

Q83. Ambient Air Monitoring for VOCs

Section 6.4.2 of the Environmental Protection Plan speaks to the need for monitoring near areas of activity for VOCs using a PID whereas the EMP which is referenced in 01 35 43 indicates "The Port Granby Project, Atmospheric Environment Environmental Effects Assessment Report [4], assesses Criteria Air Contaminants and the assessment was not concerned with the volatile organic compounds from wastes at the Port Granby Waste Management Facility. In case the excavations find wastes with these characteristics, volatile organic compounds sampling will be conducted using Photoionization detector (PID) at the excavation area." Can you confirm that VOC sampling will not be required unless excavations identify the potential presence of volatile compounds?

A83. Ambient Air Monitoring for VOCs, will be required only if waste encountered is suspected to be impacted with volatile organic compounds i.e. based on visual, olfactory or other evidence of VOC contamination.

Q84. Winter Operations

Section 5.1 of the Environmental Protection Plan anticipates seasonal restrictions on the excavation and placement of waste based on the following statement "Wastes shall only be excavated and transported in non-winter months to ensure that the liner system of the LTWMF is ready to accept waste materials (i.e., no frost impacts requiring repair and delays in material placement)."

02 61 10 speaks to placing an initial lift of 1 metre of material to protect the liner from freezing in the winter "the initial lift of waste is placed on time to protect the compacted clay liner from freezing in winter" and "Initial Protective Waste Layer:

.3 This initial layer shall be minimum 1.0 m thick including temporary cover.

.5 This initial layer is to cover the base liner system including that on the side slope before winter to protect the compacted clay liner from freezing. "

Can you confirm that the measures outlined in 02 61 10 are sufficient for protecting the liner and that work can be carried out throughout winter months weather permitting?

A84. The Contractor will be responsible for the quality of the work for the duration of the contract. The measures identified in Section 02 61 10 are the minimum that will be accepted. It is the Contractor's responsibility to ensure that adequate material is placed during year 1 to protect the liner system from freezing, or any other damage.

The safe excavation, transportation and placement of the waste will be the responsibility of the Contractor. The quality of the installation will be the responsibility of the Contractor. Work can be completed throughout the winter month so long as quality is maintained.

Q85. Addendum 1 included a new drawing titled "LAK-C-17," but a description of the revision(s) made was not included in the summary provided. Please describe what changes were made to this drawing

A85. The description of the changes for drawing LAK-C-17 are:

1. Guiderail shown on applicable sections.

2. Right limit of grading adjusted.

Q86. The drawing with filename "PGWMF-X-02.pdf" is labeled as being Drawing No. PGWMF-X-04; yet the drawing with filename "PGWMF-X-04.pdf" is also labeled as being Drawing No. PGWMF-X-04; therefore, there are two different drawings with the same drawing no. Can you please confirm that filename "PGWMF-X-02.pdf" is incorrectly labeled and should be Drawing No. PGWMF-X-02?

A86. PGWMF-X-04 was mistakenly provided twice in the drawing package. Drawing PGWMF-X-02 was provided with Addendum #3.

Q87. The drawing issued and labeled PGWMF-X-02 is actually drawing PGWMF-X-04. Will PWGSC please provide a copy of PGWMF-X-02?

A87. Refer to Addendum 3

Q88. Is the 286 week period of performance based on completing 550,000 tonnes or 700,000 tonnes of contaminated material excavation?

A88. BA06 of the RFP requires completion of the Work within 286 weeks. This includes all the contract work regardless of the final tonnage of excavated contaminated material.

Q89. What determines completion for the period of performance?

A89. The definition for Completion can be found in Contract General Conditions, Article 1.1.5; Completion

Q90. What is the basis for the number of units included in the Form of Tender for the laboratory analysis (Items 8a and 8b)? Does this include for all media i.e. soil, groundwater, surface water, and swipe samples.

A90. These refer to preliminary and final soil verification samples. The DR is responsible for laying out of sampling grids and performing verification sampling as required. The Contractor's responsibility is to assist the DR in collecting samples and to coordinate required laboratory analysis. Bidders should bid based on the number of samples outlined in the Bid and Acceptance form.

