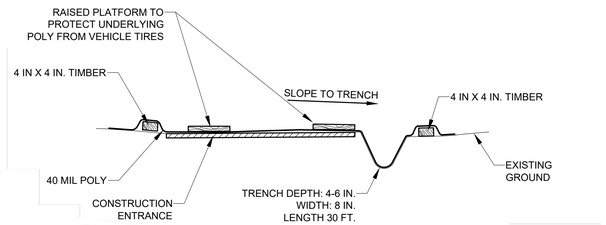
6. SOIL SHALL BE SCREENED WITH PID AND SEGREGATED BASED ON THE FOLLOWING CRITERIA:

   6.A. SOILS EXHIBITING PID READINGS OF 0 TO 50 PPM, SHALL BE PLACED IN GENERAL FILL SOIL CONTAINMENT BERM PILE.

   6.B. SOILS EXHIBITING PID READINGS OF 50 PPM AND GREATER, SHALL BE PLACED IN SEGREGATED "GROSSLY CONTAMINATED" CONTAINMENT BERM PILE.

7. ALL WASTE SHALL BE TRANSPORTED OFF-SITE AS SOON AS POSSIBLE FOLLOWING RECEIPT OF WASTE CHARACTERIZATION LABORATORY RESULTS AS DIRECTED BY ENGINEER. UNDER NO CIRCUMSTANCE SHALL MATERIAL DESIGNATED FOR OFF-SITE DISPOSAL BE STAGED LONGER THAN 2 WEEKS FOLLOWING RECEIPT OF WASTE CHARACTERIZATION RESULTS.

8. RESTORATION OF THE STOCKPILE EXCAVATED SOIL MANAGEMENT AREA SHALL BE INCLUDED IN THE COST OF ITEM 205.0201 - SEGREGATION AND STORAGE OF CONTAMINATED SOILS.

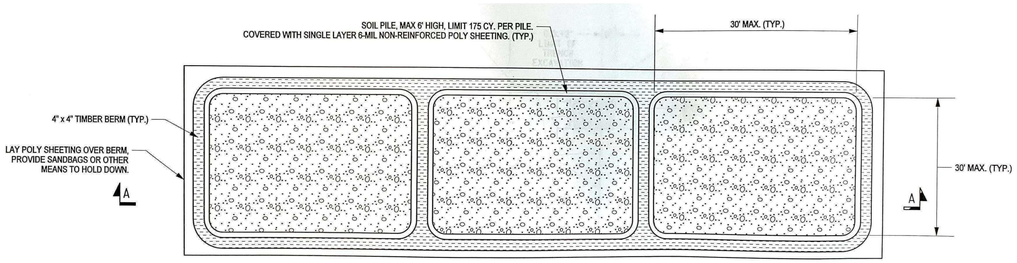


NOTES:

1. PAD SIZE 30 FT. LONG X 24 FT. WIDE.
2. CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING AND CONTAINERIZING RINSATES ON A DAILY BASIS.
3. RINSATES CONTAINERIZED IN 3,000 GALLON STEEL ABOVE GROUND STEEL TANKS (AST).
4. CONTRACTOR SHALL MAINTAIN DECONTAMINATION PAD FOR DURATION OF PROJECT AS REQUIRED.

DECONTAMINATION PAD DETAIL

NOT TO SCALE

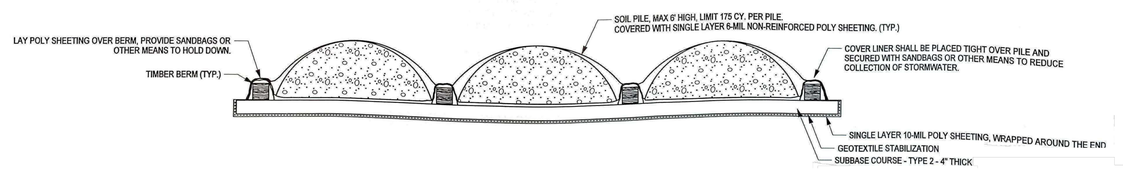


SOIL CONTAINMENT BERM - PLAN VIEW

NOT TO SCALE

NOTES:

1.THREE SOIL PILES SHOWN AS EXAMPLE OF SITE LAYOUT. CONTRACTOR SHALL ADJUST SIZE AND NUMBER OF SOIL PILE BERMS TO ACCOMMODATE VOLUMES ENCOUNTERED BASED ON REQUIRED SOIL SEGREGATION CRITERIA LISTED IN GENERAL NOTES ABOVE.



