

RESPONSE TO INTERMEDIATE (60%) DESIGN COMMENTS
PROVIDED IN EPA'S NOVEMBER 1, 2007 LETTER

12/31/07
Superfund Records Center
SITE: Fletcher's Paint
BREAK: 6.6
OTHER: 286703

General: On November 1, 2007, the United States Environmental Protection Agency (EPA) provided comments on the Intermediate (60%) Design Reports (Intermediate Design Reports) for the low-temperature thermal desorption (LTTD) and off-site disposal (OSD) soil remedies. The Intermediate Design Reports were submitted to EPA by the General Electric Company (GE) on June 4 and 12, 2007.

In its November 1, 2007 letter, EPA requested that GE submit the Final (100%) Design Report for the OSD soil remedy by December 31, 2007, and that GE also submit responses to EPA's comments on both Intermediate Design Reports. GE's responses are provided in this document. GE's Final Design Report for the OSD soil remedy incorporates GE's responses to EPA's comments on the Intermediate Design Report for the OSD soil remedy.

EPA's comments on the Intermediate Design Reports were organized under several different headings. GE's responses follow that same general organization. However, GE has reordered some of EPA's comments so that they are addressed with other comments relating to the relevant sections of the Intermediate Design Reports. In addition, although the majority of EPA's comments on the Intermediate Design Reports were numbered, certain of the EPA's comments were not numbered. In such cases, GE has included EPA's narrative in its entirety and inserted responses at several locations within the body of the narrative. EPA's comments are shown in italics.

General Comments

EPA has reviewed and provided comment on the 60% OSD Intermediate Design as well as the 60% LTTD design. The majority of the comments are applicable to both designs as many elements of the performance of the remedies are the same.

The 60% LTTD design has progressed from the 30% design, and related submissions, whose focus was mainly on the limits performance of the excavation and the support system, cover design and confirmation sampling to a design which includes more detail relative to the performance and sequencing of the remedial action as well as specific issues of traffic, access and verification measures.

Two significant Town comments on the 30% design were included the 60% design and included the reduction of the performance of the LTTD system from a 24/7 week to a 12/6 week. This decrease in available time to perform treatment at the site increased the overall schedule for the performance of the LTTD remedy. Similarly, the Town determined that an alternative cover to the asphalt cap required in the ROD was desired and the incorporation of a 40 inch equivalent soil cover resulted in alterations to the limits of excavation needed to install the cover, utilities and tree corridors associated with the Towns plan for reuse of the Fletcher property, as well as the need to remove additional soils from the site to achieve the final grade for the cover. GE has been cooperative with these requests and has willingly provided the EPA, NHDES and the Town with details of such a cover, and all its complexities to "catch up" this portion of the remedy for the 60% submission. EPA supports the use of the smaller cap on the Elm Street area, which allows for greater areas for tree corridors and understands that the Town is also in agreement.

Response: The Final Design Report for the OSD soil remedy incorporates the design of the smaller cap preferred by EPA and the Town of Milford (Town), as did the Intermediate Design Reports. This maximizes the area available for tree planting corridors.

The Town of Milford has, in an email dated October 31, 2007 submitted comment on the 60% design submission for both the OSD and LTTD remedies. EPA remains concerned that the 60% design was submitted without determinations and performance details for several key elements. GE provides the assumption that

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they will have the ability to remove the southern rail service for an extended time to perform either remedy, however note that currently there is only permission for removal of the rail for a 2-4 week timeframe. The final design(s) will need to resolve this issue and provide a final basis for the performance and sequencing of the excavation, support structures and soil handling associated with the remedial action. EPA cannot complete its review and approval for the minimum limits of excavation at the Mill Street site without knowing that GE has the support of the railroad.

Response: On October 31, 2007, the Town submitted comments to EPA on the Intermediate Design Reports that were submitted by GE on June 4 and 12, 2007. EPA has not yet provided comments on the Town's comments on the Intermediate Design Reports. However, in a separate document GE has provided responses to the Town's comments.

As previously reported, GE was informed in a March 28, 2007 meeting with representatives of Guilford Transportation Industries, Inc. (Guilford) that Guilford would, based on current demand, likely approve removal of the southern rail line on a short-term basis (i.e., two to four weeks), but indicated that long-term removal (i.e., several months) of the southern rail line would not be acceptable without changes to its current infrastructure. Guilford also stressed that demand can change on short notice, and that the demand in the future (e.g., next year, two years from now, etc.) cannot be predicted. This information was summarized in GE's May 10, 2007 letter to EPA and included in the Intermediate Design Reports. Since the submittal of the Intermediate Design Reports on June 4 and 12, 2007, respectively, Guilford informed GE that it will not agree to the short-term removal of the southern rail line. Regarding removal of the southern rail line on a long-term basis, as assumed in the Intermediate Design Reports, Guilford indicated that 1,000 feet of alternate siding would need to be constructed to the immediate west (i.e., between the Mill Street Area and West Street), that such a siding would need to be installed by Guilford, and that Guilford was not willing to incur the cost to construct the alternate siding. An agreement has not yet been reached with Guilford regarding the removal of the southern rail line. However, like the Intermediate Design Reports, this Final Design Report for the OSD soil remedy is based on the assumption that the southern rail line will be removed on a long-term basis. GE will continue its efforts to reach an agreement with Guilford that allows removal of the southern rail line on a long-term basis, but EPA assistance may ultimately be required. If the southern rail line cannot be removed, then subsurface soils with concentrations of total polychlorinated biphenyls (PCBs) up to 12,000 milligrams per kilogram (mg/kg) would not be able to be removed, and the Final Design Report for the OSD soil remedy would require significant modification.

Other issues that were identified in the reports that will need to be resolved within the Final Design submission include:

- *Alternative Access to the Keyes Park*
- *Discharge of the temporary water treatment to either the POTW or the River*
- *Dewatering through the installation of wells in bedrock versus at the bottom of the excavations*
- *Discussions with Mill Street residences relative to their alternative access*
- *Traffic routes*
- *Discussions remaining with the Town relative to utilities at the Elm Street site*

Response: EPA's comment identifies six "issues". These are addressed sequentially below.

Alternate access to Keyes Field is not required to implement either the OSD soil remedy or the LTDD soil remedy. GE is aware that the Town would prefer to continue using those portions of Keyes Field that are not needed in connection with the implementation of the soil remedy. GE also recognizes that alternate access to Keyes Field would provide a long-term benefit to the Town. There is already a gate along the west side of

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Keyes Field adjacent to the former Permattach property, and the Town has been working to obtain an easement for access to Keyes Field through the former Permattach property. If the Town secures this easement from the adjacent property owner, a gravel road could be installed from the existing gate to the existing road within Keyes Field. This road would remain after the soil remedy is completed for use by the Town. A design for the new access road is not included in the Final Design Report for the OSD soil remedy because it is not required to implement the OSD soil remedy, and the Town has not yet secured the necessary easement over the former Permattach property. The design of the new access road can be submitted if and when the alternate access rights have been secured by the Town and the alignment of the road has been agreed upon.

As requested by EPA, a discharge location has been selected for the temporary water treatment system. The Final Design Report for the OSD soil remedy incorporates discharge to the on-site drainage ditch/culvert system at the Mill Street Area, which ultimately leads to the Souhegan River. The Final Design Report also provides the substantive requirements (e.g., monitoring requirements and discharge limitations) for the discharge from the temporary water treatment facility based on ARCADIS BBL's review of the available groundwater data and also the discussions with Jeff Andrews of the New Hampshire Department of Environmental Services (NHDES). In accordance with the discussions with Mr. Andrews, the Remediation & Miscellaneous Contaminated Sites General Permit (RGP) was utilized as a guide to determine the substantive requirements for the water discharge.

For completeness, the Final Design Report includes a dewatering system that was designed by Haley & Aldrich (H&A) and is capable of extracting up to 150 gallons per minute (gpm) from the excavation cells extending below the water table. The Remedial Action Contractor will have the ultimate responsibility for the design of the dewatering system, which will be presented in the Remedial Action Work Plan (RAWP) submitted to EPA. However, to dewater the excavation cells located within the soldier pile tremie concrete (SPTC) walls, it is anticipated that the system utilized by the Remedial Action Contractor will include a combination of dewatering wells located primarily in the overburden but with some or all of the wells extending into the shallow bedrock. To dewater excavation cells located outside the SPTC wall, it is anticipated that the Remedial Action Contractor will use extraction points located solely within the overburden.

The Intermediate Design Reports included provisions to install a temporary access road to maintain access to the residential properties on the south side of Mill Street during the soil remedy. GE has discussed the alternate access with the impacted property owners on two occasions during the final design activities (i.e., on November 28 and 29 and December 20, 2007), and is currently developing a more detailed design. Once that design is approved by the property owners, it will be submitted to EPA for review and approval.

EPA's comment references "[t]raffic routes" as an "issue". The Truck Route and Traffic Analysis Report (TR/TA Report) presented in Appendix E in the Intermediate Design Reports has been modified, and the modified TR/TA Report is presented in the Final Design Report for the OSD soil remedy. The TR/TA Report in the Final Design Report contains details regarding the traffic routes that will be used to bring clean backfill to the Site and also haul impacted materials from the Site to off-site disposal facilities.

Finally, EPA's reference to "[d]iscussions remaining with the Town relative to utilities at the Elm Street site" is unclear. A significant focus of the preliminary and intermediate design efforts related to the Town's proposed use of the Elm Street Area as a park, and the Town's proposed plans were incorporated into the Intermediate Design Reports, which provided detailed information on the location, width and depth of the utility corridors at the Elm Street Area. Those details are also provided in the Final Design Report for the OSD soil remedy.

