



VIA E-MAIL TRANSMITTAL ONLY

August 5, 2022

Kimberly A. Merchant
Deputy Regional Permit Administrator
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, New York 14414-9516

Re: Seneca Meadows Valley Infill Expansion Application
Response to Request for Additional Technical Information
Seneca Meadows Inc. (SMI) Landfill
DEC ID 8-4532-00023/00041 and 00001
Seneca Falls (T), Seneca (C)

Dear Ms. Merchant:

On behalf of Seneca Meadows, Inc., Cornerstone and GHD have developed responses to the comments in your letter dated March 11, 2022 for the 6 NYCRR Part 360 Permit Application for the SMI Valley Infill development at the Seneca Meadows Landfill in Seneca Falls, New York. The New York State Department of Environmental Conservation (NYSDEC) comments are listed below with responses in italics immediately following.

SEQR Comments

Comment:

The Department received a Full Environmental Assessment Form (EAF) and have conducted the Lead Agency Coordination. We will be continuing to complete the procedural parts of 617 pertaining to Type I actions leading up to, and including, SEQR determination of significance, Public Scoping, and the acceptance of the Draft EIS by the Lead Agency. As stated previously, the Pre-Draft EIS that was submitted cannot be used in lieu of a full EAF, or a draft Scope, due the changes in the SEQR regulations.

Therefore, the Department has not reviewed the pre-draft EIS or provided any comments on it here. Instead, those DEC comments will be forthcoming after the project proceeds to the appropriate step of the SEQR process, i.e., after the Department receives a draft scope, generates a final Scope and before it accepts any Draft EIS for public review.

Response:

A draft Scoping Document was submitted to the Department on March 11, 2022 via email correspondence. It is our understanding that the Department is currently reviewing the document and suggested modifications will be forthcoming shortly.

General Part 360 Series Comments

Comment:

1. The current proposed landfill design included with the application includes utilization of adjacent landfill footprints designed and operated per 6 NYCRR Part 360 pre-November 2017. These areas include proposed overfill regions which sit atop existing landfill cell liners. In November of 2017, a new updated version of the 6 NYCRR Series 360 Series regulations became effective. Please discuss how current Part 363 liner requirements will be met for these overlay areas.

Response:

The language in Section 363-6.1(e) of the current Part 363 regulations – which is referring to lateral expansions - indicates that the Part 363 requirements (and the section itself) apply if the existing liner system in question is a single composite liner. Since the lateral expansion overfill areas are over double composite liner areas, the existing liner areas that are to be overfilled are not required to meet the liner system requirements of the new Part 363 Regulations.

*This is further supported by the responsiveness summary to the public comments that were solicited prior to issuance of the current regulations. The text below has been copied from the June 2017 document titled, **Assessment of Public Comment for Public Comments Received on the New York State Department of Environmental Conservation Comprehensive Revisions to Solid Waste Regulations Found in NYCRR Part 360, Part 364, Part 369, and Associated Regulations** and shows the public comment and department response on this section of the regulations.*

363-6.1(e) Requirement for lateral expansions needing to meet “all” of the provisions proposed revised liner systems or if not expansion would require compliant overliner.

Comment: Most existing double-lined landfills with adequately operating secondary leachate collection and removal systems and to require them meet all of the liner requirements of the proposed liner requirements (i.e., primary and secondary drainage layer permeability or new performance requirements for these components) is not needed. As long as the secondary monitoring is in place and working without any problems should be proof enough that the proposed lateral expansion will not have to meet the new liner system requirements. Re-write this provision to afford more flexibility to not to needlessly require revised liner system requirements in lateral expansions. Suggested re-wording: “(e) For lateral expansions adjacent to existing landfills that have less than a double liner system with secondary monitoring, any encroachment on the existing landfill’s side slope must be designed to meet the equivalent liner system requirements of this Part.”

Response: The wording of subdivision 363-6.1(e) has been modified to clarify that this provision refers to the basic configuration of the liner system such as whether it is a single composite or double composite liner system.

It is clear that the intent of the Department response - and ultimate language in the regulations - was to clarify that the new requirements would apply based on the basic configuration of the overliner system. That is, if there is a double composite liner that has a functioning secondary leachate collection system, that a lateral expansion would not have to have a new/current Part 363 compliant liner. The proposed overfill areas, due to the lateral expansion at the SMI Valley Infill project, will be over double composite liners with a functioning secondary leachate collection system. As detailed elsewhere in this letter, the existing double composite liner systems were all recently installed and have been performing as originally intended.

Lastly, new liner areas adjacent to the existing liner systems will be designed and constructed in accordance with the current Part 363 regulations.

Comment:

2. Please show operational documentation confirming compliance with 6 NYCRR Part 363-7.1(f)(2) as well as justification that it will continue to be met for the proposed expansion cells.

Response:

The referenced regulatory citation is related to the maintenance of the water levels in the liner systems (outside of the sump areas). However, maintenance of this type of operational record is not currently included in the Operations and Maintenance Manual for the facility. While the pumping levels are controlled by transducers that are set at levels below the top of the sump, as required, detailed record of the water levels is not regularly maintained. That being said, we have provided the Department (Region 8 and Central) additional data via email correspondence on May 18, 2022 on how the various liner systems continue to perform as intended.

As seen in the tables included in Attachment 1, which shows the peak annual leakage through the primary liners and into the secondary liners (30-day average) for each of the cells to be overfilled, the liner systems continue to perform as originally designed and intended. While there are several instances of ALR values exceeding the operational requirement of 20 gallons per acre per day, the cause of each exceedance has been anticipated as a normal course of construction adjacent to each cell and has been temporary in nature. Each ALR exceedance and assessment has been coordinated with the Region 8 staff as required.

Comment:

3. In consideration of the above comments, the drainage area for each phase maybe expected to change, which would necessitate a revised leachate generation estimate and model. As such:
 - a. Within the context of each of the proposed phases, please discuss the anticipated leachate generation rates on the existing liner systems during the applicable landfilling activities that will be utilized for the respective overflow areas.
 - i. Please confirm and show that 6 NYCRR Part 363-4.3(e) is satisfied for existing and proposed liner systems.
 - b. Please provide a flow diagram of the typical path of leachate collection, treatment, and disposal at the landfill along with average volumes and flowrates.

Response:

The drainage areas for each phase and sump (existing and proposed) are not anticipated to change based on the above comments and responses. The leachate generation discussion provided in the Engineering Report, Section 3.7 (and associated calculations) meets the regulatory citation by providing leachate generation data for the landfill. The process of leachate collection, treatment, and disposal is described in detail in Sections 3.7.3 through 3.7.6. Leachate collection and conveyance in the new cells and sumps is shown on Sheets 8 and 9 of the Engineering Drawings. Leachate collected from the new cells will be conveyed via force-main around the south end of the SELF Bump-out to an existing force-main for the SELF Bump-out and SELF sideriser stations. The leachate will be transported in the existing force-main to the existing leachate storage and treatment facility.

It should be further noted that leachate collection and transport in the existing cells is not proposed to be changed. Leachate generation rates in the existing cells are expected to be significantly less than previously experienced when first constructed.

For example, the leachate collection system for the Stage 3 cell (Western Expansion), which is currently 35.2 acres, was capable of handling on the order of 52,800 gallons per day (17.6 acres with an active waste placement generation rate of 700 gallons per acre per day [gpad] and 17.6 acres with an initial cell start-up generation rate of

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2,300 gpad). Considering the proposed new construction that would drain into the Stage 3 cell, the estimated leachate generation would be 30,160 gallons per day (35.2 acres with an active waste placement generation rate of 700 gpad and 2.4 acres with an initial cell start-up generation rate of 2,300 gpad).

The above example uses Stage 3 since it has the largest additional drainage area that is proposed (by acreage and percent). Also, this is an extremely conservative approach as approximately half of Stage 3 is expected to be under intermediate or final cover and not in active waste placement. The actual generation rates in all of the existing cells will be much less than the cells were originally designed to accommodate.

Comment:

4. As stated in the engineering report "The [leachate] storage tanks provide more of a staging area than storage due to the relatively rapid turnaround time between collection and disposal." It is understood that during typical operations of the leachate treatment area, the leachate storage tanks are run full or semi full. Therefore, in the event of a contingency where leachate disposal is interrupted there would be an immediate need for additional storage not generally available based on storage tank standard operating procedures. Please discuss the SOP for each of the associated storage tanks and detail how additional storage would be made available if it is immediately needed.
 - a. It is understood that one of the 500,000-gallon storage tanks will be used in a biological treatment system currently being constructed onsite. Please include a discussion of this and any necessary updates to the application materials and note that the Department has yet to determine if this tank, used in the biological treatment system, will also continue to function as onsite leachate storage.