SOIL CONTAMINATION BERM - SECTION VIEW A-A

NOT TO SCALE

ISSUE / REVISIONS

NO.	DATE	COMMENTS	BY	CHKD
1	03/29/21	ISSUED TO NYSDEC	KAB	MDO

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CONLAMINATED SOILS STORAGE DETAILS
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PHASE II WATER SYSTEM IMPROVEMENTS
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SHEET NO.: C2.02B

PROJECT NO.: 6475-009

APPENDICES

APPENDIX A - DER-10 ALLOWABLE CONSTITUENT LEVELS FOR IMPORTED FILL OR SOIL

Appendix 5
Allowable Constituent Levels for Imported Fill or Soil
Subdivision 5.4(e)

Source: This table is derived from soil cleanup objective (SCO) tables in 6 NYCRR 375. Table 375-6.8(a) is the source for unrestricted use and Table 375-6.8(b) is the source for restricted use.

Note: For constituents not included in this table, refer to the contaminant for supplemental soil cleanup objectives (SSCOs) in the Commissioner Policy on *Soil Cleanup Guidance*. If an SSCO is not provided for a constituent, contact the DER PM to determine a site-specific level.

Constituent	Unrestricted Use	Residential Use	Restricted Residential Use	Commercial or Industrial Use	If Ecological Resources are Present
Metals					
Arsenic	13	16	16	16	13
Barium	350	350	400	400	433
Beryllium	7.2	14	47	47	10
Cadmium	2.5	2.5	4.3	7.5	4
Chromium, Hexavalent[1]	1 [3]	19	19	19	1 [3]
Chromium, Trivalent[1]	30	36	180	1500	41
Copper	50	270	270	270	50
Cyanide	27	27	27	27	NS
Lead	63	400	400	450	63
Manganese	1600	2000	2000	2000	1600
Mercury (total)	0.18	0.73	0.73	0.73	0.18
Nickel	30	130	130	130	30
Selenium	3.9	4	4	4	3.9
Silver	2	8.3	8.3	8.3	2
Zinc	109	2200	2480	2480	109
PCBs/Pesticides					
2,4,5-TP Acid (Silvex)	3.8	3.8	3.8	3.8	NS
4,4'-DDE	0.0033 [3]	1.8	8.9	17	0.0033 [3]
4,4'-DDT	0.0033 [3]	1.7	7.9	47	0.0033 [3]
4,4'-DDD	0.0033 [3]	2.6	13	14	0.0033 [3]
Aldrin	0.005	0.019	0.097	0.19	0.14
Alpha-BHC	0.02	0.02	0.02	0.02	0.04 [4]
Beta-BHC	0.036	0.072	0.09	0.09	0.6
Chlordane (alpha)	0.094	0.91	2.9	2.9	1.3
Delta-BHC	0.04	0.25	0.25	0.25	0.04 [4]
Dibenzofuran	7	14	59	210	NS
Dieldrin	0.005	0.039	0.1	0.1	0.006
Endosulfan I	2.4[2]	4.8	24	102	NS
Endosulfan II	2.4[2]	4.8	24	102	NS
Endosulfan sulfate	2.4[2]	4.8	24	200	NS
Endrin	0.014	0.06	0.06	0.06	0.014
Heptachlor	0.042	0.38	0.38	0.38	0.14
Lindane	0.1	0.1	0.1	0.1	6
Polychlorinated biphenyls	0.1	1	1	1	1