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In addition, GE proposed in the Intermediate Design Reports to perform non-remedial work to correct an existing problem for the Town. Specifically, as shown on Technical Drawing G-20 in Appendix B of the Final Design Report for the OSD soil remedy, GE proposed replacing the storm sewer that extends from catch basin CB-1 near the Snack Corner Mobil gasoline station, along Cottage Street, and across Elm Street to the Elm Street Area. The existing storm sewer in this area is not functioning properly, and, as a result, the Town installed an overflow in catch base CB-1 to divert flow into the storm sewer that flows east along Elm Street. While GE proposes to leave that overflow structure in place, the replacement storm sewer should result in that overflow being used much less frequently, if at all. This is a benefit to the Town that is not a requirement of the Record of Decision (ROD) for Operable Unit 1 (OU-1).

The only outstanding utility-related issue relates to a comment made by the Town in its October 31, 2007 letter to EPA. The Intermediate Design Reports indicated that the Town was responsible, under its February 8, 1999 Consent Decree with EPA, for providing the materials of construction for the replacement storm sewer, and that the pipe and manhole sizes, materials of construction and manufacturer would be specified by the Town. The Town's October 31, 2007 comments to EPA state:

“The Town's Consent Decree requires only that the Town provide 'a replacement drainage pipe'. The Town is not responsible for storm water utility materials other than the pipe. Further, the 60% design must specify the storm water utility materials, which should be consistent with Town utility construction requirements.”

GE does not expect the Town to provide the bedding materials for the replacement storm sewer, or the backfill material; those would be provided by GE. GE would also be responsible for performing the actual replacement, including the excavation, installation and backfilling. However, GE does expect the Town to provide the “hardware” of the drainage system including connections, subsurface structures at turns, riser sections above those structures and manhole structures with covers at the top of the risers. Incorporation of these items would be standard engineering and/or construction practice. We also confirmed the need for these components with the Town's Department of Public Works on November 13, 2007. Moreover, these other elements are required by the Town's standard specification package, which ARCADIS BBL purchased from the Town on November 13, 2007.

Based on the Town's comment, the intent of which was explicitly confirmed with Tom Roy of Aries Engineering (the Town's consultant) on November 15, 2007, and EPA's requirement to submit the Final Design Report for the OSD soil remedy by December 31, 2007, the design of the replacement storm sewer, including specifying the various materials of construction, was completed for the Final Design Report. The Town's standard specification package was used in developing this design. However, pursuant to its Consent Decree with EPA, the Town should provide all of the necessary materials, except for the bedding and backfill, to install the replacement storm sewer from catch basin CB-1 to the outfall at the Souhegan River.

The 60% OSD Design is EPA's first look at some of the details that would be included in the performance of the alternative action. Many of the basic elements of this design are the same as the LTTD design GE presented two scenarios for excavation which involved either a concurrent or sequential excavation of soils at the Elm and Mill Street area. GE also noted that the remedial action contractor may choose either scenario for final approval however GE's estimates for cost and schedule reflect only scenario 2 - concurrent excavation actions. In the final design GE should reflect the OSD scenario as a potential range in schedule and cost depending on the final design. This would also allow public comment to way in on both potential scenarios.

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Response: As EPA knows, GE asked to submit a Preliminary (30%) Design Report (Preliminary Design Report) for the OSD soil remedy concurrent with the Preliminary Design Report for the LTTD soil remedy. GE also requested that EPA make a decision between the LTTD and OSD soil remedies at the preliminary design stage, rather than at the intermediate design stage. However, EPA directed GE not to submit a Preliminary Design Report for the OSD soil remedy, and stated that the remedy decision would not occur until the intermediate design stage.

The Intermediate Design Report for the LTTD soil remedy only presented cost and schedule information for one of the scenarios evaluated as part of the remedial design. Specifically, four scenarios were evaluated during the preliminary design of the LTTD soil remedy, as presented in Appendix C of the Preliminary Design Report for the LTTD soil remedy. Scenarios 1 and 2 were determined to be impracticable. The two scenarios determined to be practicable were Scenarios 3 and 4 which both involved the management of treated soil stockpiles at Keyes Field. Scenario 4 would also have involved locating the LTTD system at Keyes Field. Scenario 4 was not recommended largely for that reason. Scenario 3 involves the management of treated soil stockpiles, but not the location of the LTTD system, at Keyes Field. EPA approved the selection of Scenario 3 in its April 5, 2007 letter approving with modifications the Preliminary Design Report.

As reflected in its October 31, 2007 comments, the Town desires the soil remedy to be completed as quickly as possible. That sentiment was also echoed by several property owners during recent meetings with GE. Scenario 2 of the Intermediate Design Report for the OSD soil remedy is based on concurrent excavation of the Elm and Mill Street Areas, subject to certain constraints, such as not closing the west-bound (i.e., northern) lane of Elm Street at the same time that Mill Street is closed to through traffic. That is the scenario that has been incorporated into the Final Design Report for the OSD soil remedy. Scenario 1 was based on the sequential excavation of the Elm and Mill Street Areas, but this scenario was not advanced to the final design.

It should be noted that the Remedy Comparison Document submitted by GE to EPA on June 12, 2007 presented cost estimates and schedule information for both soil remedies based on the Intermediate Design Reports. The cost estimate for the LTTD soil remedy was \$28.8MM, which is almost 45% higher than the \$19.95MM estimate for the OSD soil remedy. Unlike the Intermediate Design Reports, the Remedy Comparison Document presented the schedule for each soil remedy as a range. For the LTTD soil remedy, the range was 30 to 52½ months. This range was based on Scenario 3. For the OSD soil remedy, the range was 14½ to 23 months, and was based on Scenario 2. GE maintains that the cost estimates and schedule information provided in the two Intermediate Design Reports, and the associated Remedy Comparison Document, are sufficient to facilitate a decision between the LTTD and OSD soil remedies.

One final issue that EPA remains concerned about, which was not specifically addressed in Section 4 of the design, but was commented on as part of the 30% LTTD design, is the need for, availability and location of staging areas in and around the site to allow for continuous availability of trucks to bring in or haul out materials. EPA provided comment on a prior submission initially presenting some of this information; however GE indicated at the recent Town meeting that addition off-site staging areas were being considered. The final design should include a designated section for the details of this key element of the OSD remedial action.

Response: Staging areas were not specifically addressed in Section 4 of the Intermediate Design Reports. However, they were specifically addressed in Section 2.4.1 of the TR/TA Report in Appendix E of the Intermediate Design Reports.

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The TR/TA Report specified two potential staging areas located on Town property that were identified by Town personnel for potential use as truck staging areas. Such areas would be used for the staging of trucks bringing clean fill materials to the Site, or empty trucks prior to traveling to the Site for loading of impacted materials for subsequent transportation to the applicable off-site disposal facilities. The TR/TA Report also indicated that Staging Area 1 was anticipated to be used as the primary staging area for trucks that do not travel directly to the Site, with Staging Area 2 utilized, if necessary, as an overflow staging area.

As discussed in the TR/TA Report, it is estimated that approximately 26 trucks would visit the Site during a typical work day when excavation and/or backfilling operations are being performed, and that the Remedial Action Contractor would be responsible for scheduling the arrival of the trucks throughout the day to maintain a continuous flow of vehicles bringing clean backfill materials to the Site or transporting impacted materials from the Site. Based on this approach, it was further indicated that it would not be necessary to stage all 26 trucks in Staging Area 1 at any one time during the work day. Instead, it is anticipated that Staging Area 1 can accommodate five to ten trucks with another five to six trucks staged on-site (split between Mill Street and the portion of Keyes Drive adjacent to the Elm Street Area). The TR/TA Report indicated that the trucks loaded with impacted material would travel directly to the appropriate off-site disposal facilities and would not be routed back to the staging area(s). Based on the apparent suitability of the identified staging area(s) for the implementation of the remedial action, the evaluation of additional staging areas per EPA's comment is not necessary.

Finally, it should be noted that the Final Design Report includes revisions to the TR/TA Report. The revised report provides additional recommendations regarding the use of truck staging areas during the implementation of the OSD soil remedy.

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Comments on the 60% OSD Design

EPA Comment 1: *Section 1.2 Purpose and Scope of Intermediate Design Report for the OSD soil remedy: The comparable section 1.2 for the LTTD remedy indicates the major elements or revisions that make up the 60% LTTD design submission. While 1.2 of the OSD report indicates that the 60% OSD report provides a comparable level of detail, it does not go so far as to confirm that, where applicable, comments, concerns, and modifications that have been built in to the 60% LTTD design under the Order have been incorporated into the 60% design and specifications. EPA requests assurance that the remedial design work that has been on-going under the UAO is incorporated into this 60% OSD Design with respect to excavation, cover, utilities, etc. wherever such components are elements of both designs.*

Response: GE's intent during the preparation of the Intermediate Design Reports for both the LTTD and OSD soil remedies was that common elements of the two remedial designs would be identical. To that end, any comments and/or modifications to elements of the intermediate design for the LTTD soil remedy that were also relevant to the OSD soil remedy were incorporated into the intermediate design of the OSD soil remedy.

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EPA Comment 2: *Section 4.2: GE notes that the estimated volume of soil removal assumes that certain samples containing PCBs in excess of SCLs will not be fully addressed by the scope of the remedial action. This is incorrect. First the remedial action is an EPA approved activity and issues related to meeting performance standards are part of that approval. Second, GE continues to reiterate that they are seeking an exemption for meeting an SCL for a specific sample of soil that is roughly 5 grams of material. EPA, in*

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approving the final design for the site, will include in that approval process (per the language provided in the Order) the understanding of, comment or modification to GE's proposed limits of excavation for the Mill Street Site and not approvals of individual samples that may or may not represent soil conditions in nearby soils. EPA has in the past reviewed all subsurface data before addressing or accepting any proposed minimum limits of excavations. As GE notes in the 60% Design, the limits of excavation represent the minimum excavation that would be performed under GE's next cleanest point methodology. Additionally, soils which exceed SCLs may require excavation following the soil confirmation sampling activities to be performed under verification plan. All combined, the EPA approval of remedial design and remedial action activities at the site ensure that all soils at the site are being addressed by the scope of the remedial action.