Response:

As indicated in the facility manual (Section 18.2.2.6), the facility has arranged disposal agreements with multiple other facilities to provide both routine and contingency disposal capacity that is greater than expected leachate generation rates. It is unlikely that leachate disposal is fully interrupted because of the multiple options for disposal that are maintained. In the event that one disposal provider stops allowing deliveries, existing providers will be used to provide the needed disposal capacity. In addition, new providers are regularly identified for disposal capacity.

Regarding the tank used for the biological treatment system, it will continue to function as an on-site leachate storage tank. While the referenced tank will normally maintain a liquid level to support the biological treatment system, it will also be providing a treatment option for the facility – with a treatment capacity of 200,000 gallons per day. Therefore, whatever storage capacity is impacted by the biological treatment system it will be offset by the treatment capacity provided by the biological system that is within control of SMI. Furthermore, the site will continue to be able to use the remaining 500,000 gallon tank and the 1,772,000 gallon tank for contingent leachate storage. The application documents will be updated to reflect the operational conditions related to the biological treatment system.

Comment:

5. A geophysical survey is required to map major fractures in the bedrock in the proposed cell construction areas south of Tantalio. This survey is required since the area is noted to be fracture dominated, but there is insufficient data on fracture locations and preferential migration pathways to evaluate the effects of the proposed cell construction on plume movement.

Response:

The above reference to "...the area is noted to be fracture dominated..." is with respect to bedding plane fractures as documented in both the regional literature and Site-specific data (see Sections 3.5.2 and 5.1.2 of the Part 363 Hydrogeologic Investigation Report, respectively). In addition, geophysical surveys performed by others to the

west and east of Tantalø found no evidence of major faulting and the offset attributed to the “bedrock knob” was of geologic interest but was not significant with respect to the Site hydrogeology (Section 5.1.2.1). Most importantly, there is no evidence of preferential flow paths or barriers to groundwater flow observed in the potentiometric data (horizontal or vertical) presented in both map and cross-sectional views (Section 5.2.2.3 and associated figures) or in the configuration of the VOC plume (Section 5.3.2 and associated figures), all of which is consistent with radial flow paths off the bedrock knob and then regional groundwater flow to the south.

As stated above, the “fracture dominated” groundwater flow refers to bedding plane fractures. These bedding plane fractures are evaluated as part of monitoring well construction by conducting packer tests and selecting the interval with the highest observed permeability for construction of the final monitoring well interval. Therefore, the monitoring wells are monitoring the preferential pathways, where present. In addition, while the prior geophysical surveys were conducted to the east and west of Tantalø, there is nothing to suggest that conditions would be different to the south of Tantalø given the limited lateral distance between the location of the prior geophysical surveys and the area of interest addressed in this comment. Finally, it is unclear how the proposed cell construction and the presence/absence of fractures with respect to plume movement are related. The proposed cell construction will cutoff recharge to the underlying bedrock water bearing zone but will not materially impact the overall groundwater flow direction, and the related plume configuration, any more than the construction of the Southeast or Western Landfill expansions did. Monitoring of the area south of Tantalø will continue, and while not expected as demonstrated by construction of the prior landfill expansions, if a change is observed, contingencies can be implemented as described in response to another comment.

Given the above, conducting additional geophysical surveys is not recommended as it will not provide any additional information applicable to construction of the valley infill or current or future groundwater monitoring programs. Additionally, it is likely that the presence of the stormwater basins would interfere with obtaining clear geophysical signals such that any results would be inconclusive.

Part 360 Application and Change in Use Application Comments

Comment:

1. One of the site Remedial Action Objectives is to restore, to the extent practicable, the pre-existing quality of the groundwater in the bedrock aquifer. Although the previous injections were successful in increasing the rate of natural attenuation/reductive dechlorination, it appears that another round of injections may be beneficial to further reduce volatile organic compounds in the aquifer. Injections will be completed prior to the start of the Valley Infill project. Please indicate in the application that a Design Work Plan will be submitted to NYSDEC HWR separately for review and approval.

Response:

An additional round of injections is anticipated to be performed prior to the Valley Infill project to enhance the natural attenuation/ reductive chlorination of the remaining volatile organics present on site. We anticipate another injection round later this year / early 2023 pending completion of pre-injection sampling and approval of a work plan developed based upon those results. The pre-injection sampling includes passive diffusion bag and bio-trap sampling to understand the current state of the wells in question. The results of the pre-injection sampling will assist Cornerstone in deciding which amendments should be utilized and what volumes of material may be required. Additionally, an assessment will be conducted to understand if SE-0100 DBR will be removed due to construction constraints for the Valley Infill. If removal is necessary, a new well would be installed and would be summarized in the Work Plan. Following completion of the injection work a summary report will be issued to the NYSDEC.

Comment:

2. A portion of the Tantalito cap will be disturbed and the underlying waste is planned to be excavated and relocated under a different area of the landfill. In accordance with the Operations, Maintenance and Monitoring Plan (OMM) Section 5.8, waste to be removed will first be characterized per DER-10 Table 5.4(e)10 to determine if the material is hazardous or nonhazardous. If the material is a listed hazardous waste, please ensure a contained-in determination is obtained from NYSDEC, as needed, and the material may be placed back in the landfill as solid waste. Please indicate in the application that the material may not be stored on the landfill; it must be placed back under the cap immediately upon excavation. If the material is deemed a hazardous waste, the material must be disposed off-site at a hazardous waste facility.

Please outline the process for characterizing the waste. A detailed work plan for sampling the waste will be submitted separately for review and approval prior to conducting the work.

Response:

We propose to pre-characterize the waste materials that are proposed for removal on the south end of Tantalito as described below. Prior to conducting the excavation work, the area and depth of waste requiring excavation will be identified and the total volume of waste excavation will be calculated. The total volume of waste excavation will then be divided into areas, or "zones", containing approximately 500 cubic yards (cy) of waste within each zone. The corners of each 500-cy zone will be surveyed and staked in the field and the maximum depth of proposed excavation will be recorded for each area. Excavation and sampling of the waste materials within each zone will be conducted at two (2) random locations within each 500-cy zone and extend to the approximate midpoint of the maximum proposed depth of excavation within each zone.

Within each zone, an excavator or gas well drilling rig will be used to pre-characterize the waste both visually and analytically. The cover materials will be excavated first and staged adjacent to the excavation. The excavated waste underlying the cap will be staged separately, but also adjacent to the excavation. During the waste excavation, the waste will be visually scanned. If the excavated waste visually appears to be identifiable as a listed waste based on what is suspected to have been disposed of at Tantalito (e.g. foundry sands), the waste materials will be identified as a potential listed waste and SMI will pursue a contained-in determination from the DEC. In addition to the visual assessment, one representative sample of waste materials from each excavation within each zone (i.e., 2 samples) that are not visually identified as potential listed waste will be collected for RCRA Hazardous Waste Characteristics laboratory analysis.

Photographs of the excavated waste materials will be taken, written logs describing the excavation activities, and visual description of the waste materials will be maintained. Following excavation and collection of samples for laboratory analysis, the excavated waste will be placed back into the excavation and covered with the staged cover materials, pending subsequent approvals as described below. Upon receipt of the analytical data and potential determination of the presence of listed wastes, SMI will submit the analytical results and DEC determinations regarding potential listed wastes in a letter report to the DEC documenting the sampling activities, laboratory results and conclusions. For the waste materials within each approximately 500-cy zone that were identified as a listed waste or for which the analytical results indicate the waste materials are non-hazardous, the letter report will request approval for these wastes to be excavated and disposed of under the cap within the northern end of Tantalito. Conversely, if waste materials are identified as hazardous waste based on RCRA characteristic testing, the waste within this approximately 500-cy zone will be identified for excavation and off-site disposal at a licensed hazardous waste facility. Contingent upon the results, additional sampling may be recommended.

Pending agreement with the DEC on the pre-characterization approach outlined above, a detailed work plan will be submitted for review and approval as requested by the above comment. The work plan will identify the approximate 500-cy zones to be sampled, the depth of excavation within each zone, approximate sample locations, and analytical parameters.

Comment:

3. In the southern portion of the landfill, bedrock must be removed to meet sufficient separation per Part 360 regulations. Based on discussions during a meeting held between NYSDEC HWR, SMI, and Cornerstone on July 8, 2021, bedrock blasting does not cause fractures within the bedrock at depth, instead, fractures occur radially. SMI also represented that all the fractures produced by the blasting would be above the groundwater table. To further justify this position, DEC requests that a hydraulic assessment of nearby wells be completed prior to blasting and post-blasting. In addition, SMI indicated bedrock is planned to be crushed and used as a road base or backfill in the landfill footprint. Bedrock must be tested prior to crushing and reuse. Please outline the process for characterizing the bedrock. A detailed plan for characterization will be submitted separately for review prior to sampling.