Constituent	Unrestricted Use	Residential Use	Restricted Residential Use	Commercial or Industrial Use	If Ecological Resources are Present
Semi-volatile Organic Compounds					
Acenaphthene	20	98	98	98	20
Acenaphthylene	100	100	100	107	NS
Anthracene	100	100	100	500	NS
Benzo(a)anthracene	1	1	1	1	NS
Benzo(a)pyrene	1	1	1	1	2.6
Benzo(b)fluoranthene	1	1	1	1.7	NS
Benzo(g,h,i)perylene	100	100	100	500	NS
Benzo(k)fluoranthene	0.8	1	1.7	1.7	NS
Chrysene	1	1	1	1	NS
Dibenz(a,h)anthracene	0.33 [3]	0.33 [3]	0.33 [3]	0.56	NS
Fluoranthene	100	100	100	500	NS
Fluorene	30	100	100	386	30
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	5.6	NS
m-Cresol(s)	0.33 [3]	0.33 [3]	0.33 [3]	0.33 [3]	NS
Naphthalene	12	12	12	12	NS
o-Cresol(s)	0.33 [3]	0.33 [3]	0.33 [3]	0.33 [3]	NS
p-Cresol(s)	0.33	0.33	0.33	0.33	NS
Pentachlorophenol	0.8 [3]	0.8 [3]	0.8 [3]	0.8 [3]	0.8 [3]
Phenanthrene	100	100	100	500	NS
Phenol	0.33 [3]	0.33 [3]	0.33 [3]	0.33 [3]	30
Pyrene	100	100	100	500	NS
Volatile Organic Compounds					
1,1,1-Trichloroethane	0.68	0.68	0.68	0.68	NS
1,1-Dichloroethane	0.27	0.27	0.27	0.27	NS
1,1-Dichloroethene	0.33	0.33	0.33	0.33	NS
1,2-Dichlorobenzene	1.1	1.1	1.1	1.1	NS
1,2-Dichloroethane	0.02	0.02	0.02	0.02	10
1,2-Dichloroethene(cis)	0.25	0.25	0.25	0.25	NS
1,2-Dichloroethene(trans)	0.19	0.19	0.19	0.19	NS
1,3-Dichlorobenzene	2.4	2.4	2.4	2.4	NS
1,4-Dichlorobenzene	1.8	1.8	1.8	1.8	20
1,4-Dioxane	0.1 [3]	0.1 [3]	0.1 [3]	0.1 [3]	0.1
Acetone	0.05	0.05	0.05	0.05	2.2
Benzene	0.06	0.06	0.06	0.06	70
Butylbenzene	12	12	12	12	NS
Carbon tetrachloride	0.76	0.76	0.76	0.76	NS
Chlorobenzene	1.1	1.1	1.1	1.1	40
Chloroform	0.37	0.37	0.37	0.37	12
Ethylbenzene	1	1	1	1	NS
Hexachlorobenzene	0.33 [3]	0.33 [3]	1.2	3.2	NS
Methyl ethyl ketone	0.12	0.12	0.12	0.12	100
Methyl tert-butyl ether	0.93	0.93	0.93	0.93	NS
Methylene chloride	0.05	0.05	0.05	0.05	12

Volatile Organic Compounds (continued)					
Propylbenzene-n	3.9	3.9	3.9	3.9	NS
Sec-Butylbenzene	11	11	11	11	NS
Tert-Butylbenzene	5.9	5.9	5.9	5.9	NS
Tetrachloroethene	1.3	1.3	1.3	1.3	2
Toluene	0.7	0.7	0.7	0.7	36
Trichloroethene	0.47	0.47	0.47	0.47	2
Trimethylbenzene-1,2,4	3.6	3.6	3.6	3.6	NS
Trimethylbenzene-1,3,5	8.4	8.4	8.4	8.4	NS
Vinyl chloride	0.02	0.02	0.02	0.02	NS
Xylene (mixed)	0.26	1.6	1.6	1.6	0.26

All concentrations are in parts per million (ppm)
NS = Not Specified

Footnotes:
[1] The SCO for Hexavalent or Trivalent Chromium is considered to be met if the analysis for the total species of this contaminant is below the specific SCO for Hexavalent Chromium.
[2] The SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.
[3] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.
[4] This SCO is derived from data on mixed isomers of BHC.