Response: EPA's comment is acknowledged. GE has provided EPA with ample technical justification for not removing certain soils associated with samples that contain PCBs in excess of the soil cleanup levels (SCLs). EPA has already concurred with the technical justification provided by GE for not addressing such soils at the Mill Street Area. However, the ROD issued by EPA on September 30, 1998, the Unilateral Administrative Order (UAO) issued to GE by EPA on July 16, 2001, and the Statement of Work (SOW) attached to the UAO each specify the SCLs that are to be achieved at the Site. Further, Paragraph 99 of the UAO states, in pertinent part:

“The final site inspection shall be followed by a written report (Final Construction Completion Report) submitted within thirty (30) days of the Final site inspection by a registered professional engineer and Respondent's Project Coordinator certifying that the Performance Standards and cleanup levels for Site soils has been met in full satisfaction of the requirements of this Order.”

Therefore, EPA must either revise the ROD or revise the UAO and associated SOW. With respect to the UAO and associated SOW, the referenced provision and other similar provisions could be revised to anticipate a certification that the soil remedy was implemented in accordance with the RAWP approved, or approved with modifications, by EPA.

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EPA Comment 3: *Section 4.7 Performance/Sequencing of the Remedial Action: The 60% Design report presents two scenarios for the sequencing of the OSD alternative. Scenario 1 was not chosen to be carried through the discussion in the report and involved the sequential approach to the remedial action. Rather, GE has presented scenario 2, which performs the approach to the remedial action at both the Elm and Mill Street sites concurrently. GE indicates that a concurrent approach will lessen the impacts on the adjacent community as it shortens the time frame to complete the remedial action. In presenting comparable remedies, GE presents the LTTD remedy via a range in the number of days that may be required to perform the activities including down time of 3 months due to inclement weather conditions. GE in providing only one scenario, which reflects concurrent actions and no assumptions that the overall schedule may be impacted by such issues as scheduling issues consistently over time for the hauling and staging of materials, limitations due to road conditions as a result of inclement weather and ability to maintain a schedule should a winter season in NH bring several feet of snow and weeks of freezing temperatures. It appears that only the “best” case scenario for OSD is being presented and EPA requests that, since the remedial action contractor will ultimately propose the final sequencing for the OSD remedy, that GE present the OSD remedy as a range of duration to complete the action as well as a range for the costs for each scenario.*

It is also not clear from the design whether, the remedial action contractor may determine not to stage clean soils on the site for backfill, but rather utilize that Keyes field for this purpose.

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Response: GE disagrees with EPA's characterization of the remedial scenarios presented in the Intermediate Design Reports and the Remedy Comparison Document. As previously indicated, the Preliminary Design Report for the LTTD soil remedy provided summaries of four potential scenarios that were evaluated for the implementation of the LTTD soil remedy. Scenarios 1 and 2 were determined to be impracticable. The two scenarios determined to be practicable were Scenarios 3 and 4 which both involved the management of treated soil stockpiles at Keyes Field. Scenario 4 would also have involved locating the LTTD system at Keyes Field. Scenario 4 was not recommended largely for that reason. Scenario 3 involves the management of treated soil stockpiles, but not the location of the LTTD system, at Keyes Field. EPA approved the selection of Scenario 3 in its April 5, 2007 letter approving with modifications the Preliminary Design Report. As a result, the Intermediate Design Report for the LTTD soil remedy included schedule and cost information associated with the implementation of the LTTD soil remedy using Scenario 3.

The Intermediate Design Report for the OSD soil remedy provided an evaluation of two potential scenarios for the implementation of the OSD soil remedy. Scenario 1 involved the sequential excavation of the Elm and Mill Street Areas, while Scenario 2 involved the concurrent excavation of the Elm and Mill Street Areas. Based on the evaluation, the Intermediate Design Report included schedule and cost information associated with the implementation of Scenario 2.

The Remedy Comparison Document submitted to EPA on June 12, 2007 provided the following information for the implementation of each remedy using the selected scenario: an estimated schedule range (using favorable and less-than favorable assumptions); and, an estimated implementation cost (using the assumptions associated with the more favorable estimated schedule). In short, GE provided equivalent information for the LTTD soil remedy using one scenario (i.e., Scenario 3) and the OSD soil remedy using one scenario (i.e., Scenario 2).

As reflected in its October 31, 2007 comments, the Town desires the soil remedy to be completed as quickly as possible. That sentiment was also echoed by several property owners during recent meetings with GE. Scenario 2 of the Intermediate Design Report for the OSD soil remedy is based on concurrent excavation of the Elm and Mill Street Areas, subject to certain constraints, for example, not closing the west-bound (i.e., northern) lane of Elm Street at the same time that Mill Street is closed to through traffic. That is the scenario that has been incorporated into the Final Design Report for the OSD soil remedy. Scenario 1 was based on the sequential excavation of the Elm and Mill Street Areas, but this scenario was not advanced to the final design.

EPA's comment indicates that the implementation schedule for the LTTD soil remedy included three months of estimated downtime due to inclement weather, whereas the implementation schedule for the OSD soil remedy does not include any such downtime. The inclusion of winter downtime in the estimated schedule for the LTTD soil remedy is warranted given that the minimum estimated duration (i.e., the estimated baseline schedule duration) for full-scale treatment is 18 months, as presented in Section 3.2.1 of the Remedy Comparison Document. This estimated three-month winter shutdown is appropriate since the implementation of the LTTD soil remedy will necessarily span at least one winter season during which cold weather would adversely impact the performance of the LTTD system. If the extended duration of 27 months for full-scale treatment is included in the implementation schedule for the LTTD soil remedy, it is possible that two winter shutdowns would be necessary to implement the remedial action.

Inclusion of a similar winter shutdown in the implementation schedule for the OSD remedy is not necessary since the estimated baseline schedule for the excavation and backfill activities is only 3½ months, as indicated in Section 3.2.2 of the Remedy Comparison Document. As a result, implementation of the excavation and backfilling components of the OSD soil remedy can be performed within a single construction season, which would preclude the need for a winter shutdown. Even if the extended duration of 6½ months is used,

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implementation of the excavation and backfill components of the OSD soil remedy could still be performed during a normal construction season. As a result, it is not necessary to include a winter shutdown in the implementation schedule for the OSD soil remedy.

With regard to EPA's assertion that the schedule for implementing the OSD soil remedy does not factor in potential impacts associated with "scheduling issues consistently over time for the hauling and staging of materials, limitations due to road conditions as a result of inclement weather and ability to maintain a schedule should a winter season in NH bring several feet of snow and weeks of freezing temperatures", the potential schedule growth discussed in Section 3.2.2.c of the Remedy Comparison Document explicitly identifies truck limitations and/or restrictions on working hours, which would include some of the "scheduling issues" and "inclement weather" to which EPA's comment eludes. Further, the inclement weather impacts that EPA mentions would not only impact the OSD soil remedy, but would also impact the LTTD soil remedy. As indicated in the relevant Intermediate Design Report, the LTTD soil remedy includes a significant amount of off-site disposal. Specifically, the LTTD soil remedy would require the transportation and off-site disposal of approximately 10,360 cubic yards (CY) of materials, or approximately 40% of the material subject to transportation and off-site disposal under the OSD soil remedy, as discussed in the Remedy Comparison Document. Therefore, any impacts to the implementation schedule for either remedy associated with scheduling issues for off-site disposal of excavated materials would be realized under either remedy. Further, inclement weather associated with winter would arguably have a greater impact on the LTTD soil remedy since such weather would not only impact the transportation and off-site disposal of treated and/or untreatable materials, but would also impact operations unique to the LTTD soil remedy.

In summary, the information submitted by GE during the intermediate design phase, including the Remedy Comparison Document, provided a balanced comparison of the implementation scenarios for the LTTD and OSD soil remedies.

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Comments on the 60% LTTD and OSD Designs

EPA Comment 1: *Section 1.4.2 Performance Standards: EPA has provided GE with comments in the past that clarify GE concerns with meeting the ROD or ESD performance standards. While EPA has addressed GE's concerns through clarification, EPA has not modified any cleanup level at the site. GE indicates that a fourth "modification" includes specific soil sample locations that may remain at the site above SCLs for reasons of engineering and implementability. While EPA has, so far, concurred with GE's proposals for limits of excavation, which account for some risk management decisions, these are not modifications to the SCLs established in the ROD.*

Response: EPA's comment is acknowledged. However, EPA must either revise the ROD or revise the UAO and associated SOW. With respect to the UAO and associated SOW, the previously referenced provision and other similar provisions could be revised to anticipate a certification that the soil remedy was implemented in accordance with the RAWP as approved, or approved with modifications, by EPA.

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EPA Comment 2: *Section 1.4.2.2 ICLs for Groundwater: The text incorrectly indicates that "...if the risk is found to be unacceptable, the EPA will establish modified groundwater cleanup levels and monitored natural attenuation will continue...." Section X of the ROD (The Selected Remedy) states "[i]f, after review of the risk assessment, the remedial action is not determined to be protective by EPA, the remedial action shall continue until either protective levels are achieved, and are not exceeded for a period of three consecutive years, or until the remedy is otherwise deemed protective or is modified."*

Response: GE does not believe the referenced text is incorrect since it was paraphrased from Section IV.A.I of the SOW attached to the UAO. The SOW states:

"If EPA determines, after reasonable opportunity for review and comment by the NHDES, that the cumulative risks are not within EPA's risk management standard for carcinogens and non-carcinogens, then EPA will establish Modified Cleanup Levels, and the Respondent shall continue the Remedial action until the Modified Cleanup Levels, established by EPA, are achieved, or the remedy is otherwise deemed protective by EPA or modified."