Response:

While it is possible that the blasting will occur within the limits of the plume and at a depth that intercepts groundwater (depending on groundwater levels at the time of blasting), blasting mechanics and technology is such that the impacts below the excavation zone will be minimized. The International Society of Explosive Engineers (ISEE) Blasters Handbook, 18th edition, states in Chapter 26, that "...if a charge is deeply buried or totally confined without a nearby free face, the rock cannot be displaced (although it is damaged around the explosive) and more of the energy is transferred as ground vibration." For the proposed excavation to establish the subgrade, there will be a free rock face at the upper surface of the rock. Therefore, boreholes can be installed exactly to the depth needed (subgrade minus 10-feet), explosives detonated, and the cracking limited to a small area around the explosive and the zone above the bottom of the borehole. The blasting program can be designed so that the fracturing can be limited to the zone needed to remove the rock.

Furthermore, because the blasting will occur essentially within the horizontal limit of the plume, the limited potential for downward propagation of cracks should have no significant impact on the migration of the plume further away from the center of the plume.

Lastly, it should be noted that blasting has already occurred in Stage 4 of the existing Western Expansion. The blasting for Stage 4 – which occurred on the edge of the plume – did not result in noticeable impacts to the plume contaminant levels and migration.

Given the above, hydraulic testing will not provide additional relevant information and is therefore not recommended.

If groundwater is encountered in the blast zone, SMI will collect representative pieces of the blasted rock, crush it, place it in a known quantity of methanol, and have it analyzed for VOCs. Should an individual VOC level exceed New York State groundwater quality standards, the material will be used with the footprint of lined landfill areas for road bases. Other remaining blasted material would remain on the Seneca Meadows site for use as general site or road fill.

Comment:

4. Attachment 7, Figure 3: Please explain why 390,000 gal/mo was used as the pre-cap leachate rate instead of an average of all pre-cap leachate generated. In addition, post 2012 leachate rates are more sporadic and less stable; however, is 89,000 gal/mo a conservative number to use in the groundwater model calculations? Would it make more sense to take an average of leachate rates from 2007 to present (i.e., all post-cap conditions)?

Response:

Installation of the Tantalito cap began in September 2005 with the placement of low permeability soil and was completed in October 2006 with final placement of the geomembrane liner. Since the leachate collection line was not completed prior to September 2005, actual pre-cap leachate rates were not available for averaging as the comment suggests. As shown on the referenced figure, which is attached to this letter (Attachment 2), the first reported flow rate from the LCL was in October, 2006 and reported a flow of approximately 920,000 gal/mo. However, this rate likely included a significant component of stormwater from on-going construction and was thus not considered representative of pre-cap leachate generation. Subsequent post-cap data from 2007 and 2008 show a steady decline in flow as a result of reduced infiltration and mound reduction. Thus, taking an average of these data would also not be appropriate for use in model pre-cap calibration as suggested in the comment. Based on the available data, a rate of 390,000 gallons per month was used for calibration, as it represents the closest field-measured rate to pre-cap conditions without the influence of stormwater infiltration from construction.

With respect to post-cap flow rates, Figure 3 illustrates a period roughly between August 2009 and early 2015 during which leachate flow had stabilized at a baseline rate of approximately 89,000 gallons per month. This period follows the transient period of decline due to cap placement (2006-2008) as discussed above and is prior to the influence of flow from other sources which have caused spikes in the flow rate of the LCL. The impact of these extraneous activities have been documented in prior Tantalito Periodic Review Reports (PPR) to include:

- Changes in groundwater levels due to a temporary increase in groundwater infiltration associated with the construction of the Part 360 landfill expansion (e.g., temporary ponding while pumping is performed due to temporary construction conditions).
- The potential for short circuiting of ponded stormwater flow through more permeable media such as aggregate used in construction.
- Operation and maintenance of the leachate collection system, such as collection pipe cleaning.

Further discussion of leachate flow is provided in Section 5.1.2 of the most recent PPR and Combined Annual Report #9 (September 1, 2021). As a result, averaging flow rates during this period as suggested would overestimate the actual groundwater contribution to the LCL and will thus not be used for model calibration.

Comment:

5. Please include a contingency plan in the application that addresses issues if the plume appears to be migrating or increasing in concentration.

Response:

As part of the Final Design Report for the Tantalito Waste Disposal Site OU-2 (Groundwater), a contingency plan was submitted to address conditions if the OU-2 remedy did not perform as planned. This report titled Draft Final – Contingency Plan for Operable Unit No. 2 (OU-2) Tantalito Waste Disposal Site, Site Number 8-50-004 by HydroQual Environmental Engineers & Scientists, P.C., and included as Attachment 3 to this response document, included several potential modifications to the selected remedy (additional injection wells, modification of dosing, or bioaugmentation) or alternative remedies (aerobic biodegradation, in-situ chemical oxidation, conventional groundwater extraction and treatment technology). While it is acknowledged that the proposed SMI Valley Infill project is over the Tantalito waste mass and partially over the current plume because regional groundwater flow is to the south, these contingencies are still viable.

Should the need for an alternative remedy arise, a focused feasibility review will be completed to determine most appropriate course of action taking into account the site conditions at that time. The focused feasibility study, along with supporting data, will be submitted to the NYSDEC for review and approval prior to implementation.

Comment:

6. During closure, the OMM will be updated to reflect new conditions at the site.

Response:

Understood. The Tantalio OMM Plan will be updated prior to construction of the SMI Valley Infill.

Cultural Resources Comments

Comment:

NYSDEC stated that an update to the review by OPRHP should be done to determine if there are any changes or updates needed to the previously issued No Effect Letter. Has that been done?

Response:

A review by the New York State Office of Parks Recreation and Historical Preservation (OPRHP) was requested for the proposed project through the New York State Cultural Resources Information System (CRIS). An electronic submittal was acknowledged as received by the OPRHP through the CRIS system on May 13, 2022. A letter was issued on May 19, 2022 by the OPRHP indicating that it was the opinion of the OPRHP that no properties, including archeological and/or historic resources, listed in, or eligible for the New York State and National Registers of Historic Places will be impacted by this project. This letter can be seen as Attachment 4 to this response document.

CLCPA and Air Title V Comments

Comment:

The facility is required to send in their CLCPA analysis for review. Furthermore, emission rate data for fugitive emissions of hydrogen sulfide needs to be gathered for the modeling assessment to be completed. The application will be considered incomplete until final approval of the model report.

As you may know, the Governor signed the Climate Leadership and Community Protection Act (CLCPA) into law in July 2019, which became effective January 1, 2020. (Chapter 106 of the Laws of 2019). Among other requirements, the CLCPA directs state agencies to determine if the decisions they make are consistent with the Statewide greenhouse gas (GHG) emission limits established by the CLCPA in Environmental Conservation Law (ECL) Article 75. In the case of the DEC, this includes determining if permits issued are consistent with or would interfere with the attainment of the Statewide GHG emission limits in ECL Article 75.

Response:

SMI is eager to reach consensus on expanding its GHG assessment in support of its application, but is concerned about consistency in application in relation to CLCPA Section 7(2) requirements and compliance with Section 7(3) prior to completion to several steps mandated in the law.

The agency's letter refers to draft DAR-21 which "outlines the requirements for analyses developed pursuant to Section 7(2)" of the CLCPA. While the referenced document is not yet finalized, and presumably subject to change, SMI will use the draft guidance for purposes of addressing Section 7(2).

SMI seeks clarification with respect to Section 7(3). As DEC's letter indicates, Section 7(3) applies to "disadvantaged communities." The process to finalize designation of disadvantaged communities is not complete. On December 30, 2021, the New York State Climate Action Council released the Draft Scoping Plan for the Climate Leadership and Community Protection Act (Draft Scoping Plan) for public review and comment.

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However, the draft Scoping Plan recognizes the importance of guidance in implementing Section 7(3): “Coordinated guidance for agencies is necessary to ensure Section 7(3) is applied effectively and consistently in agency decision making.”

The draft revision to CP-49, Climate Change and DEC Action, (which also is not final) similarly states (p.8): “Detailed guidance on implementation of Section 7(3) will be provided through a forthcoming revision to CP-29.” To our knowledge, these necessary revisions to CP-29 have not yet been proposed. Absent such guidance in final form, there is a concern that CLCPA Section 7(3) compliance is being imposed in an ad hoc manner.