APPENDIX B - COMMUNITY AIR MONITORING PROGRAM (CAMP)

Appendix J
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

APPENDIX C - SAFETY DATA SHEET(S)

Blastox® Safety Data Sheet (SDS)

SECTION 1: PRODUCT AND COMPANY INFORMATION

Manufacturer	TDJ Group, Inc., 760-A Industrial Dr., Cary, IL 60013
Telephone	847-639-1113 FAX: (847) 639-0499 WEBSITE: www.blastox.com - EMAIL: tdj@blastox.com
Product Name(s)	Blastox®
Recommended Uses / Restrictions	Heavy metal stabilizer / Industrial or commercial use only
Emergency Contact / Number	Chemtrec: 800-424-9300; TDJ Group: 847-639-1113

SECTION 2: HAZARD IDENTIFICATION

Hazards

Eye damage/irritation	Category 2B – Causes eye irritation
Skin corrosion/irritation	Category 2 – Causes skin irritation
Specific Target Organ Toxicity (single occurrence)	Category 3 – May cause respiratory irritation

Signal Word WARNING

Precautionary Statements: Wash hands and exposed areas thoroughly after handling. Wear protective gloves. Wear eye and face protection. Avoid breathing dust. Use only outdoors or in a well-ventilated area. **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **If eye irritation persists:** Get medical advice or attention. **If on skin:** Wash with plenty of water. **If skin irritation occurs:** Get medical advice or attention. Take off contaminated clothing and wash before reuse. **If inhaled:** Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents or container in accordance with applicable regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS#	Component%
Calcium silicates and aluminates	See note	>80
Magnesium oxide	1309-48-4	<5
Non-hazardous ingredients	Proprietary Mixture	Balance to 100%

Note: Contains CAS 12168-85-3, 10034-77-2, 12042-78-3, and 12068-35-8

SECTION 4: FIRST AID MEASURES

Most Important Symptoms / Effects: Eye contact with powder or solution can cause irritation or mechanical abrasion. Skin irritation can occur from contact with the product. Inhalation may cause coughing or mild irritation.

Skin Contact: Wash exposed areas promptly with water and mild soap. Remove contaminated clothing immediately and launder before reuse. Seek medical advice or attention if irritation occurs.

Eye Contact: Immediately flush eyes with water for at least 15 minutes. Remove contact lenses if easy to do. Seek medical attention if any symptoms persist.

Inhalation: Move to fresh air. Keep at rest and in a position comfortable for breathing. If you feel unwell, seek medical advice.

Ingestion: Do not induce vomiting. Wash out mouth with water. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Seek immediate medical advice or attention.

Indication of Immediate Medical Attention and Special Treatment, If Necessary: Persistent eye or skin irritation, difficulty in breathing.

Blastox® Safety Data Sheet (SDS)

SECTION 5: FIREFIGHTING MEASURES

Suitable and Unsuitable Extinguishing Media: Product does not burn. Use fire-fighting techniques appropriate to the surrounding fire.
Specific Hazards Arising from the Chemical: None known.
Special Protective Equipment and Precautions for Fire-Fighters: Use equipment and procedures appropriate to the surrounding fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate release area and keep unnecessary or untrained people away. See Section 8 for personal protection gear.
Environmental Precautions: Contain spill if it can be done with minimal risk. Prevent from entering drains, sewers or waterways. Material is not regulated by DOT or EPA.
Methods for Cleaning Up: Avoid actions such as use of compressed air or vigorous dry sweeping that may cause dusting. Place material into container for later use, recycle or disposal.