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EPA Comment 3: *Section 2.6 Conceptual Site Model: The ROD specifies that the maximum depth of excavation at the Elm Street area is the seasonal low water table. This would also apply to excavations at the bank of the river. Drawing G-13 indicates that cell V is the only cell on the bank that would be excavated to the low water mark in the river (due to contamination across the cell down to 23 feet – and then out horizontally to meet "daylight"). The remainder of the cells along the bank indicates a limit of excavation at the high water mark in the river. All surface soils along the bank of the river should be excavated to the low water mark if the data indicate that contamination is above the SCL. PDI sampling of the surface soils along the bank included locations down to the low water mark in the river.*

Response: Excavation cell V is the only cell at the Elm Street Area that extends down to the seasonal low water table. This cell will be excavated to an elevation of 232 feet above mean seal level (AMSL), which is the elevation of the seasonal low water table determined during the pre-design investigation (PDI). Excavation cell V will extend north until it "daylights" along the riverbank.

In response to EPA's comment, the location of the sheet piles was modified to the base of the riverbank in the Final Design Report for the OSD soil remedy has been modified. In addition, the sheeting along the base of the riverbank has been extended to the northwest and the northeast such that sheeting will be installed wherever riverbank soils are proposed to be excavated adjacent to the Souhegan River. Previously the sheeting along the base of the riverbank was only present from the northwest side of excavation cell G to the northeast side of excavation cell V.

Finally, the design has been modified to leave the sheeting along the base of the riverbank in place after completion of the soil remedy. During the site restoration activities, the sheeting along the base of the riverbank will be cut so that the top of the sheeting terminates within riprap placed along the riverbank during site restoration. This will provide a demarcation for potential future remedial action associated with Operable Unit 2 (OU-2) in the Souhegan River adjacent to the Elm Street Area.

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**RESPONSE TO INTERMEDIATE (60%) DESIGN COMMENTS
PROVIDED IN EPA'S NOVEMBER 1, 2007 LETTER**

EPA Comment 4: *Section 2.6 Conceptual Site Model: – GE's May 2, 2007 and the text on page 32 incorrectly relate EPA's position on the confirmation sampling conditions. GE states that confirmation sampling would not be required in any areas within which the depth of over excavation is one foot or more. In a meeting between EPA and GE in March 2007, EPA agreed that confirmation sampling would not be required in those areas where only 1 foot of soils required excavation to meet the SCLs. This was due to the additional 24+ inches of soils that needed to be over excavated in those cells to construct the soil cover.*

Response: The over-excavation associated with installation of the engineered cover system obviates the need for verification sampling. However, this is only one of the circumstances in which over-excavation obviates the need for the verification sampling agreed upon by EPA and GE. Another circumstance was at the Mill Street Area, where EPA agreed that verification sampling would not be required where the bottom of excavation cell U slopes down from 1 foot deep to join excavation cell T at 7 feet deep.

GE agreed to over-excavate to install the engineered cover system and also the utility and tree planting corridors at the Elm Street Area based on the condition that verification sampling would not be performed for any excavations that extend at least one foot beyond the depth of excavation required to achieve the SCLs. That approach was formally proposed in GE's submittal on May 2, 2007, over a month before the two Intermediate Design Reports were submitted. Notwithstanding the above, based on EPA's comment, the Verification Sampling Plan (VSP) presented in Appendix A of the Final Design Report for the OSD soil remedy has been modified to require confirmation sampling of excavation bottoms if the depth of over-excavation is less than 2 feet, rather than less than 1 foot as proposed in the Intermediate Design Reports. If EPA requires confirmation sampling even in areas where the over-excavation equals or exceeds 2 feet, then an alternate approach will be considered that is more consistent with that envisioned by the ROD. For the alternate approach, the designated utility corridors would be sampled below the excavation required to meet the 100 mg/kg subsurface SCL to determine if the 25 mg/kg SCL set for the utility and tree planting corridors is achieved, and only those soils that do not meet the 25 mg/kg SCL would be excavated and backfilled with imported clean backfill. This sampling could be performed before initiation of the soil remedy, or incrementally after completing the required excavation in the various areas.

* * * * *

EPA Comment 5: *Section 3.4 Permitting: Per the description of permitting requirements in this section, please confirm that there are no anticipated permits required by either remedy for any action that is not performed entirely on-site.*

Response: The only off-site activities associated with the LTTD and OSD soil remedies involve the transportation and disposal of remediation waste. The Remedial Action Contractor will use permitted disposal and/or treatment facilities for this remediation waste that are also approved by GE and EPA. In this regard, the Intermediate Design Reports indicated that excavated material that is not regulated under the Toxic Substances Control Act (TSCA) could be disposed at Waste Management, Inc.'s (WMI's) permitted Subtitle D landfill in Rochester, New Hampshire.¹ The Intermediate Design Reports indicated that excavated material that is regulated under TSCA could be disposed at WMI's permitted Subtitle C landfill in Model City, New York. For shipments into New York, the Remedial Action Contractor would also need to use transporters that have 6 NYCRR Part 364 permits.

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¹ It is also assumed that the material is not a hazardous waste, as defined by NHDES regulations. WMI's facility in Rochester, New Hampshire is not permitted to accept hazardous waste.

**RESPONSE TO INTERMEDIATE (60%) DESIGN COMMENTS
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EPA Comment 6: *Section 3.6 Utility Services: The remedial action contractor should communicate with the Milford DPW and Police prior to any utility work within Town roads and for any traffic disruptions on those same roads.*

Response: EPA's comment is acknowledged. The performance of the remedial action (including the utility work) will include the appropriate notifications of such activities to the applicable EPA, NHDES, and Town representatives.

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EPA Comment 7: *Section 3.8 Site Clearing Activities: Will the above grade vegetation that is cleared from the excavation areas for potential use as landscaping or soil bulking materials be stored on-site, presumably in a designated area of the Keyes Field until a determination is made as to the need for these materials in site restoration activities? Will these materials be covered and protected from the elements such as rain, wind and snow?*

Response: The above-grade portions of woody vegetation removed by the Remedial Action Contractor will be cut up (e.g., trees) and/or shredded (e.g., brush, small trees, limbs and branches of larger trees). If the Remedial Action Contractor and/or the Town determines that any of this material is usable, then that material will be stored in a designated area located within Keyes Field. Given the nature of any such material and standard practices for handling these materials, it will not be necessary to install a cover. If the material cannot be used within a reasonable period of time, it will be properly disposed off-site.

* * * * *

EPA Comment 8: *Section 6: GMZ: EPA has addressed its comments regarding the proposed boundaries of the GMZ and the methods proposed to establish the GMZ in a separate letter also dated November 1, 2007.*

Response: Section 6 of the Intermediate Design Reports references the Environmental Monitoring Plan (EMP) and the Institutional Controls/Access Restrictions Plan (IC/AR Plan) that GE was in the process of preparing when the Intermediate Design Reports were submitted to EPA on June 4 and 12, 2007. The EMP and IC/AR Plan were subsequently submitted to EPA on July 30, 2007, along with a revised Surface Water and Groundwater Monitoring Plan (also known as the Water Monitoring Plan [WMP]) and other documents. The EMP provides specific details regarding the scope of the post-construction groundwater monitoring activities at the Site and the IC/AR Plan provides details regarding access, access restrictions and institutional controls during the construction and post-construction phases of the project. The institutional controls include the establishment of a Groundwater Management Zone (GMZ). A separate document has been prepared that responds to EPA's separate November 1, 2007 letter that provided comments to various groundwater-related documents that GE submitted to EPA on July 30, 2007.

* * * * *

EPA Comment 9: *Section 9.1 Preliminary Construction Cost: It would be helpful to have a description of activities associated with the "Other" costs.*

Response: The line item for "other" costs includes estimated costs for activities such as traffic control, provision of alternate access at the Mill Street Area, construction oversight, etc.

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**RESPONSE TO INTERMEDIATE (60%) DESIGN COMMENTS
PROVIDED IN EPA'S NOVEMBER 1, 2007 LETTER**

EPA Comment 10: *Section 10: Similar to previous submissions from GE, EPA requests that in addition to the documents listed in the UAO, that EPA received a response to comment letter from GE for the comments EPA has submitted relative to the 60% Design Reports. This request is consistent with how GE has been presenting its understanding, response, and proposed modification, if any, in response to the EPA's comments and concerns relative to GE submissions.*

Response: This document fulfills EPA's request.

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Comments on Appendices

Appendix A: Verification Sampling Plan

General: EPA's comments have been numbered for ease of reference.

EPA Comment 1: *Section 2.3: Confirmation sampling is not required in a cell where only one foot of soils are required to be excavated to meet SCLs, not where over excavation exceeds one foot. This appendix should be revised to reflect this correction.*

Response: The VSP in the Final Design Report for the OSD soil remedy has been revised in accordance with EPA's comment. However, as previously indicated herein, if EPA requires the performance of confirmation soil sampling in areas within which two feet or more of over-excavation is necessary to achieve the SCLs, then an alternate approach will be considered that is more consistent with that envisioned by the ROD. For the alternate approach, the designated utility corridors would be sampled below the excavation required to meet the 100 mg/kg subsurface SCL to determine if the 25 mg/kg SCL set for the utility and tree planting corridors is achieved, and only those soils that do not meet the 25 mg/kg SCL would be excavated and backfilled with imported clean backfill. This sampling could be performed before initiation of the soil remedy, or incrementally after completing the required excavation in the various areas.

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EPA Comment 2: *Section 2.6: Page 12: Within each soil boring, 2 foot vertical grab samples will be collected every 5 feet (i.e 3-5 feet and 8-10 feet), such that each grab sample will represent a sampling horizon approximately 5 feet in thickness. Please clarify that all of the 2 foot increments sampled will be grabs taken from the same intervals for the entire length of wall or will other factors determine where the grabs are taken?*

Response: The intent of the VSP is that only those vertical grab samples that are collected from the same depth interval along the length of a given excavation sidewall would be composited. This is further described in Section 2.6 of the VSP.