Further, in defining disadvantaged communities in ECL 75-0101, the CLCPA states that they are identified pursuant to section 75-0111—which in turn sets forth the procedure for identifying disadvantaged communities, and specifically provides for public comment before finalization. The agency issued the draft disadvantaged communities criteria and is accepting public comment until July 7, 2022. SMI is therefore concerned that compliance with Section 7(3) is being required before steps mandated by statute for doing so are complete.

That said, SMI acknowledges that draft CP-49 states that in “advance of the completion of the proposed criteria identifying disadvantaged communities . . . , the Department will identify disadvantaged communities using an interim approach,” and will look to opportunity zones or certain census blocks within a potential environmental justice area (PEJA) to identify the interim disadvantaged communities. This presumably is why the agency is referring to PEJAs (discussed below) in relation to Section 7(3). As noted above, CP-49 is still in draft form but in order to move the process forward, SMI assumes that the agency is requiring all relevant applicants to undertake a similar analysis during this interim CLCPA phase.

The H2S emission rate workplan was approved by DEC on 4/29/22 and the field work is tentatively scheduled for August 2022.

Comment:

To address Section 7(2) of CLCPA, please identify each GHG and calculate the project's potential to emit GHG in units of tons per year and carbon dioxide equivalents using the 20-year global warming potentials found in 6 NYCRR Section 496.5. The CLCPA analysis should also include calculations showing the project's projected GHG and CO₂e emissions in the years 2030 and 2050 if possible. For purposes of the CLCPA, Statewide GHG emissions include “upstream” out-of-state GHG emissions associated with the generation of electricity imported into the State, or the extraction, transmission, and use of fossil fuels imported into the State. Accordingly, please include any upstream emissions in the calculations. The Department has developed the attached document titled, “Emission Factors for Use by State Agencies and Applicants,” which includes upstream emission factors for facilities to use as they prepare analyses. As explained in the attached document, the values are intended to be presumptive, meaning a facility may use a different value in a given context, provided that it is supported by an appropriate justification in the analysis.

Response:

These items will be addressed in the CLCPA analysis currently being prepared.

Comment:

Pursuant to ECL Article 75, the CLCPA's Statewide GHG emission limits require a Statewide reduction in GHG emissions from 1990 levels of 40% by 2030 and 85% by 2050. Further, CLCPA requires that the energy generation sector be zero-emissions by 2040. Please discuss how the emissions from this facility will be mitigated or reduced consistent with these requirements. If there are no feasible ways to reduce GHGs, please explain that, too. If GHG emissions will not be consistent with the Statewide GHG emission limits of the CLCPA, then we may need to discuss this further.

Response:

These items will be addressed in the CLCPA analysis currently being prepared.

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Comment:

To address Section 7(3) of CLCPA, the DEC is required to prioritize the reduction of GHG emissions and co-pollutants in disadvantaged communities.

Response:

These items will be addressed in the CLCPA analysis currently being prepared.

Comment:

Co-pollutants are defined as hazardous air pollutants (HAPs) that are emitted by GHG sources. A GHG source is a piece of equipment that emits GHG. If this project is in, or potentially impacts, a Potential Environmental Justice Area (PEJA) as identified by the DEC Office of Environmental Justice (see <https://www.dec.ny.gov/public/911.html> for more information about PEJAs), please calculate the co-pollutant emissions from each GHG source and discuss any alternatives or mitigation measures that will be used to reduce the impact of those emissions on the facility's neighbors. If you conclude that existing measures are enough to mitigate these impacts, that should be discussed as well.

Response

These items will be addressed in the CLCPA analysis currently being prepared.

Comment:

The applicant may also want to review the Department's draft DAR-21 policy which provides more detail about information that could be appropriate in the CLCPA Assessment. The document can be found at : https://www.dec.ny.gov/docs/air_pdf/dar21.pdf.

Response:

DAR-21 has been reviewed as part of the analysis currently being prepared.

Habitat Management Plan Comments

Comment:

1. The Natural Resource Habitat Management Plan for Closure and Post-Closure is a requirement/condition of the Seneca Meadows SWMF Freshwater Wetlands permit (8-4532-00023/00046) and by reference to the DEIS – a condition of the current Part 360 permit. Please provide this plan and any changes that are proposed for incorporation considering the proposed expansion.

Response

The Natural Resource Habitat Management requirements were incorporated into the Closure and Post-Closure (C-PC) Plan submitted as part of the Stage 2 permitting process for the current facility. When the Department provided a modified wetland permit on November 26, 2008, the correspondence indicated that the requirement for the Natural Resource Habitat Management Plan was satisfied.

In addition to the Dove and Black Brook enhancements Education Center, the natural resource habitat components in the C/P-C plan also included a native seed mixture to be incorporated into the final cover system and that seeding plan was made part of the Landscape Plan (Appendix J) for the current facility dated December 2006. The seed mix for final cover (December 2006 Landscape Plan, Table 4) is as follows:

Table 4.

Closure Seed Mix Rate (lb/acre)	Type of Seed Mixture
Required	
60 lb/acre	Big Bluestem (<i>Andropogon gerardii</i>)
90 lb/acre	Indian Grass (<i>Sorghastrum nutans</i>)
90 lb/acre	Little Bluestem (<i>Schizachyrium scoparium</i>)
60 lb/acre	Switchgrass (<i>Panicum virgatum</i>)
Optional*	
2 lb/acre	Boneset (<i>Eupatorium hyssopifolium</i>)
3 lb/acre	Butterfly-weed (<i>Asclepias tuberosa</i>)
2 lb/acre	Black Eyed Susan (<i>Rudbeckia hirta</i>)
2 lb/acre	Dwarf Cinquefoil (<i>Potentilla canadensis</i>)
2 lb/acre	Early Goldenrod (<i>Solidago juncea</i>)
2 lb/acre	Northern Dewberry (<i>Rubus flagellaris</i>)
2 lb/acre	Rough Goldenrod (<i>Solidago nemoralis</i>)
2 lb/acre	Rush (<i>Juncus greenei</i>)
2 lb/acre	Stargrass (<i>Hypoxis hirsuta</i>)
3 lb/acre	Stiff-Leaf Aster (<i>Aster linariifolius</i>)
3 lb/acre	Wild Indigo (<i>Baptisia tinctoria</i>)
2 lb/acre	Wild Bergamot (<i>Monarda fistulosa</i>)
2 lb/acre	Yellow Cone Flower (<i>Ratibida pinnata</i>)

*Optional seed mixes may be included in mix as available by local suppliers and as approved by SMI.

The Facility Manual (which under the new regulations include C-PC provisions for the site), Section 8.3.2 – Final Cover, submitted as part of the application for the SMI Valley Infill project, indicates that the entire Valley Infill final cover area will have vegetative cover installed in accordance with the natural habitat requirements of the 2006 Landscape Plan.

Kimberly A. Merchant
August 5, 2022

We trust that the responses enclosed herein, and the attached documentation adequately address the concerns of NYSDEC required to receive a notice of complete application. Please call me at 585-831-7862 with any questions.

Sincerely,

CORNERSTONE ENGINEERING AND GEOLOGY, PLLC



Robert Holmes, P.E.
Senior Client Manager



Attachment 1: Liner Performance Data

Attachment 2: Historic Tantalum Leachate Collection Data

Attachment 3: Draft Final – Contingency Plan for Operable Unit No. 2 (OU-2) Tantalum Waste Disposal Site

Attachment 4: New York State Office of Parks Recreation and Historical Preservation (OPRHP) No Impact Letter

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ATTACHMENT 1

LINER PERFORMANCE DATA

Table 1
SMI Peak Leakage Rate (30-Day Average)
2017 Calendar Year

Sump ID	Area	Peak Leakage Rate 30-Day Average for 2017 (gal/ac)	Number of Weeks with 30-day average Leakage Rate above 20 gal/ac	Notes
ABSRS-1	A/B Landfill Area 3	14.0	0	
ABSRS-2	A/B Landfill Area 1 & 2	2.8	0	
SESRS-1	SELF Area 1A &1B	4.4	0	
SERS-2	SELF Area 2	2.0	0	
SERS-3	SBO	11.5	0	
WESRS-3	WEX Stage 3	20.4	1	Existing liner (Stage 3) opened to accommodate new liner (Stage 6A) tie-in.
WESRS-4	WEX Stage 4	45.7	5	Capping of WEX Stage 4
NESRS	NEX Stage 7/8	47.1	4	Construction related damage to primary liner repaired.