The bid form is for soil samples only. Other required sampling is to be developed by the Contractor as part of the Environmental Management Plan. The cost for this is to be included as part of the Lot Price for Specification Section 01 35 43.

Q91. How is the environmental monitoring analytical work for the various media to be charged? We don't see a line item for the analytical work requested under the environmental monitoring program.

A91. The Contractor is responsible for completing environmental monitoring as required to meet relevant project requirements. Information related to monitoring etc. shall be detailed in the Contractor's Environmental Protection Plan (CEPP) subject to review and approval by the DR Specification Section 01 35 43 Article 1.6.3. Payment for the development and update of plans and implementation of all required environmental procedures and mitigation measures as described herein, otherwise viewed as incidental to the Work or as directed by the Departmental Representative shall be according to Lot Price outlined Specification Section 01 35 43 Article 1.2.1.

Q92. How is the number of environmental monitoring stations being established? The specifications do not provide a specific number of stations. Also, is there a specific requirement for the number of stations to be established at the edge of the excavation, site perimeter north and south, and will any be required around the new landfill.

A92. The Contractor is responsible for establishing monitoring stations as required to meet relevant project requirements. Details related to monitoring etc. shall be detailed in the Contractor's Environmental Protection Plan (CEPP) subject to review and approval by the DR Specification Section 01 35 43 Article 1.6.3.

Q93. Can multiple remediation cells be excavated concurrently and adjacent to one another or is there to be a minimum spacing between active work faces? This impacts the number of verification samples.

A93. The Contractor can adopt their own approach provided their approach satisfies the specifications and meets all related project requirements. Information related to their proposed approach must be provided in the Contractor's Waste Excavation Plan. All RPP zoning requirements need to be adhered to for the Work.

Q94. How long should the contractor be expected to maintain an area of excavation before backfill work can proceed once verification samples have been procured by the Departmental Representative? This impacts working on adjacent cells and verification testing alongside walls.

A94. The time an excavation(s) has to remain open will depend on the Contractor's means and methods. The Contractor is to provide this type of detail in their Waste Excavation Plan.

Q95. What happens to organic material generated during the clearing and grubbing program (e.g. mulched trees and shrubs) or during the excavation program (e.g. root balls that are contaminated)? Normal practice is not to incorporate organic materials within a landfill. Will there be a designated area within the landfill for the placement of organic materials.

A95. Above grade cleared and grubbed materials shall not be placed in to the mound and must be managed at the existing Licensed facility according to Specification Section 31 11 00 Articles 3.3.1 and

3.3.2. Organic material that currently exists below grade and is covered with impacted soil shall be placed within the containment mound.

Q96. How are large pieces of debris from within designated excavation cells to be managed? Are they to be broken down within the limits of the excavation and placed into designated areas within the landfill?

A96. Refer to Specification Section 02 61 00 Article 3.2.6. Waste material is to be processed within the confines of designated waste material processing pads to be constructed by the Contractor. The Contractor shall comply with the requirements detailed in Section 02 61 00, Article 1.5.6 and Section 02 61 10 Articles 1.4 and 3.3.5. Only oversized items which cannot be practicably reduced may be managed in accordance with Section 02 61 10 Article 3.3.5 with DR approval.

Q97. What happens to debris or impacted soils that cannot be placed within the landfill?

A97. All impacted subsurface material shall be placed in the containment mound.

Q98. Where would materials that cannot be placed in the landfill be temporarily stockpiled pending offsite disposal?

A98. All impacted subsurface material shall be placed in the containment mound.

Q99. Section 3.5.17.3 of the RFQ states "Trucks shall be weighed entering (empty) and leaving (full) the LTWMF via the weigh bridge." Are trucks required to be weighed empty after each load or just once daily?

A99. Trucks are required to be weighed after each load.

Q100. The duration between recommending verification of an excavation unit and confirmation from the DR is important and this the duration affects project planning and cost. Please provide specification of the DR time window for verification of the survey unit following excavation.

A100. The Contractor is responsible for the laboratory test results turn-around-time. Therefore, the time an excavation(s) has to remain open will depend on the Contractor's means and methods. The Contractor is to provide this type of detail in their Waste Excavation Plan.