* * * * *

EPA Comment 3: *Section 4.2.1 and 4.2.3: A 4 step process is described to review and determine whether an SCL is exceeded at the bottom of an excavation. The last step indicates that if the composite sample is greater than 150 ppm or more, and the data is usable, the excavation will remain open until the duplicate sample extract is analyzed. If, after this process is completed there is still an exceedance of the criteria than GE proposes that remedial action will only include the excavation of 1 foot of soils within the composite grid in question.*

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This does not appear to meet the object of determining whether the bottom of the verification area meets the SCL. GE's process allows for the entire verification area to be deemed complete if all of the composites are below 100, or the mean of all of composites are below 150. This process does not appear to account for the removal of one foot of soil across the entire verification area if the mean of the composites, once all duplicates are analyzed and all data deemed usable, still exceed 150 ppm. This should be included in the process as confirmation sampling was to show that GE correctly estimated the extent of contamination and therefore the minimum limits of excavation for a given cell - not a given sample.

Response: Per the VSP, the mean of the composite samples for a verification area must be less than or equal to 100 mg/kg total PCBs, not less than 150 mg/kg as indicated in EPA's comment. Moreover, all of the individual composite samples for a given verification area must be less than or equal to 150 mg/kg total PCBs.

Notwithstanding the above, to help clarify this, the second bullet of Section 4.2.1 of the VSP in the Final Design Report for the OSD soil remedy has been revised to state:

“If one or more confirmation sample results are greater than 100 mg/kg total PCBs, but less than or equal to 150 mg/kg total PCBs, the mean (i.e., average) of the 10 composite sample results will be calculated. If the mean is less than or equal to 100 mg/kg, then the excavation activities for that verification area will be considered complete. If the mean is greater than 100 mg/kg, then additional analysis, sampling and/or remedial action is necessary.”

Likewise, the second bullet of Section 4.2.3 of the VSP in the Final Design Report for the OSD soil remedy has been revised to state:

“If one or more confirmation sample results are greater than 1 mg/kg total PCBs, but less than or equal to 2 mg/kg total PCBs, the mean (i.e., average) of the 10 composite sample results will be calculated. If the mean is less than or equal to 1 mg/kg, then the excavation activities for that verification area will be considered complete. If the mean is greater than 1 mg/kg, then additional analysis, sampling and/or remedial action is necessary, unless the EPA has already approved leaving similar PCB concentrations behind (i.e., not included within the excavation limits presented in the Final Design Report) at or near that verification area, in which case the excavation activities for that verification area will be considered complete.”

* * * * *

EPA Comment 4: *Section 4.2.2 – Similar to the discussion above, the grabs are being collected to verify that the contamination on the deeper side of the excavation does not extend to the shallow side along the length of a cell wall. Once again composites that meet criteria are used to determine that the entire length meets the SCLs but if one or more exceeds the criteria, following the process, then rather than a determination that the entire length of wall, at that depth exceeds the SCL, GE proposes once again to limit the response only to the limited area of the boring in question. Again this does not appear to meet the objectives of the confirmation sampling to verify that that structural supports incorporated within a cell, all of the PCB contamination at a given depth.*

Response: In previous discussions EPA indicated that in the event that excavation sidewall confirmation sampling at the Elm Street Area indicates an exceedence of the subsurface SCL, the need for additional removal along that excavation sidewall would be limited to the impacted portion of the sidewall to the extent possible. This is necessary to minimize the negative impact on the constructability of the soil remedy caused by the need for verification sampling. As indicated in Figure A-18 in Appendix A of the Intermediate Design

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Reports, sidewall samples from the same vertical depth interval along a given segment of excavation sidewall will be composited for analysis. For example, excavation cell Q will have confirmation samples collected behind four distinct sidewall segments. In the event that a single composite sidewall sample has total PCBs greater than 100 mg/kg, GE does not propose to perform additional excavation on all four sidewalls. The evaluation process is clarified in Section 4.2.2 of the VSP in the Final Design Report for the OSD soil remedy, in which the second bullet has been revised to state:

“If one or more confirmation sample results for a given segment of excavation sidewall are greater than 100 mg/kg total PCBs, but less than or equal to 150 mg/kg total PCBs, the mean (i.e., average) of the sample results for each vertical horizon for that segment of excavation sidewall will be calculated. If the means are less than or equal to 100 mg/kg total PCBs, then the excavation activities for that segment of excavation sidewall will be considered complete. If one or more of the means is greater than 100 mg/kg, then additional analysis, sampling and/or remedial action is necessary.”

* * * * *

Appendix B: Technical Drawings

General: Note that the numbering of the Technical Drawings is slightly different in the Intermediate Design Reports for the LTTD and OSD soil remedies. Therefore, in this section of GE's responses, all references to Technical Drawings are to the Intermediate Design Report for the LTTD soil remedy unless otherwise noted.

Several of the comments provided by EPA are to Technical Drawings that are only present in the Intermediate Design Report for the LTTD soil remedy. Since EPA has at this time only required GE to proceed with the final design for the OSD soil remedy, GE's responses indicate how the Technical Drawings that are uniquely applicable to the LTTD soil remedy would be revised if EPA requires submittal of a Final Design Report for the LTTD soil remedy. However, GE has reviewed EPA's comments and is making revisions to the corresponding Technical Drawings, where appropriate, for inclusion in the Final Design Report for the OSD soil remedy.

Technical Drawing G-5 for LTTD Soil Remedy: *LTTD – The Keyes Layout for the LTTD remedy does not shade or label the designated areas to be used at Keyes Field. Why does the LTTD G-5 map show that the work area includes the area along the river up to the current trailer locations, however that portion of land is not designated for any purpose?*

Response: The area along the river between the Elm Street Area and the current field trailer was inadvertently included in the fencing shown on Technical Drawing G-5 for the LTTD soil remedy. That area will not be used by the Remedial Action Contractor for either soil remedy. This change also affects Figure 2 of the Remedy Comparison Document; a revised Figure 2 is attached.

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Technical Drawing G-5 for OSD Soil Remedy: *The map indicates shading areas of the clean fill staging area and alternate trailer location however the line for the edge of the work, and the marking for the fencing is directly adjacent to these areas. How will the vehicles move into and around these areas? Shouldn't the line of work include a vehicle lane adjacent to these areas? Do these areas also account for the staging, loading or unloading, and turning around of 20 cy trucks bringing in the clean fill or materials?*

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It is unclear why there is a difference between the OSD and LTTD approximate area of work line up along the river towards the current trailer location.

Why does the LTTD drawing have both 6' orange fencing and silt fence and bales at the edge of the work by the river, yet the OSD drawing only indicates orange fencing? Wouldn't silt fencing and hay bales be used all along the river within the entire area of work to mitigate erosion of any soils away from the work area and into the river?

Response: A potential temporary access road location was identified along the eastern side of the shaded areas. This drawing will be revised to better delineate the access road. Given the limited space available, these areas in combination with the Elm Street Area will be used for staging, loading or unloading, and turning of the transport vehicles.

With regard to the additional area shown along the river for the LTTD soil remedy, see GE's response to EPA's previous comment on Technical Drawing G-5 for the LTTD soil remedy.

With regard to the silt fence and hay bales, the drawing for the OSD soil remedy will be revised to indicate silt fencing and hay bales along the river. These erosion control features are correctly shown on Technical Drawing G-4, but were inadvertently omitted from Technical Drawing G-5.

* * * * *

Technical Drawing G-6: *It is unclear why the limit of work area is defined to the area behind one Mill Street residence when the temporary access road crosses three properties.*

Will all the jersey barriers also be dust barriers?

Response: The limits-of-work area was expanded to include the entire temporary access road and a slight buffer. The revised limits of work will extend from the existing paved driveway for Parcel 25-94 through Parcel 25-93A to the existing gravel parking area for Parcel 25-93.

With regard to the jersey barriers, only those that are installed at the site perimeter and that do not obstruct views at the end of access roads/driveways will contain dust barrier fabric (as shown on Technical Drawings G-25 and G-26).

* * * * *

Technical Drawing G-9: *For clean equipment and material staging refer to detail 1, G-25. Also, what is the size of the new gate?*

Response: The requested reference was added to the drawing. Regarding the new gate, the Remedial Action Contractor will determine its size. However, two 8-foot side-by-side gates or a single 12-foot sliding gate would be suitable for this type of application. The exact size and location of all temporary gates will be provided in the forthcoming RAWP.

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**RESPONSE TO INTERMEDIATE (60%) DESIGN COMMENTS
PROVIDED IN EPA'S NOVEMBER 1, 2007 LETTER**

Technical Drawings G-11, G12, and G13: *Review of these three soil removal limit sheets for Elm Street are confusing as each area for excavation has a different cell designation on each sheet. Denoting different cells with the same letter designations used for a different cell with a separate excavation criteria is confusing to read.*

As GE has noted previously, the design may ultimately be modified by the contractor performing the Work and ultimately where there are abutting cells which are small in size with close removal depths, these cells for practicality will probably be proposed to be excavated to one depth by the remedial action contractor.

Response: EPA's comment is acknowledged, but the cell designations are unchanged on Technical Drawings G-11, G-12 and G-13. The drawings follow the sequence of excavation. Specifically, excavation will be performed in two phases, including: 1) excavation required to achieve the SCLs; and 2) over-excavation to install the engineered cover system and establish the utility and tree planting corridors, subject to EPA approval of the elimination of confirmation sampling where the depth of over-excavation is 2 feet or greater. If not approved, such over-excavation may not be performed, as previously described. Since the over-excavation associated with the utility and tree planting corridors shown on Technical Drawing G-12 span several excavations cells and subdivide other excavation cells, retention of the excavation cell designations presented on Technical Drawing G-11 is not practicable in most instances. Technical Drawing G-13 shows the combined limits of excavation presented on Technical Drawings G-11 and G-12.