Table 2
SMI Peak Leakage Rate (30-Day Average)
2018 Calendar Year

Sump ID	Area	Peak Leakage Rate 30-Day Average for 2018 (gal/ac)	Number of Weeks with 30-day average Leakage Rate above 20 gal/ac	Notes
ABSRS-1	A/B Landfill Area 3	1.7	0	
ABSRS-2	A/B Landfill Area 1 & 2	9.8	0	
SESRS-1	SELF Area 1A &1B	8.7	0	
SERS-2	SELF Area 2	9.7	0	
SERS-3	SBO	6.5	0	
WESRS-2	WEX Stage 6	20.4	1	Existing liner (Stage 6A) opened to accommodate new liner (Stage 6B) tie-in.
WESRS-3	WEX Stage 3	29.0	4	Existing liner (Stage 3) opened to accommodate new liner (Stage 6A) tie-in.
WESRS-4	WEX Stage 4	14.9	0	
NESRS	NEX Stage 7/8	3.7	0	

Table 3
SMI Peak Leakage Rate (30-Day Average)
2019 Calendar Year

Sump ID	Area	Peak Leakage Rate 30-Day Average for 2019 (gal/ac)	Number of Weeks with 30-day average Leakage Rate above 20 gal/ac	Notes
ABSRS-1	A/B Landfill Area 3	1.7	0	
ABSRS-2	A/B Landfill Area 1 & 2	4.8	0	
SESRS-1	SELF Area 1A &1B	7.7	0	
SERS-2	SELF Area 2	15.4	0	
SERS-3	SBO	12.8	0	
WESRS-2	WEX Stage 6	19.8	0	
WESRS-3	WEX Stage 3	9.3	0	
WESRS-4	WEX Stage 4	10.1	0	
NESRS	NEX Stage 7/8	3.6	0	

Table 4
SMI Peak Leakage Rate (30-Day Average)
2020 Calendar Year

Sump ID	Area	Peak Leakage Rate 30-Day Average for 2020 (gal/ac)	Number of Weeks with 30-day average Leakage Rate above 20 gal/ac	Notes
ABSRS-1	A/B Landfill Area 3	2.1	0	
ABSRS-2	A/B Landfill Area 1 & 2	5.9	0	
SESRS-1	SELF Area 1A &1B	9.0	0	
SERS-2	SELF Area 2	4.6	0	
SERS-3	SBO	13.1	0	
WESRS-2	WEX Stage 6	8.5	0	
WESRS-3	WEX Stage 3	14.9	0	
WESRS-4	WEX Stage 4	10.9	0	
NESRS	NEX Stage 7/8	13.2	0	

Table 5
SMI Peak Leakage Rate (30-Day Average)
2021 Calendar Year

Sump ID	Area	Peak Leakage Rate 30-Day Average for 2021 (gal/ac)	Number of Weeks with 30-day average Leakage Rate above 20 gal/ac	Notes
ABSRS-1	A/B Landfill Area 3	74.2	12	Existing liner (AB Area 3) opened to accommodate new liner (Stage 5) tie-in.
ABSRS-2	A/B Landfill Area 1 & 2	21.1	1	Stage 7/8-SMI Landfill Capping project underway (exposed tie-ins)
SESRs-1	SELF Area 1A &1B	15.8	0	
SERS-2	SELF Area 2	29.9	12	Capping project exposed a hole (from 2007) in liner.
SERS-3	SBO	19.2	0	
WESRS-2	WEX Stage 6	24.2	2	Existing liner (Stage 6) opened to accommodate new liner (Stage 5) tie-in.
WESRS-3	WEX Stage 3	8.1	0	
WESRS-4	WEX Stage 4	11.2	0	
NESRS	NEX Stage 7/8	25.6	4	Stage 7/8 Capping project underway (exposed tie-ins)

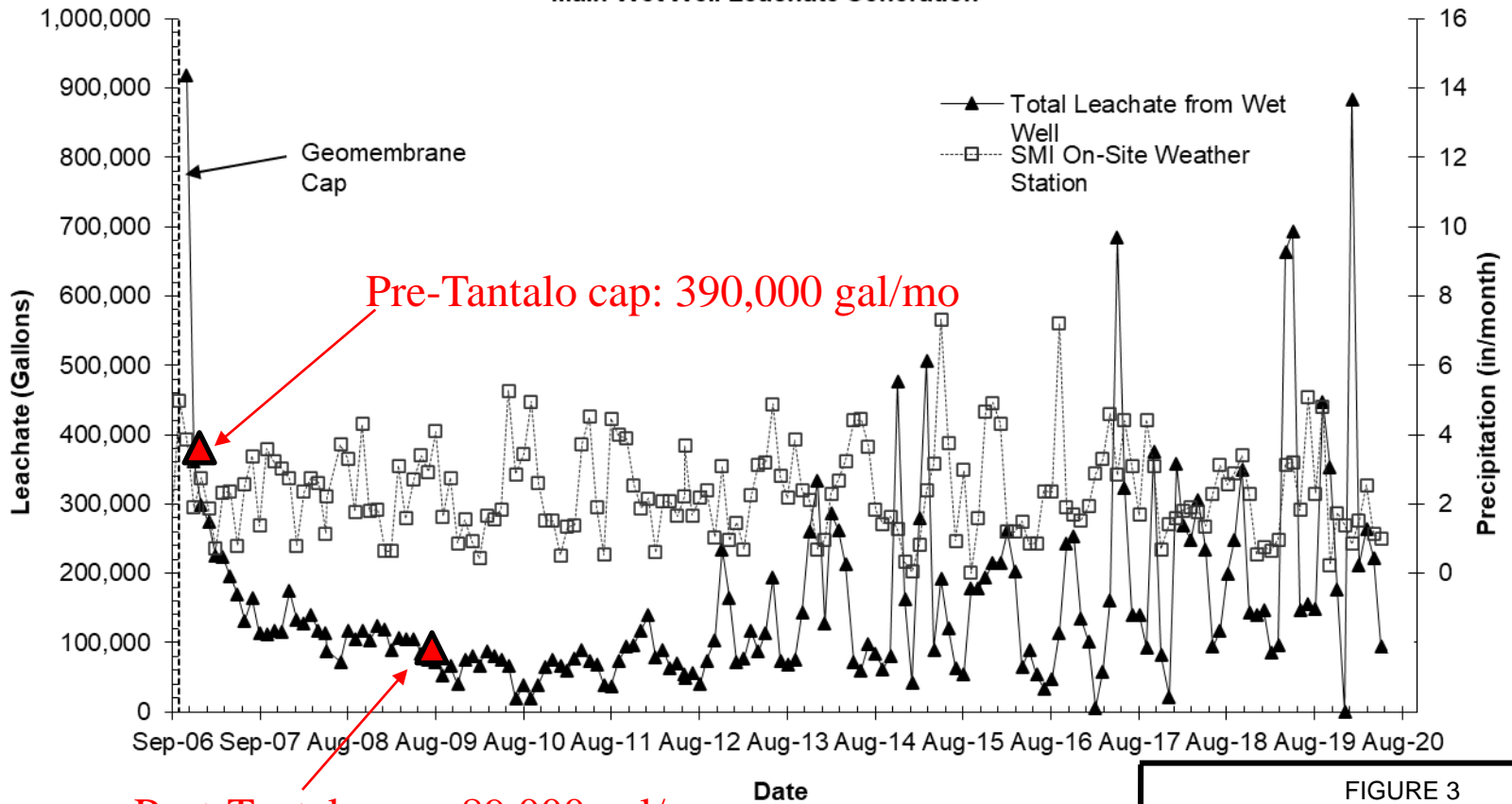
Table 6
SMI Peak Leakage Rate (30-Day Average)
January 1, 2022 - May 17, 2022

Sump ID	Area	Peak Leakage Rate 30-Day Average for 2022 (gal/ac)	Number of Weeks with 30-day average Leakage Rate above 20 gal/ac	Notes
ABSRS-1	A/B Landfill Area 3	4.5	0	
ABSRS-2	A/B Landfill Area 1 & 2	6.6	0	
SESRS-1	SELF Area 1A &1B	8.2	0	
SERS-2	SELF Area 2	50.5	22	Capping project exposed a hole (from 2007) in liner, repairs made and leakage rate is currently below 20 gpad (30-day avg of 15.7 gal/ac as of 5/17/2022).
SERS-3	SBO	8.3	0	
WESRS-1	WEX Stage 5	81.3	2	Liner construction / tie-ins / pipe installation. Secondary collection system was exposed for pipe tie-ins from adjacent cell on 5/16 during rain event.
WESRS-2	WEX Stage 6	6.5	0	
WESRS-3	WEX Stage 3	8.2	0	
WESRS-4	WEX Stage 4	10.8	0	
NESRS	NEX Stage 7/8	32.6	7	Capping project exposed a hole (from 2017) in liner, repairs made and leakage rate is currently below 20 gpad (30-day avg of 6.1 gal/ac as of 5/17/2022).