SECTION 7: HANDLING AND STORAGE

Handling: Plant processes should be designed to minimize or control airborne dusts. All bags and containers should be properly labeled. Keep bags unopened until use. Keep containers tightly sealed when not in use. Use only with adequate ventilation. Wash hands at end of shift or before eating or using restroom. Wear gloves, goggles and appropriate clothing to avoid repeated or prolonged contact. Use good hygiene practices when handling product, including changing and laundering work clothes after use.
Storage: Keep containers in a dry, cool, well-ventilated area. Keep containers tightly closed.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure Limits

Component Name	ACGIH TLV-TWA	OSHA PEL-TWA
Particulate material	10 mg/m^3	15 mg/m^3
Calcium silicate	10 mg/m^3	15 mg/m^3 (total) 5 mg/m^3 (respirable)
Magnesium oxide	10 mg/m^3	15 mg/m^3

Engineering Controls: Use appropriate ventilation to maintain airborne concentration limits below exposure limits. Have eye wash stations and safety showers readily available.
Eye and Face Protection: Wear safety glasses or goggles to prevent dust from getting in eyes.
Skin Protection: Wear water-proof gloves to prevent contact. Additional body garments should be used based upon the task being performed.
Respiratory Protection: Use a properly fitted NIOSH respirator in areas where the exposure is unknown or above the OSHA PEL or ACGIH TLV.
General Hygiene: Follow accepted work practices for handling an alkaline material. Do not eat, drink or smoke in areas where this chemical is used or stored. Wash thoroughly with soap and water after task or shift, when using the restroom or before eating.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State	Gray solid (powder)	**Flash Point**	Not Applicable
Specific Gravity (Water=1)	3.15	**Upper Flammability Limits**	Not Applicable
Evaporation Point	Not Applicable	**Lower Flammability Limits**	Not Applicable
pH (in water)	~12	**Auto-ignition Temperature**	Not Applicable
Solubility in Water	Slight (0.1 – 1%)	**Decomposition Temperature**	Not Determined
Odor	No distinct odor	**Vapor Pressure**	Not Applicable
Odor Threshold	Not Determined	**Vapor Density (Air-=1)**	Not Applicable
Melting/Freezing Point	>1000 °C	**Partition Coefficient (n-octanol/water)**	Not Applicable
Boiling Range	Not Applicable	**Viscosity** (cSt , 40 °C)	Not Applicable
Initial Boiling Point	Not Applicable	**Critical Temperature**	Not Determined
Note: Physical and chemical properties are provided for safety, health and environmental considerations and do not fully represent product specifications. Those should be requested separately.			

Blastox® Safety Data Sheet (SDS)

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None
Chemical Stability: Stable when properly stored dry. Contact with water can produce calcium hydroxide.
Possibility of Hazardous Reactions: Will not occur under recommended conditions
Conditions to Avoid: Keep dry.
Incompatible Materials: Acids, ammonia salts or aluminum
Hazardous Decomposition Products: None

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Effects: Aqueous solution can cause serious eye damage due to high alkalinity. Aqueous solution can cause severe skin irritation or burns due to high pH in water. Ingestion may cause burns or irritation to the linings of the mouth, throat, and gastrointestinal tract. Inhalation may be irritating or corrosive to the respiratory tract due to product's alkaline nature.
Target Organ Effects: Lungs and respiratory system: short-term or immediate effects of dust inhalation are expected to be coughing and mild respiratory irritation.
Pre-existing Conditions Aggravated by Exposure: Respiratory or skin disorders
Chronic Effects: Acute symptoms may be aggravated
Carcinogenicity: Contains no components known by IARC, NTP or OSHA to be carcinogenic. Blastox has been analyzed and does not contain detectible amounts (<0.2%) of crystalline quartz which is known to be carcinogenic.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not Determined
Mobility: Not Determined
Degradability: Not Determined
Bioaccumulation: Not Determined

SECTION 13: DISPOSAL CONSIDERATION

Product is not regulated by EPA or DOT. Dispose in compliance with all applicable federal, state and local regulations.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name: Not Regulated

SECTION 15: REGULATORY INFORMATION

TSCA Status: All components are listed in the TSCA inventory
SARA 311/312 Reporting Categories: Acute hazard
SARA 313 Reportable Ingredients: No ingredients listed

SECTION 16: OTHER INFORMATION

Department Issuing SDS Health and Safety

Disclaimer
While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of Blastox as it is commonly used, the sheet cannot, and does not, anticipate and provide all of the information that might be needed in every situation. In particular, the data furnished in this sheet does not address hazards that may be posed by other materials mixed with Blastox products. Users therefore, should review other applicable safety data sheets before working with Blastox.

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SDS Blastox 10.15