While the Remedial Action Contractor could, from an implementation standpoint, elect to modify the limits of soil removal for small excavation cells that are subject to similar removal depths, it should not be assumed that the Remedial Action Contractor will elect to do so. Given the complex verification sampling requirements for the excavation bottoms and sidewalls, the design of the shoring systems, and the fact that any additional over-excavation by the Remedial Action Contractor would likely be at its sole expense, the Remedial Action Contractor may not elect to modify the limits of soil removal as suggested in EPA's comment.

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Technical Drawing G-11 for OSD Soil Remedy: *No detail is provided as to the areas of excavation that are TSCA or NonTSCA, as noted in Figure G-10 OSD.*

Response: Technical Drawing G-11 for the LTTD soil remedy does not distinguish between TSCA and non-TSCA material, as all of the excavated material will be treated on-site in the LTTD system. Similarly, Technical Drawing G-10 for the OSD soil remedy does not distinguish between TSCA or non-TSCA material, since all soils portrayed on that figure are soils that are being excavated to accommodate installation of the engineered soil cover and the utility and tree planting corridors at the Elm Street Area. As indicated in the Final Design Report, GE proposed to perform this over-excavation subject to the condition that those soils would be consolidated on-site under the engineered cover system.

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Technical Drawings G-15 and G-27: *Utility corridor plan sheet and the detail sheet should be referred to each other for easy reference.*

Response: Note 6 on Technical Drawing G-15 refers to Technical Drawing G-27, and Note 2 of Detail 3 on Technical Drawing G-27 refers to Technical Drawing G-15. No additional references are necessary.

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**RESPONSE TO INTERMEDIATE (60%) DESIGN COMMENTS
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Technical Drawing G-16: *The towns' future use park designs should be incorporated by reference, and included in the report to allow for better review of drawing.*

Response: The requested reference was added to Technical Drawing G-19 and the Town's conceptual design for its park is included for informational purposes as an Appendix H to the Final Design Report for the OSD soil remedy. Section 5.4 of the Final Design Report for the OSD soil remedy was revised to reference the Town's conceptual park design.

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Technical Drawing G-19: *Check the spot elevation 258.8 between the 259 and 260 contours.*

Response: ARCADIS BBL has reviewed the site survey information and determined that the spot elevation at the specified location should be revised to 259.1 feet AMSL. The Technical Drawing has been revised accordingly.

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Technical Drawing G-21: *Are the shaded areas on the south side of Mill Street at the extended driveways to be vegetated? The temporary access road on south side of properties must have grass restored. No restoration detail is provided for Mill Street itself.*

Response: The shaded areas referenced by EPA are subject to vegetative restoration, as indicated in the legend for the Technical Drawing. A note was added to the drawing indicating that the properties must be restored to a condition similar to the pre-remediation condition, unless otherwise approved by the property owners. Mill Street restoration details are provided on the T-series of Technical Drawings. A note was added to this drawing to reference those T-series Technical Drawings.

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Technical Drawing G-22: *Will jersey barriers with chain link fence be required to be a dust barrier as indicated in detail on sheet G-29?*

Response: See the previous response to EPA's comment to Technical Drawing G-6.

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Technical Drawing G-23: *Refer to sheet G-29 for detail of dust barriers if applies.*

Response: The requested reference was added to the drawing.

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Technical Drawing G-24: *Explain the rip rap around catch basin in detail 4. Also watertight manhole reference should be G-24 not G-15.*

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Response: The riprap was added around the inlet to dissipate flows and reduce velocities as the surface water drained to the catch basin. The reference for the manhole was revised to indicate conformance with the manhole detail provided by the Town.

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Technical Drawing G-25: *Detail 2 should be referred back to sheet G-9. Detail 3 should be referred back to sheet G-14 and details for the SPTC wall appear to be missing.*

Response: Detail 2 presents details for a typical material staging, mixing, and dewatering area. As indicated in the text for the Intermediate Design Report, it is anticipated that such material handling areas can be used anywhere on the Site. Therefore, this detail should not reference a particular drawing.

Detail 3 on Technical Drawing G-25 was revised to include the requested reference to Technical Drawing G-14. The SPTC wall details are provided in the S-series of Technical Drawings. Notations were added to Technical Drawings G-11 through G-14 to reference the applicable S-series drawings for excavation support details.

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Technical Drawing G-26: *Detail 5 – Vegetated cover detail 5: should topsoil be 4”?*

Response: The detail was revised to indicate 4 inches of topsoil.

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Technical Drawing G-29: *Is barbed wire a requirement? EPA has opted for taller fences in the past to meet fence height requirements rather than use barbed wire, especially where barbed wire may not be necessary.*

Response: Barbed wire is not a requirement. The detail was revised accordingly.

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Technical Drawing S-1: *a) Note 1 & 3: Identify drawing nos. by ARCADIS.*

b) Note 9: Show the surcharge limits on plan for Elm Street. Drawing S-6 shows surcharge of 600 PSF. Explain why Is it different than Elm Street? Also clarify if surcharge values Remain same for LTTD and OSD conditions.

c) Note 11: Provide ground water elevations based on soil boring data or geotechnical investigation instead of assuming.

d) Note 12: Use 25 year flood level based on storm records and hydraulic evaluation of the storm data than assuming at elevation 242.9 ft., as provided by “ARCADIS BBL”

e) General construction sequence note 5: Identify the reference backfill specification.

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PROVIDED IN EPA'S NOVEMBER 1, 2007 LETTER**

Response: The drawing was revised to include the information requested in EPA's comment.

With respect to EPA's comment on the surcharge values, note that it is anticipated that the equipment required to implement the soil remedy at the Elm Street Area may not be as large as that required at the Mill Street Area (e.g., cranes will be required to install the SPTC wall at the Mill Street Area). Accordingly, the surcharge values shown for the Elm and Mill Street Areas are different. However, for a given area (i.e., Elm Street Area or Mill Street Area), the surcharge values are the same for the LTTD and the OSD soil designs.

The groundwater elevations referenced by EPA were not based on soil boring or geotechnical investigations. Rather, those elevations are based on the groundwater elevation monitoring performed during the PDI, as supplemented more recently by the quarterly monitoring activities under the WMP. The groundwater elevation data were provided in the PD Report and the Water Monitoring Report (WMR) submitted to EPA on October 16, 2007. Additional groundwater elevation data were collected in October 2007 and will be provided in the WMR to be submitted to EPA on or about January 23, 2008.

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Technical Drawing S-2: *a) Cell V Support of Excavation System: Detail 1 & 2 are incorrectly referred on drawing S-4. Soldier pile size is not same as design calculation sheets.*

b) Cell Q Support of Excavation System: Detail 1 referred to drawing S-3 does not match. Soldier pile size is not same as design calculation sheets.

c) Wale schedule: Wale no. W-02 not shown in design calculation sheets.

Response: This Technical Drawing was revised to include the correct references and to be consistent with the design calculation sheets. Also, the design calculation sheets were revised to include the referenced wale.

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Technical Drawing S-3: *a) Details 1, 2 and "Beam seat Detail": Show cross reference to drawings where they are shown in plan.*

b) Show weld sizes.

Response: This Technical Drawing was revised to include the requested cross-references and weld sizes.

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Technical Drawing S-4: *a) Section 1: Construction surcharge is incorrectly referred to note 10 on drawing S-1. Provide dimension "D".*

b) Section 1: The section describes "lower strut where required". Identify cells and locations on plan where lower strut is required.

Response: This Technical Drawing was revised to: provide the appropriate reference; include the requested dimension; and include the cells and locations where lower struts will be required.

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**RESPONSE TO INTERMEDIATE (60%) DESIGN COMMENTS
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Technical Drawing S-5: a) Note 1 and 4: Identify drawing nos. by ARCADIS

b) Note 2: Provide a reference (e.g. soil report) for ground water table at 254+/- ft. instead of assuming. Sub-soil investigation for water table is required if no reference is available.

c) Note 12: Provide design, size and locations for temporary sheeting.

d) Note 15: Incorrect reference sheet G-14 (included in 60% report for EPA review).

e) General construction sequence note 5: Identify the reference backfill specification.

Response: This Technical Drawing was revised to include the correct references and the requested additional information. Regarding the groundwater elevations, these elevations are based on the groundwater elevation monitoring performed during the PDI, as supplemented more recently by the quarterly monitoring activities under the WMP. The groundwater elevation data were provided in the Pre-Design Report and the WMR submitted to EPA on October 16, 2007. Additional groundwater elevation data were collected in October 2007 and will be provided in the WMR to be submitted on or about January 23, 2008.

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Technical Drawing S-7: a) Wale schedule does not include W24x146 shown on design calculation sheets.

Response: This Technical Drawing was revised to be consistent with the design calculation sheets.

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Technical Drawing S-10: a) Detail 1 and 2: Provide specification for centralizer.

b) Details 3, 4 and 5: Provide weld sizes.

c) Detail 6: Provide specifications for guide wall concrete.

Response: This Technical Drawing was revised to include the requested specifications and weld sizes.

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Technical Drawing T-6: Will the final thickness of the bituminous mix meet the local or state standards? Bituminous thickness is proposed as 9" but noted as a minimum of 6", depending on type and condition of existing subgrade materials.

Response: The Town's standard specification package, which was purchased by ARCADIS BBL on November 13, 2007, requires that the asphalt be 4 inches thick, consisting of a 2.5 inch base coarse and a 1.5 inch top coat, with 6 inches of gravel under the asphalt and 18 inches of bank run under the gravel layer. The Final Design Report for the OSD soil remedy has been revised accordingly.