ATTACHMENT 2

HISTORIC TANTALO LEACHATE COLLECTION DATA

Main Wet Well Leachate Generation



Post-Tantalo cap: 89,000 gal/mo

Pre-Tantalo cap: 390,000 gal/mo

FIGURE 3

Comparison of Model-predicted Leachate Collection Rates with Historic Data

SMI Valley Infill Development



Taken from Figure 5-2 of the 2019 Tantalo Combined Annual Report No. 8

ATTACHMENT 3

CONTINGENCY PLAN FOR OPERABLE UNIT NO. 2 (OU 2) TANTALO WASTE DISPOSAL SITE

**SENECA MEADOWS, INC.
Seneca Falls, New York**

DRAFT FINAL

**CONTINGENCY PLAN
FOR OPERABLE UNIT NO. 2 (OU-2)
TANTALO WASTE DISPOSAL SITE
SITE NUMBER 8-50-004**

**December 2005
SEMD.008.002**

**SENECA MEADOWS, INC.
Seneca Falls, New York**

DRAFT FINAL

**CONTINGENCY PLAN FOR
OPERABLE UNIT NO. 2 (OU-2)
TANTALO WASTE DISPOSAL SITE
SITE NUMBER 8-50-004**

Prepared by:

**HydroQual Environmental
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**December 2005
SEMD.008.002**

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SECTION 1

INTRODUCTION

This Contingency Plan outlines contingency procedures that will be implemented at the Tantalo site during field operations associated with implementation of the Operable Unit 2 remedy, as well as to address conditions that may arise during the post-construction period of operation. The actions described herein will be taken in the event that unexpected or unforeseen events, accidents, or breakdowns occur during implementation of the remedy, or the remedy does not perform as expected.

1.1 GENERAL FACILITY DESCRIPTION

The Tantalo site has been designated a class 2 inactive hazardous waste disposal site under Title 13 of Article 27 of the Environmental Conservation law. Prior to 1958, the Site was agricultural land and part of property known as the “Greco Farm”. From 1958 through 1974, the Site was operated as a disposal area for residential, commercial, and industrial waste.

The development of the Tantalo site as a disposal area occurred in at least three distinct phases. From 1958 through 1968, the Site was used by two operators, Stanley Sell and Dominick Tantalo, Sr., for two adjacent open dumps operated pursuant to agreements with the Villages of Seneca Falls and Waterloo. In the initial phase of operation, the majority of wastes were burned. During this period, local industries used the dumps for the disposal of industrial wastes. Site investigation data collected following these disposal activities indicate that some of these wastes likely contained hazardous waste or substances by current definitions.

After 1968, the Site was operated solely by Dominick Tantalo, Sr., burning of wastes ceased and the adjacent village dumps were merged into a single landfill which gradually expanded from south to north to fill the Site. During this period, local industrial use of the Site expanded, and the service area grew to include wastes from one or more waste haulers operating in the City of Geneva.

During the third and final phase of landfilling, at the northern end of the Site and lasting from mid-1973 through the summer of 1974, DEC required that wastes be placed at least five feet above the water table to maintain a buffer between the waste mass and the groundwater. The service area expanded to include industrial waste from Onondaga County in addition to the existing municipal and industrial generators. By the summer of 1974 waste completely filled the remainder of the Tantalo site and a crossing over Black Brook was constructed for the operation of a new landfill north of the brook.

1.2 MATERIAL INVENTORY

The materials considered potential sources (stored or accumulated) for spill or release include:

- gasoline and diesel fuel for equipment and vehicles;
- oils and various equipment fluids;
- decontamination water;
- drill cuttings and fluids, and;
- contaminated groundwater.

1.3 REMEDIAL ACTION ACTIVITIES

The elements of the final design may be summarized as follows:

- Injection System: installation of injection wells and injection system for the electron donor material;
- Monitoring Wells: installation of monitoring wells to assess system performance;
- Water Supply Wells: installation of water supply wells for use in the operation of the injection system; and
- Operations: sequencing work for injection of electron donor for adequate lateral and vertical distribution and compatibility with ongoing landfilling activities and to efficiently complete the remedial action.

The elements of the remedial design are presented on the final design drawings and accompanying Final Design Report.

SECTION 2

CONSTRUCTION CONTINGENCY MEASURES

2.1 PERSONNEL AND USER SAFETY

Response procedures for on-site personnel injury during remedy construction activities are described in this section. An accident review, also discussed herein, will be conducted after the occurrence of incidents leading to personnel injury.

Through the use of signs and other controls and equipment, both remedial construction personnel and facility users are afforded safeguards against injury, accidents, and vehicular damage. Controls currently in place that are aimed at providing both users and personnel with safeguards include: posted speed limits on access roads and facility entrance, a hazard communication program for materials used at the facility, as well as the use of good engineering and construction practices.

2.1.1 Security

Access to the site will be controlled by the existing perimeter fence system and locking gate. Operating hours for the site will be 5 a.m. to 8 p.m. After operating hours, gates will be locked and access will be restricted to persons with proper identification. During off hours a private security company conducts patrols and monitors site security.

Only vehicles authorized by scale house personnel will be allowed to enter the site. Access routes and critical working areas will be adequately lighted. Other security measures will include requiring visitors to sign in, posting "No Trespassing" signs and locking groundwater monitoring wells.

2.1.2 Communications System

The internal communications system will consist of two-way radios assigned to each key operation and into the Project Manager's vehicle and the Health and Safety Officer's vehicle. A sufficient number of two-way radios will be maintained on site so that personnel engaged in the remedy implementation activities have access to a radio. The radio equipment will be selected so that it will be fully operational under various weather conditions. Internal communications include personal pagers and cell phones that SMI issues to key personnel. These employees can be contacted and made aware of an emergency that may arise at the facility.

Oral communications with off-site personnel will be accomplished by outside telephone lines. Telephones are in the existing office area and the maintenance

building/shop. These buildings will continue to be used during implementation of the remedy. In addition, telephones will be included in the new scale house.

The appropriate outside agencies such as the fire department, police, ambulance, poison control center, etc. will be contacted by telephone in the event of an emergency. A list of telephone numbers for emergency agencies (Figure 2-1) will be placed near each telephone that is located in an office with a radio receiver.

2.1.3 Employee Training Programs

Employees involved in the remedy construction will be trained in proper work, safety, and emergency response procedures. Employees who may be required to handle potentially harmful materials will be taught procedures for harmful materials handling, spill prevention and clean-up, material compatibility, and applicable right-to-know requirements, in accordance with the health and safety plan for OU-2.

Employees of SMI are trained during their initial employment probationary period. Prevention of emergency situations is emphasized in landfill training programs; however, emergency response actions are also covered. Safety meetings will be held periodically for work involved with implementation of the remedy. Basic safety measures, emergency response procedures, and changes to facility operations will be reviewed at these site safety meetings, in accordance with the health and safety plan.

2.2 WORK DELAYS

During implementation of the remedy potential work delays may occur due to inclement weather or inoperable or damaged equipment.

2.2.1 Inclement Weather

Work delays due to inclement weather could potentially affect the quality of work, construction schedules, and the coordination of subcontractors whose efforts are dependent on other phases of work. Heavy rains, winds, and storms may also cause damage to site work that has already been completed and negatively impact construction schedules. The OU-2 remedy is not labor intensive and will involve primarily well drilling and fabrication of injection equipment. Fabrication of injection equipment will not be materially affected by inclement weather. Work can be moved indoors if needed. If weather-related delays affect well installations, additional drilling resources can be called upon. SMI typically uses the drilling resources provided by the following companies and more than one company could be called upon to assist, if needed:

Earth Dimensions, Inc.
1091 Jamison Road
Elma, New York 14059
(716) 655-1717

Nothnagle Drilling
1821 Scottsville-Mumford Road
Scottsville, New York 14546
(585) 538-2328

In the event that additional construction equipment is required (e.g., pumps, etc.) the following companies may be contacted contingent upon construction-specific equipment needs:

Rupp Rental & Sales Corp. 120 Norman Street Rochester, New York (585) 254-2125	Tracey Road Equipment Route 290 P.O. Box 489 East Syracuse, New York (315) 437-1471	Five Star Equipment 60 Paul Street Rochester, New York (585) 235-3011
Syracuse Supply 275 Marketplace Drive Rochester, New York (585) 475-1330	Dooley Equipment Corp. 1550 Emerson Street Rochester, New York (585) 647-3140	Sealand Contractors 85 High Tech Drive Rush, New York (585) 359-9242

In the event that additional skilled labor and specialized equipment is required, the following subcontractors may be retained:

Sealand Contractors 85 High Tech Drive Rush, New York (585) 359-9242	D.C. Rausher Construction Mound Road Waterloo, New York (315) 539-1040	J.C. Dendis Construction 1164 NYS Route 96 Waterloo, New York (315) 539-8103
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Work delays due to inclement weather are not anticipated to have an impact on the overall construction schedule/implementation of the remedy due to the nature of the work (i.e., not earthwork related), availability of numerous equipment vendors, readily available labor supply, and contingency subcontractors.