Q101. PHAI CC levels allow reliable determination that uranium and arsenic concentration are below criteria through XRF measurements and that radium-226 is below criteria based on a gamma radiation trigger level. Assessing the presence of thorium-230 above PHAI CC prior to recommendation for verification is not possible using gamma radiation field measurement scans with the typical NaI equipment. Or should we be using a field gamma spec which take a long time and could have geometry problems?

A101. DR is responsible for conducting verification activities. The Contractor is responsible for excavation of additional waste material under the direction of the DR either by lot price (up to a limit of 550,000 tonnes) or by unit rate (above 550,000 tonnes) and submission/transportation/receipt of

chemical analysis from the analytical laboratory. The finalized Port Granby Remediation Verification Standard Operating Procedure (RVSOP) will be administered by the DR.

Q102. Can a limiting assumption that thorium-230 above PHAI CC cannot occur without an elevated gamma radiation be used to recommend verification or is a laboratory measurement necessary?

A102. DR is responsible for conducting verification activities. The Contractor is responsible for excavation of additional waste material under the direction of the DR either by lot price (up to a limit of 550,000 tonnes) or by unit rate (above 550,000 tonnes) and submission/transportation/receipt of chemical analysis from the analytical laboratory. The finalized Port Granby Remediation Verification Standard Operating Procedure (RVSOP) will be administered by the DR.

Q103. It is our understanding that verification (decision criteria) is based on the mean value for the individual COPCs and the unity rule and that no consideration is given to the individual measurements. The recommendation for verification process and requirement for excavation is dependent on how the verification rule is to be applied. There could be a location with very high concentrations (say 5 times PHAI CC) but the unit could still pass since the verification is based on the mean. The program has not adopted an elevated measurement criterion and there is no test for this. Is the recommendation for verification based only on the mean value of the COPCs concentrations and the unity rule meeting PHAI CC or do results at individual locations within the excavation area also have a criteria?

A103. DR is responsible for conducting verification activities. The Contractor is responsible for excavation of additional waste material under the direction of the DR either by lot price (up to a limit of 550,000 tonnes) or by unit rate (above 550,000 tonnes) and submission/transportation/receipt of chemical analysis from the analytical laboratory. The finalized Port Granby Remediation Verification Standard Operating Procedure (RVSOP) will be administered by the DR.

Q104. Is there any consideration of ALARA in the excavation process? The PHAI CC are well above background and field measurements could direct further removal which may support some ALARA considerations (e.g. .removal of material below the PHAI CC).

A104. DR is responsible for conducting verification activities. The Contractor is responsible for excavation of additional waste material under the direction of the DR either by lot price (up to a limit of 550,000 tonnes) or by unit rate (above 550,000 tonnes) and submission/transportation/receipt of chemical analysis from the analytical laboratory. The finalized Port Granby Remediation Verification Standard Operating Procedure (RVSOP) will be administered by the DR.

Q105. Will a cost allowance be provided to the contractor, if the DR or client indicated further excavation to achieve an ALARA objective even if verification passes?

A105. Payment will be by lot price (up to a limit of 550,000 tonnes) or by unit rate (above 550,000 tonnes) for the excavation and transport of waste material. Refer to Specification Section 02 61 00 Articles 1.2.2. and 1.2.3.

Q106. Different wastes have been placed in the PWGMF. The sequence of these excavations can affect project duration and costs. Is sequencing of excavation from PGWMF and placement in LTWMF determined by PHAI or is this determined by the contractor?

A106. The sequence of the excavations will be detailed in the Contractor's Waste Excavation Plan.

Q107. What involvement will the client and/or DR have in the screening and release of vehicles for material transport to the landfill? If there is involvement, how much time should the contractor assume per vehicle?

A107. The procedure to be employed for screening of vehicles designated for the landfill is the Contractor's responsibility and should be detailed within the Contractors RP Plan Specification Section 01 35 30 Article 1.4.2 subject to review and Approval by the Departmental Representative.

Q108. What is the density of the waste material that the contractor use for planning purposes?

A108. The densities of the waste materials buried at the Licensed facility vary. Refer to Section 3.2 of Appendix R-3 the 2009 Golder Waste Excavation Management Plan (WEMP) and the Golders Summary of Historical Geotechnical Information provided with Addendum 4 for additional information on physical characteristic of various waste.