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General Comments on Technical Drawings

EPA Comment 1: *There should be some coordination between traffic sheets and general sheets.*

Response: As indicated in previous responses, certain technical drawings were revised to include references to the T-series Technical Drawings, where applicable.

* * * * *

EPA Comment 2: *Drawings: Revetment details for the bank of the river should be provided, including layer thickness, toe details, end protection, etc.*

Response: Details regarding the riprap size and layer thickness are depicted in the table on Technical Drawing G-29. A detail for the proposed gabion wall at the toe of the riverbank was also added to Technical Drawing G-27.

* * * * *

EPA Comment 3: *Specifications: Stone protection specifications, related to riprap to be used on the bank of the river, and other areas, could not be located.*

Response: Details regarding the riprap size and layer thickness are depicted in the table on Technical Drawing G-29.

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Appendix C: Technical Specifications

Specification Section 02160: *a) Part 1 – General, para.1.07 References, sub-para. A: Add Manual for Railway Engineering, AREMA (American Railway Engineering and Maintenance-of-Way Association) and Standard ASTM A500, Grade 46.*

b) Part 1 – General, para.1.08 Submittals, sub-para. A: It is more appropriate to submit to the engineer of record, items 1 to 6 for review minimum 4 weeks before the scheduled start of the applicable activity, than to the owner.

c) Part 3 – Execution, para. 3.01 General Requirements, sub-para. D: Specify details of welding quality control such as using AWS D1.1/D1 1M qualified welders, welding operators, and tackers etc.

d) Part 3 – Execution, para. 3.04 Steel sheet Piling: Include requirements for sheet piles about submittals, delivery, storage and handling, material tests, inspection and verification, pile driving equipment, placing and driving, cutting off and splicing, inspection of driven piling, pulling and re-driving.

e) Specify requirements for timber lagging.

Response: This specification was revised to include and/or revise the requested references, details, and/or requirements.

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Specification Section 02400: *a) Include requirements for 4000 psi non-shrink grout referred on drawing S-10 and SPTC guide wall concrete.*

b) Part 1 – General Provisions, para.1.04 submittals, sub-para. A and B: Identify the Owner's Representative. It is more appropriate to submit to the engineer of record, shop drawings and other information, than to the owner's representative.

c) Part 1 – General Provisions, para.1.05 Definitions and Reference standards, sub-para. A, B, C, D, E: Identify specification nos. Explain where API standards are applied. Add Manual for Railway Engineering, AREMA (American Railway Engineering and Maintenance-of-Way Association) for structural loading and slurry wall construction.

d) Part 1 – General Provisions, para.1.07 Disposal of slurry and excavated soil, sub-para. A: Identify the specification referred in the "contract document and specifications" if it is different than Specification section 02400.

Response: This specification was revised to include and/or revise the requested requirements, identifications, and references. With respect to the request for an explanation of where American Petroleum Institute (API) standards are applied, those standards apply to the slurry associated with installation of the SPTC wall.

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Specification Section 02015: *a) Provide plans to show the locations of instruments and the type of instruments to be used.*

b) Describe instrument type, calibration, frequency of the instrument readings and interpretation of instrument readings.

Response: The specifications were revised to include the requested instrumentation-related information.

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Appendix D: LTTD Staging Scenario

EPA Comment: *In phase II, where is Figure 12 and technical drawing 14 (is this G-14?)*

Response: Figure 12 is located in Volume I of the Intermediate Design Report for the LTTD soil remedy. The reference to Technical Drawing 14 will be revised to indicate Technical Drawing G-14, if and when EPA requires the submittal of a Final Design Report for the LTTD soil remedy.

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Appendix E: OSD Truck Route and Traffic Analysis Report

EPA Comment 1: *Section 2.2.4 Truck Route and Traffic Analysis Report, Section 2.2.4 Transportation of clean materials/Elm Street Restoration/ Vegetated topsoil, page 7: The text indicates that 650 cy of topsoils would be transported to the Elm Street site for a 6 inch placement within the utility corridors and tree planting corridors. Will the treated (LTTD) or clean fill (OSD) be of suitable quality to install in the tree corridors and provide the tree stability and growth potential? (ie – is the fill or treated soil suitable to grow trees in or are amendments required to these soils such as organic materials, nutrients, etc).*

Response: The intent of the remedial design is to provide utility and tree-planting corridors that either contain treated soil (for the LTTD soil remedy) or clean backfill (for the OSD soil remedy) that contains no more than 25 mg/kg total PCBs. It is not the intent of the design to backfill the corridors with material suitable for bedding utility pipes or for growing trees. The Town can incorporate such material when the utilities are installed and/or the trees are planted.

As discussed in a response to a previous EPA comment, a 4-inch thick topsoil layer is used consistently in the Final Design Report for the OSD soil remedy. Based on this change, the total volume of topsoil needed at the Elm Street Area may not be 650 CY. Refer to the Final Design Report for the OSD soil remedy.

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EPA Comment 2: *Section 2.3 Haul Routes: While acknowledging the limited truck routes available, the route between the Elm Street area and NH Route 101 that travels along Lincoln, Union, Garden and Cottage seems to place a very high burden of truck traffic along these residential/light commercial lined streets than if these trucks went on the more heavily traveled, less residential Elm Street to NH Route 101 route. GE should indicate the preferred routes of travel and situations when the preferred route would not be used.*

Response: The traffic control plan presented in the Final Design Report for the OSD soil remedy indicates that the preferred route for transportation of impacted materials to appropriate off-site disposal facilities is to take Elm Street west to NH Route 101. The alternate route would only be utilized if travel on the primary route is interrupted by local emergency responders (e.g., fire, ambulance, police, etc.).

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Appendix F: Design Calculations

EPA Comment 1: *Design Calcs, Riprap Bank Protection Design – Included in these calculations should be layer thickness determination, toe configuration based upon plate 43 of Reference 5, and end protection details from plate 41 of reference 5.*

Response: The requested calculations have been added to Appendix F with the exception of the toe configuration. The toe of the slope is now being protected with a gabion retaining wall, a short sheetpile wall, and limited riprap. The design calculations for the new gabion wall are provided in Appendix F and are further discussed below.

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EPA Comment 2: *Calculations, Riprap – reviewer could not locate slope stability analysis, which should be conducted to ensure the integrity of the slope configuration*

Response: Upon completion of a slope stability analysis of the existing slope configuration, a factor of safety of 0.75 was calculated against significant slope failure. Since the current slope is inherently unstable, restoring the slope to existing conditions upon completion of remedial action is not appropriate given that the resulting factors of safety for the restored slope are similar to those calculated for the existing slope. Proposed engineering modifications have been included in the final design in order to stabilize the restored slope. These modifications include a gabion retaining wall placed at the toe of the slope and placement of backfill to create a flatter slope that can be retained by the gabion wall. Detailed slope stability and gabion wall calculations are provided in Appendix F. However, it should be noted that verification of soil conditions and riverbank topography is necessary to confirm the final design for the restored riverbank. If any changes are warranted, they will be provided to EPA in a separate submittal or in the RAWP.

* * * * *

EPA Comment 3: *Rip rap bank Protection Design Calculations: page 1-5: Using the design values stated on Page 2/5, the "ChanlPro" riprap design software was used to check the D15, D50, and D100 minimum size requirements as stated in the Summary on Page 5/5. All of the sizes stated in the Summary meet and exceed minimum stone size requirements. Proposed riprap sizes meet and exceed minimum requirements for the design values specified.*

Response: No response is required.

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EPA Comment 4: *HEC-RAS Output, Standard Table 1: The average channel velocity at T-15 is 3.5 fps, upstream and downstream of T-15 the average velocities are 5.99 fps and 5.48 fps, respectively. More information is needed to explain the 2+ fps drop in average channel velocity at T-15, which is at the most extreme bend in the river. The Cross Sections at T-16 and T-14 with Predicted Flood Elevations may help to show if it is due to channel geometry.*

Response: The 2 feet per second (fps) drop in average channel velocity at transect T-15 is attributed to the increased cross-sectional flow area at this location (as eluded to in EPA's comment). For comparison purposes, transects T-14 and T-16, which depict reduced cross-sectional flow areas (and therefore, increased velocities) at downstream and upstream locations, respectively, have been included in the riprap bank protection design calculations.

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EPA Comment 5: *Stormwater Drainage Ditch Design Calculations: All design values were reviewed using the TR-55 Manual (Jun 86). All of the values were reasonable for the "Newly Graded" and "Vegetated" watershed scenarios. For the design values used, all of the values presented in the hydraulic analysis table are good.*

Response: No response is required.

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EPA Comment 6: *Following are the requirements for the calculations:*

- a) Structural calculations must be orderly, and easily understandable. A registered practicing structural engineer different from the originator must check calculations.*
- b) Structural calculations must include a cover sheet indicating the project title, location, description/purpose, method of analysis, references, assumptions, conclusions/recommendations, and the names of the persons originating & checking calculations.*
- c) Structural calculations must include a table of contents.*
- d) Within the calculations, provide a brief statement describing the structural system, significant design parameters, and any restrictions that may affect the project design.*
- e) Provide all design criteria including the following:*
 - Restrictions – Include all limiting factors such as deflection limits, special tolerances for installing or operating equipment, or other special restrictions that may affect the design of the structure.*
 - Materials – Include all materials to be used and their allowable stress limits, yield strength, type, grade, class, and other applicable material properties.*
 - Include an adequate number of sketches with sufficient detail to make the designer's intention clear, concise, and easily understandable. Note all assumptions and references to codes, standards, criteria, drawings, and computer output. Refer to the corresponding drawings in the calculations.*

Computer generated calculations must identify the program name, source, and version. Provide input data, including loads, loading diagrams, node diagrams, and adequate documentation to illustrate the design. The schematic models used for input must show, as a minimum, nodes/joints, element/members, material properties, and all loadings, induced settlements/deflections, etc., and a list of load combinations. Results must include an output listing for maximum/minimum stresses/forces and deflections for each element and the reactions for each loading case and combination.

Response: Neither the UAO nor the SOW specify any of the above-listed “requirements”. Nevertheless, the design calculations included in the Final Design Report for the OSD soil remedy were revised to include the requested information, as appropriate. It should be noted that not all of the computer programs utilized during the remedial design provide information on certain items at nodes, joints, elements, and members. As a result, the design calculations will provide sufficient information for review of the calculations consistent with industry standard of practice.

* * * * *

EPA Comment 7: *a) Provide a reference for the 25-year storm data and corresponding loading considered in the design.*

b) Provide design calculations for the sheet piling adjacent to the river.

c) Provide a reference to applicable New Hampshire State and local codes.

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- d) Identify the reference drawings by Arcadis BBL dated 01 June 2007 considered for layout of the slurry wall.*
- e) References: Refer to 13th edition of "Manual of Steel Construction" and "ACI 318-05/318R-05".*
- f) Provide a reference standard such as AREMA (American Railway Engineering and Maintenance-of-Way Association) for the railroad loading.*
- g) Refer and identify the boring logs corresponding to cell locations, geotech reports referred for soil properties used in the calculations and water table elevations. Provide interpretation of soil bore information for soil properties if geo-tech report is not available.*
- h) Identify the computer programs used with their name, source, and version.*

Response: The requested references and design calculations are provided in the Final Design Report. Regarding the interpretation referenced in item G, the available subsurface information generated during the PDI was reviewed to evaluate soil properties. Based on that review, it was concluded that it is reasonable to use consistent soil properties for design for all cells. Accordingly it is not necessary to identify the boring logs corresponding to each cell location.

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EPA Comment 8: *a) Provide a design narrative that is easily understandable to include the sequence of excavation with strut installation, the stability check and factor of safety considered. Explain consideration of vehicle loading from Elm Street and Mill Street traffic and provide reference code section for Highway and Railroad loading considered.*

b) Explain if LTTD and OSD processes have any impact on the structural design.

c) Provide sheet piling design.

Response: The requested design narrative and sheet piling design are included on the S-series of Technical Drawings (Appendix B) and in the design calculations (Appendix F) of the Final Design Report. The structural design is the same for both soil remedies.

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EPA Comment 9: *a) Elm Street, Cell Q design: The soldier pile size HP14x89 per computer sheets do not match the size HP14x117 calculated by hand.*

b) Explain why summary of cT-shoring analysis does not consider construction surcharge for locations other than cells Q and V.

Response: Regarding the design of the soldier piles for Excavation Cell Q, the calculations were updated in the Final Design Report for the OSD soil remedy, and the updated calculations resulted in use of HP 14 x 102 soldier piles. With respect to EPA's comment regarding construction surcharge, the calculations presented in the Final Design Report were updated to reflect construction surcharge, where applicable.

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EPA Comment 10: *a) Mill Street, Cell H design: Design calculations show three bracing sizes W24x146, HP14x73 (Top) and HP14x63(Bottom). Referring to bracing spread sheets. However, drawing S-7, Wale Schedule does not include W24x146 member. Coordinate the bracings shown on the drawings per the design calculations.*

Response: The Technical Drawing was revised to be consistent with the design calculations.

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Comments on the 60% LTTD Design

EPA Comment: *EPA has reviewed and submitted comments relative to the LTTD design with the primary focus on being able to provide to the public, comparable remedial alternatives. EPA may submit, at later date, additional comment relative to the LTTD 60% design should EPA rescind the temporary hold on the UAO for the Final LTTD Design.*

Section 9 costs: It is unclear if the costs for the LTTD remedy reflect the longer, potential time frames presented in the design as well as the costs of treating and disposing the 7400 cubic yards as indicated in the design (Appendix E). If GE is going to provide a range of cleanup schedules that differ by a significant amount and the additional costs for treatment and disposal of a large portion of the soils estimated for treatment, then GE should present the costs as a range.

Response: Neither of the Intermediate Design Reports present the estimated construction schedule as a range. Due to its importance to the community, schedule uncertainty is only addressed in the Remedy Comparison Document that was submitted on June 12, 2007, and revised on September 21, 2007. The cost estimate presented by GE in the Intermediate Design Reports for both the OSD and LTTD soil remedies reflect the costs associated with the low end of the range in the estimated construction schedule that was presented in the Remedy Comparison Document. Clearly the cost estimate for each soil remedy would be higher under the less-favorable conditions assumed to estimate the high end of the range in the construction schedule presented in the Remedy Comparison Document. However, cost estimates were not developed for those scenarios.

The cost estimate presented in the Intermediate Design Report for the LTTD soil remedy includes both treatment costs and disposal costs. The on-site treatment of all treatable material was included based on the requirements of the ROD. The off-site transportation and disposal of some material was included to maintain the volume balance.

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Appendix E: LTTD Truck Route and Traffic Analysis Report

General: EPA's comments have been numbered for ease of reference.

EPA Comment 1: *2.2.1 and 2.2.2, Page 5: If the trucks being used to transport the contaminated soils away from Mill Street are not going to be the same as the trucks being used to transport the treated/clean soils back to Mill Street, then why couldn't 20 cy trucks be used to transport the treated/clean materials back to Mill Street reducing the 1,716 truck trips to 858 trips. Use of larger trucks at the Site appears to be acceptable as the larger truck size is proposed for the transportation of other materials to and away from the Site for other aspects of the LTTD remedy and only the use of larger trucks are proposed for the OSD remedy. A reduction of the number of truck trips for this one transportation event will reduce the overall truck trips associated*

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according to GE's calculations, by approximately 15% or to approximately 4,571 truck trips. Larger truck loads of treated materials would also ensure the quickest backfilling of open excavations under this remedy.

Response: The Remedial Action Contractor will likely use 10 CY dump trucks between the Elm and Mill Street Areas. The smaller dump trucks are more likely to be owned and/or otherwise readily available to the Remedial Action Contractor. The Elm and Mill Street Areas are only separated by approximately ¼ mile, and the larger 20 CY trailers do have a larger turning radius and are more difficult to maneuver. Therefore, even assuming that the smaller dump trucks and larger trailers are equally available to the Remedial Action Contractor, it is expected that the Remedial Action Contractor would choose to use the smaller 10 CY dump trucks.

EPA's comment is somewhat confusing given EPA's "acknowledg[ement] that the overall impacts related to traffic have a negligible impact on typical traffic flow" (see EPA Comment 2 below). The LTTD and OSD soil remedies involve a similar number of truck trips. Moreover, the number of truck trips per day for either remedy is not significant relative to the existing level of traffic.

Finally, GE does not agree that the use of the larger 20 CY trailers between the Elm and Mill Street Areas for the LTTD soil remedy would allow the open excavations to be backfilled more quickly. The rate of treatment of material in the LTTD system is the factor limiting the speed at which the excavations could be backfilled, not the time needed to excavate, transport or backfill material.

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EPA Comment 2: *Section 2.2.3, Page 6: GE calculates that approximately 7,400 cubic yards of treated materials will be transported off-site to off-set the volume of imported clean materials brought in to perform the surface restoration activities. To reiterate EPA's question posed in our 60% design conference on June 18, 2007, why would these soils be treated prior to off-site disposal? Treating the roughly 7,400 cubic yards of soils and paying for off-site disposal appears to add approximately \$2.4 million dollars to the cost of the LTTD remedy than may be necessary. Not treating those soils, as they are to be disposed off-site anyway, would not only reduce the costs of the LTTD remedy, it would likely reduce the treatment time as roughly 25% of the 24, 460 cy volume of contaminated soils would then not require treatment.*

It would also appear that should GE send 7,400 cubic yards of contaminated soils off-site directly from Mill Street in 20 cy trucks, the trucks trips associated with the LTTD remedy would be reduced drastically. 7,400 cubic yards taken off in 20cy trucks is approximately 740 truck trips. If as noted in comment 1 above, 20 cubic yard trucks were used to bring the treated Elm Street soils to Mill Street as backfill, this would add another 740 truck trips. GE estimates that roughly 3,357 truck trips will occur to transport the contaminated soils away and treated soils to the Mill street area. By comparison, transporting 7400 cubic yards directly from Mill Street to an off-site location, and backfilling with treated soils from the Elm Street area would involve roughly 1,480 truck trips. The overall potential consideration of reduced short term impacts to the community, reduced local truck trips (acknowledging that the overall impacts related to traffic have a negligible impact on typical traffic flow), shorter treatment timeframe, reduced costs, etc all yield for a review on how the performance and sequencing of the LTTD remedy can be better optimized to reduce costs, time and impacts.

Response: EPA issued a UAO to GE on July 16, 2001 to design and construct the remedy previously selected for OU-1. As specified in the UAO, the excavated materials that are amenable to treatment are to be treated; therefore, this requirement was incorporated into the Preliminary and Intermediate Design Reports for the LTTD soil remedy. As EPA is aware, GE has long advocated for an alternate soil remedy involving off-site disposal rather than on-site thermal treatment. In its July 16, 2001 letter, EPA agreed to allow GE to carry the

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OSD soil remedy into the design phase in addition to the LTTD soil remedy. This is exactly what GE has done, and why there are two Intermediate Design Reports, one for the LTTD soil remedy selected in the ROD and referenced in the UAO issued to GE, and another for the OSD soil remedy advocated by GE. GE agrees that, if EPA ultimately decides to require implementation of the LTTD soil remedy, a hybrid approach should be considered during development of the Final Design Report for the LTTD soil remedy. However, the OSD soil remedy would still have significant advantages over a hybrid soil remedy.

Attachment:

Revised Figure 2 of Remedy Comparison Document dated June 12, 2007, amended September 21, 2007.

ARCADIS BBL

Revised Figure 2 of the Remedy
Comparison Document dated
June 12, 2007, amended
September 21, 2007