2.2.2 Damaged Materials and Equipment

Construction specifications, including the construction CQA/CQC Plan require the construction contractor to check that construction materials used are free from defects and are not damaged prior to use or installation. In addition to materials specifications contained in the final design documents, material and equipment manufacturers will submit appropriate documentation (e.g., pump test results), as well as material storage, handling, and installation information. The CQA/CQC Plan specifies the procedures to be followed in field inspections and tests of equipment and materials prior to their use to demonstrate that they are free of defects and not damaged.

Material or equipment found to be damaged or unfit for use or installation will be removed, replaced, or repaired. Incidents will be documented where construction materials have been found to be unfit for use or installation. Replacement construction materials or

equipment or the use of those that have been repaired will also be documented to confirm adherence to the requirements outlined in the CQA/CQC Plan, Technical Specifications and Engineering Drawings.

In the event that materials or equipment used for construction are found to be damaged, materials will either be returned to the vendor for replacement or purchased from another supplier. The following consist of some construction materials suppliers that may be used in the event that materials have been damaged and require immediate replacement:

Empire Hardware & Machinery 300 Clark Street Auburn, New York (315) 253-0396	Kistner Concrete Products 8713 Read Road East Pennbroke, New York (585) 762-8216	New York Tank P.O. Box 51 Weedsport, New York (315) 834-6738
Charles H. Haynes, Inc. 6424 Taft Road Syracuse, New York (315) 452-1080	Keystone Builders Supply 85 Palm Street Rochester, New York (585) 458-5442	L.B. Smith, Inc. 783 Wangum Road Fishers, New York (585) 924-4930

2.2.3 Unavailability of Materials/Subcontractors

Materials proposed for use in the construction of the remedy are generally standard components/media available through a variety of local dealers and manufacturers. Various materials used for the implementation of the remedy include, for example, pipes and hoses, various valves, and metering devices. In the event that a pre-fabricated specific component or design structure is not available, it will be custom made for the appropriate use for which it is intended, as applicable.

In the event that aforementioned local material suppliers and subcontractors are unavailable, the geographical scope will be enlarged to solicit material suppliers and subcontractors from cities such as Buffalo, Binghamton, Albany in New York; Newark, New Jersey; and Scranton, Pennsylvania. If the expanded scope of materials and equipment suppliers proves unsuccessful, various construction efforts will be halted or redirected until the appropriate materials or equipment have been secured for on-site use. Revisions to construction schedules will be made accordingly, where appropriate.

2.3 ON-SITE PERSONNEL INJURY

During construction activities, the Health and Safety Officer will enforce the use of protective apparel in accordance with the Health and Safety Plan (HASP). Every effort will be made to implement safe practices to prevent personnel from getting injured. First aid kits

are located in the main office, equipment maintenance shop, and selected on-site pickup trucks. Regardless of the severity, incidents resulting in personnel injury will be documented. First aid procedures will be implemented in accordance with the HASP, and are generally described in the following sections of this plan.

2.3.1 Minor Injury

Minor injuries sustained by site personnel such as insect stings, minor cuts and abrasions, as well as minor burns, will be treated by an SMI employee having successfully completed a first aid training program. For liability purposes, material and equipment suppliers, as well as other site visitors will not be given first aid treatment. The visitor will instead be directed to receive medical attention from their physician, hospital, or local health clinic in proximity to their residence. Whether or not the victim is an employee, information regarding the incident will be recorded on an accident report form contained in the HASP.

2.3.2 Intermediate Personnel Injury

Intermediate personnel injuries consist of incidents resulting in, for example, minor burns, punctures, and sprains where the victim is not incapacitated as a result. Employees sustaining such injuries will be administered first aid at the site by a trained employee only. The injured employee will then report to or be taken to the SMI occupational physician, at the Lifecare Center located in proximity to the landfill at 1991 Balsley Road, Waterloo, New York. Contingent upon the nature of the injury, the employee may elect to visit their personal doctor, or may be transported to the hospital emergency room at Geneva General Hospital, located at 196 North Street in Geneva, New York for examination and treatment. Regardless of the nature of the injury, an accident report form will be completed and filed by either the Operations Manager or Health and Safety Officer.

Unless it is deemed absolutely necessary, again for liability purposes, on-site visitors sustaining injuries that are not incapacitating will not be given first aid at the site. Personal information about the victim will be collected for the purposes of completing the accident report form and the visitor will be instructed to receive primary care from their physician or hospital. Depending on the nature of the injury, they may be transported to the hospital emergency room at Geneva General Hospital, located at 196 North Street in Geneva, New York for examination and treatment.

2.3.3 Serious Injury

In the event of a serious injury to an employee or visitor, first aid will be administered to the degree only in which further harm to the accident victim is prevented. First aid will be rendered only by individuals who have had proper first aid training. The North Seneca Ambulance Service, located just south of the corner of Salcman Road on Route 414 will be called immediately and an employee will be dispatched to direct the

ambulance to the scene. The telephone number of the ambulance service is posted conspicuously near telephones at the site. Unless the location poses an immediate further threat to the life of the injured party, those having been seriously injured will not be moved until trained emergency medical technicians arrive.

2.3.4 Accident Review

The Health and Safety Officer will undertake an investigation of the accident and occurrences leading to the accident. The investigation will commence as soon as possible after the accident and any witnesses and people involved will be interviewed. The cause of the accident will be determined upon review of data collected during the investigation and if warranted, corrective measures will be implemented to help prevent future like occurrences.

The exact corrective measures implemented will be appropriate to the nature of the incident. Corrective measures may take the form of equipment repair or replacement, the installation of additional safety equipment, a revision of the procedures unique to the project, or meeting with the contractor and/or subcontractors to further emphasize and instruct employees of safe operating procedures and work habits. If it has been determined that the reasons for the accident were related to unsafe employee work habits, the Health and Safety Officer will convene a meeting with site employees to discuss the accident and the corrective measures that will be effected to prevent a recurrence and to instruct and remind employees of proper safety procedures. The Health and Safety Officer will follow up to check that recommended corrective measures have been implemented and that proper safety precautions are being taken.

2.4 EXCESSIVE NOISE

Drilling equipment used at the site will produce noise. Drilling activities will generally be confined to a regular workday. Drilling activities will be carried out with the intent of minimizing noise to those levels set forth by 6 NYCRR Part 360-1.14(p) for suburban settings. Noise levels are not to exceed 62 dBa from 7:00 a.m. to 10:00 a.m. and are not to exceed 52 dBa from 10:00 p.m. to 7:00 a.m. Internal combustion powered equipment, such as drill rigs, will be equipped with mufflers.

If noise levels beyond the SMI property line exceed the aforementioned levels, SMI will determine the source and implement or instruct contractors to implement corrective measures. Corrective measures may take the form of a muffler repair or replacement.

2.5 EQUIPMENT BREAKDOWN/UNAVAILABILITY

As previously discussed in Section 2.2 of this Contingency Plan, if equipment, such as a drill rig, becomes unavailable due to breakdown, it will be replaced by contacting various subcontractors/suppliers as previously noted, so that the work will continue.

In the event that the replacement equipment is unavailable from the local sources previously identified, additional contractors/vendors in the region will be contacted for availability. In the event that this course of action proves unsuccessful, the geographical scope will be broadened to include a search in other areas including Albany, Binghamton, and Buffalo, New York.

2.6 EVACUATION PLAN

If an emergency situation associated with the OU-2 remedy implementation were to arise, the OU-2 Site Health and Safety Officer is responsible for determining when an evacuation of the OU-2 work area is required and directing the OU-2 personnel to follow the procedures in the Health and Safety Plan. The OU-2 site Health and Safety Officer is also responsible for contacting SMI's Health and Safety Officer under such circumstances.

Immediate or imminent dangers requiring evacuation from the OU-2 work area include:

- A fire or threat of fire that cannot be averted, especially if an explosion may result (e.g., vehicle fire)
- A major spill or leak that cannot be contained and threatens human welfare (e.g., significant fuel spill).

In the event that evacuation of the work area is required the following procedures will be undertaken, time permitting:

- Facility personnel will be notified using either the two-way radio communications system or telephone paging system, as appropriate, so that site procedures and notifications may be implemented, as appropriate;
- Equipment is to be shut down; and
- Personnel will meet at a pre-arranged area - this will allow for a 'head count' of any missing personnel.

If during the course of the work, a site evacuation is necessary, unrelated to OU-2 operations, OU-2 personnel will follow the instructions of SMI personnel in charge of the evacuation.

2.7 WELL INSTALLATION DEFICIENCIES

The OU-2 remedy calls for the installation of injection, monitoring and water supply wells to implement the work. These wells must have sufficient capability to supply water in the quantities noted in the design report (water supply wells), accept electron donor material in the quantities noted in the design report (injection wells), and provide sufficient yield for sampling (monitoring wells). In fractured rock, well yields can vary based on the number of fractures actually intersected by the open interval of the well. In the event that initial testing

performed during well installation indicates inadequate well yield, the following procedures will be employed:

- If there is an opportunity to advance the well to a greater depth for the prospect of intersecting a greater number of or more productive factures (e.g., for water supply wells), the field representative may instruct the driller to continue drilling and yield testing.
- Hydrofracturing may be considered if the well appears to be yielding but a somewhat lower capacity and propagating existing fractures offers the potential to increase yield.
- A replacement well in a new location may be drilled, if necessary.
- Another existing well location (e.g., for water supply) may be considered, if appropriate.

The selected remedy for inadequate well yield will be based on the data collected during the well installations and the decision will be made with input from the field personnel and the design engineer.

Figure 2-1

**TANTALO WASTE DISPOSAL SITE
(OPERABLE UNIT NO. 2)
CONTINGENCY PLAN**

EMERGENCY TELEPHONE NUMBERS	
Fire Department	
Waterloo District	(315) 539-3333 or 2425
Police Department	
Waterloo State Police	(315) 539-3976
Seneca County Sheriff	(315) 539-9241
Ambulance Service	
North Seneca	(315) 539-5001
Hospital/Emergency 24-hr. Care	
Taylor-Brown	(315) 539-9024
Geneva	(315) 789-4222
Poison Control Center	(800) 333-0542
Chemical Emergency Advice	(800) 424-9300
Local Emergency Planning	(315) 539-3021
NYSDEC	
Regional Office	(585) 226-2466
Oil/Haz Mat Reporting After Hours Spill Calls	(800) 457-7362
RCRA Hotline	(800) 424-9346
Buckeye Petroleum Pipeline (24 hr.)	(800) 523-9420 Ext. 5223 (610) 967-3131
Mobil Petroleum Pipeline	(201) 754-3546
AT&T Fiber Optic Line	(800) 222-0400
NYSEG	(315) 789-8779

SECTION 3

IMPLEMENTATION CONTINGENCY MEASURES

The contingency plan for the Tantalos site OU-2 remedy implementation phase (i.e., during electron donor injection and performance monitoring) consists of two components (1) modifications to the selected remedy and (2) implementation of an alternative remedy. Each of these contingency actions is described in the sections that follow.

3.1 MODIFICATIONS TO THE SELECTED REMEDY

Selection of a contingency should make use to the extent possible of the site conditions at that time. Based on current conditions and existing data, as well as the anticipated impacts of the selected remedy, technology modifications that take advantage of generally reducing conditions and ongoing reductive dechlorination would have significant advantages in that an existing process is being supported. The contingency actions that may be taken in this regard are as follows:

1. Modification of electron donor type or dosing. This contingency action would be based on the performance of the design using monitoring data collected during the operation of the enhanced monitored natural attenuation remedy. An obvious change could be the addition of greater quantities of electron donor if the system is responding to the injection of such materials, but not to the extent necessary to affect the downgradient plume or cause significant pressure buildup within an injection well. In such events, additional electron donor may be injected. Ongoing research is also being performed by a variety of vendors and new products are being introduced into the marketplace. Therefore, if a contingency had to be evaluated, other electron donor materials available in the marketplace at the time could also be considered.
2. Installation of additional injection wells. This contingency action would be applicable to circumstances where enhancement of natural attenuation processes is occurring as anticipated, but distribution of electron donor is not as widespread as anticipated (e.g., due to variability of the fracture flow system). Additional wells could be placed along the entire injection area alignment or in select locations, based on monitoring data. This action could also result in a decrease in the time estimated for the remedy to achieve the objectives.
3. Bioaugmentation or the addition of microbial cultures that have the ability to carry out complete reductive dechlorination of chlorinated ethenes. The current state of the art offers a number of cultures based on various strains of Dehalococcoides.

Several field tests have shown that these cultures can be successfully introduced into aquifers resulting in acceleration of dechlorination and more complete degradation (i.e., dechlorination of cis-1,2-DCE). This technology is undergoing extensive testing and development and should be substantially more mature by the time a contingency plan might be required. This contingency action would likely be tested on a small scale at the site before a decision was made to implement on a full-scale basis. Bioaugmentation could occur through existing injection wells or at new locations, again depending on actual monitoring data.

4. Abiotic reductive dechlorination is a relatively new approach to remediating chlorinated VOCs. In the last 2-3 years, the industry has demonstrated and recognized that abiotic reductive dechlorination is an important mechanism at many natural attenuation sites. Some vendors have begun to promote this approach by manipulating aquifers to enhance the presence of iron species that participate in these reactions. This technology is undergoing extensive testing and development and should be substantially more mature in the future. However, this technology would not be considered in the short-term, if a contingency were necessary in the short-term.

Should a remedy modification occur based on performance monitoring data, the modifications will be reported in routine progress reports required for the OU-2 remedy implementation. Should a major change, constituting a design change, occur, a design change submittal will be made to the NYSDEC for prior approval.

3.2 ALTERNATIVE REMEDIES

Alternative treatment-based technologies may be considered for contingency purposes but would require oxidizing rather than reducing conditions. Such conditions would be counter to the prevailing conditions currently on site and generally associated with a landfill site. Oxidizing conditions may also be easier to achieve in some portions of the site than others (e.g., where reducing conditions may not be as prevalent). The treatment-based technologies that could be considered are as follows:

1. Aerobic biodegradation. Aerobic and other oxidative (iron reducing and manganese reducing bacteria) biodegradation processes are known to degrade cis-1, 2-DCE and vinyl chloride. This technology is reasonably well established but implementation could possibly interfere with degradation of PCE and TCE. This approach could be applicable to the farthest extent of the plume, where reducing conditions may not be as prevalent and where degradation products predominate. Implementation could be achieved by introduction of dilute hydrogen peroxide. Use of biosparging is not recommended in a fractured rock environment.

2. In situ chemical oxidation (ISCO). Given the geological setting, permanganate and persulfate technologies appear to be the most likely forms of ISCO to consider because these chemicals oxidize chlorinated alkanes and alkenes and have a longer life-span in the environment (weeks to months with a single dose). Ozone could also be considered but delivery is likely to be difficult in a fractured rock environment. Permanganate reacts quickly with chlorinated ethenes but leaves a residual precipitate of manganese that could reduce aquifer permeability. Persulfate requires some activation, either thermal or a catalyst such as iron. ISCO technology is currently available in the marketplace from a number of vendors, and if applied, the first step would be a pilot program to confirm performance, dosing, etc. The injection and pumping locations used for the electron donor could be applied for ISCO technology as a starting point. Although ISCO could be used to oxidize constituents found at the Tantalito site, it is best applied at source areas where concentrations of the constituents are high. Because OU-2 deals with a generally dissolved phase plume of lower concentrations, ISCO will be considered, but is unlikely to be the contingency of choice.
3. Last, conventional groundwater extraction and treatment technology could be used as a contingency, but would only be considered where there was potential for exposure to the plume. Such an option would be evaluated similar to other technologies, that is, on the basis of actual operating and monitoring data. Groundwater extraction and treatment could be applied to specific sub-areas of the plume or to the downgradient perimeter, depending on the results of monitoring data.

Should the need for an alternative remedy arise, a focused feasibility review will be completed to determine the most appropriate course of action taking into account the state of the art of applicable technologies as well as site conditions at the time. The focused feasibility study will be submitted to NYSDEC, along with supporting data, for review and approval prior to implementation.

ATTACHMENT 4

NYS OPRHP – NO IMPACT LETTER



**Parks, Recreation,
and Historic Preservation**

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

May 19, 2022

Kyle Rogers
Staff Engineer
Tetra Tech
100 Crystal Run Road, Suite 101
Middletown, NY 10941

Re: DEC
SMI Valley Infill
1786 Salcman Rd, Waterloo, NY 13165
22PR03274
Current Permit No. 8 4532-00023/00041 (SWMF 50S08)

Dear Kyle Rogers:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation