

INVITATION TO TENDER "ITT" NO. PS20191496  
CONSTRUCTION SERVICES FOR PHASE 4 CLOSURE AND GAS SYSTEM UPGRADES -  
VANCOUVER LANDFILL

QUESTIONS AND ANSWERS NO. 4

ISSUED ON January 22, 2020

Q1	Vertical Gas Well drawing 19017-528 shows units in both "mm" and "ft-in". The engineer has used rounded conversions between mm and ft which may cause discrepancy in the final numbers. This conversion process reoccurs through the entire well profile. Please specify which is the governing unit to allow for an accurate takeoff of materials.
A1	<p>The vertical gas wells are paid for by the metre, so the governing unit of measure is metric (SI). Since the work is paid for by the metre of boring depth, this eliminates any discrepancies. As stated in the notes of Drawings 522 through 527, the pipe shall be supplied in standard lengths of 1.5, 3.0, and 6.0 m (5'-0", 10'-0", and 20'-0" ft) and shall be cut to length in the field.</p> <p>The pipe is typically manufactured in lengths of 20 ft. The top 200 mm (8") <u>solid</u> pipe is a standard 20 foot length. The 250 mm (10") <u>solid</u> pipe is intended to be 6.67 ft long or 1/3 the length of a standard 20 ft pipe. So when the settlement joint is attached the length is 2100 mm (or roughly 7 ft). The remaining perforated pipe length is calculated by subtracting 20 ft from the overall boring depth. Since each joint occupies approximately 75 to 125 mm (3" to 5") this will have to be factored into the total length of perforated pipe needed.</p>
Q2	Please provide a specification to indicate the difference between bentonite chips and granular bentonite as stated in Note 2 of drawing 19017-528.
A2	<p>See Amendment No. 3.</p> <p>The specifications have been revised to indicate the difference between bentonite chips and granules.</p>
Q3	The vertical gas well profile on drawing 19017-528 indicates 450mm from the bottom of pipe to the bottom of drilled well. The elevations shown in the preceding gas well profiles show a gap of 600mm. Please clarify
A3	<p>See Amendment No. 3.</p> <p>The dimension of 450 mm from the bottom of the boring to the bottom of the pipe on Detail 1 and 2 of Drawing 528 shall be change to 600 mm.</p>

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Q4	On drawing 19017-522, well P04-V005 shows a bottom of borehole elevation at 31.6m below grade and a bottom of pipe at 31.7m. These elevations are conflicting based on profile trends and gas well detail drawings. Please confirm that the actual bottom of pipe is 31m below grade.
A4	See Amendment No. 3.
Q5	With respect to items 7.17 and 7.18 (alternate well seals), please confirm that these items are supposed to account for the incremental cost above and beyond item 7.16 and that these items may or may not be utilized depending on the owner's preference?
A5	<p>The unit price represents the cost for furnishing and installing the alternative well seal shown in Detail 2 of Drawing 528 minus the cost of procuring and installing the two bentonite seals shown in Detail 1 of Drawing 528.</p> <p>Items 7.17 and 7.18, alternative well seals (shown in Detail 2 of Drawing 528), may or may not be used in lieu of the two bentonite seals (shown in Detail 1 of Drawing 528) based on unit costs, other considerations, or preference by the City.</p>
Q6	For the well centralizers, the note states "every 9m oc below seal". Please confirm whether "seal" refers to the cover penetration seal (ie. Finished grade) or the bentonite seal identified on DWG 528 detail #1.
A6	See Amendment No. 3.
Q7	Please clarify the difference between top and bottom caps on the vertical gas wells.
A7	The bottom cap shall be 250 mm (10") diameter CPVC, Schedule 80. The top cap shall be 200 mm (8") diameter made of PVC or CPVC with Sch 40 or Sch 80 wall thickness.
Q8	We kindly request a two-week closing date extension for the above noted ITT to Thursday, February 13.
A8	See Amendment 2.
Q9	Which bid item will cover the over-excavation of the pond to -1m ASL as shown on Drawing 304?
A9	Item 2.02 - Excavate, Haul and Dispose of Material.
Q10	Item 2.02 - Does this quantity correspond just to the landfill closure or does this item include the pond?

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A10	Item 2.02 - Excavate, Haul and Dispose of Material shall cover all relevant work on the landfill, pond and other areas of the project as needed.
Q11	Drawing 304 has a note for additional peat excavation and backfill with select fill material cut volume of 24,740m <sup>3</sup> . Please clarify the requirement, location, and which bid item is to include?
A11	For area indicated on Drawing 304 (grey dashed line and grey hatch) with comment " <i>OVER EXCAVATE TO -1m ASL OR AS OTHERWISE INSTRUCTED BY ENGINEER. REPLACE WITH EMBANKMENT MATERIAL</i> ", the initial excavation and associated work is subject to "Item 2.02 - Excavate, Haul and Dispose of Material". Consequent work, including but not limited to biocover fabrication is subject to other related payitems.
Q12	Please confirm which bid item covers the supply and installation of geogrid shown on detail S5 on sheet 306?
A12	See Amendment No. 3 document and "Schedule A - Schedule of Quantities and Prices - ITT Pricing Table V13 - Rev Amendment 3".
Q13	<p>Item 2.04 Loading, Hauling, Placement, and Compaction of Grading Fill</p> <p>a. Please clarify the discrepancy of the fill volumes shown on sheet 104/105 for Phase 4 South and Phase 4 North being 90,900m<sup>3</sup> and 92,380m<sup>3</sup> for total fill of 183,280m<sup>3</sup> but pay quantity is 120,326m<sup>3</sup>?</p> <p>b. Please confirm all clean fill material for this pay item would be owner supplied?</p> <p>c. Measurement and payment item states that grading fill will consist of clean fill and waste material generated from excavation works for pipe, ditches, roadworks etc. The measurement and payment items for pipe, ditches, and roadworks state that each item is to include the load, haul, placement of excavation material generated in their respective bid items. Please clarify which item should cover the load, haul, placement of excavation material generated from the pipe, ditches, and roadworks?</p>
A13	<p>a. The cut/fill values are to be confirmed under the IFC Drawing Package upon completion of the "MARCH 2020/2021 SURVEY" (see NOTES in Drawings 104 &amp; 105) as the area is subject to ongoing landfilling operations. The pay quantity of 120,326m<sup>3</sup> is an estimate intended to provide the contractor with a basis to establish a unit rate value. See contract documents for complete details regarding quantity variations.</p> <p>b. A portion of the clean fill material may be owner supplied, however a combination of owner and contractor supplied clean fill may be used to satisfy the requirements under "Item 2.04 - Loading, Hauling, Placement, and Compaction of Grading Fill". As such, the contractor will be required</p>

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	<p>to deliver additional material as requested by Engineer, to compensate for shortages of Owner supplied fill, at different times during the execution of the project.</p> <p><b>c.</b> The payment for excavation and hauling of materials generated from the pipe trenches, ditches, and roadworks fall under the individual pay items for each mentioned task. For example, Item 4.01 - Leachate Interceptor Trench c/w 250 mm <math>\phi</math> HDPE DR17 Slotted Pipe - Phase 4N reads <i>"All labour, equipment and materials required to excavate, relocate waste, shape, cover ...."</i>. The payment item for the placement, compaction and grading of such materials is covered under "Item 2.04 - Loading, Hauling, Placement and Compaction of Grading Fill". Refer to contract specifications for complete details.</p>
Q14	Which bid item covers the supply, installation, and trenching for the leachate discharge and air supply lines across Road 45, Road 65, and North Road (Road Crossing Type 4)?
A14	See Amendment No. 3.
Q15	Please clarify on the requirements of the Vertical Gas Extraction Well Seal Alternate. Is this item optional or will it be required at certain locations?
A15	<p>See response to Q5, above.</p> <p>The alternative seals may be used in lieu of the two bentonite seals at select locations, at the discretion of the City.</p> <p>The Contractor is required to provide pricing for both of these items as further clarified in A5 above.</p>
Q16	Centralizers are stated to be every 9m oc below seal, while the drawing shows the centralizer 4.5m below the seal. Will a second centralizer be spaced 9m from the first, or an additional 4.5m placing it at 9m below the seal? Please provide clarification on the spacing and quantity requirements of centralizers.
A16	See response to Q6 above.
Q17	Specification 3.04 states "A 2 meter by 2 meter (6.5 feet by 6.5 feet) piece of Geotextile..." which is conflicting with drawing 19017-528 Note 4 stating the geotextile to be 6 feet by 6 feet. Please clarify this item.
A17	See Amendment No. 3
Q18	Please provide further detail (from that stated in specification 31 23 02 -02.01 G) for the particle size/ material requirements of final backfill soil for the Vertical Gas Wells.

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A18	See Amendment No. 3
Q19	Will threaded connections of the perforated pipe for vertical gas wells be accepted?
A19	See Amendment No. 3
Q20	Will the engineer accept PVC instead of CPVC? There is a significant cost decrease when just using PVC and it has been used on other landfills numerous times.
A20	PVC is not acceptable for use with Vertical Gas Wells for this project. The City is aware of PVC as a common material used for vertical gas wells. CPVC pipe is required for this project to provide a durable pipe material over a greater temperature range than PVC is capable of providing.
Q21	Please confirm the following assumptions about payment items: a. Item 7.14 will cover drilling operations to reach well depth. b. Item 7.16 will cover the supply and installation of CPVC as well as fill materials. c. Item 7.17/18 will cover the supply and installation of the Alternates 2 and 3 as shown in detail 2 of drawing 19017-528. These items are optional to price.
A21	See Amendment No. 3

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All other conditions and specifications remain unchanged.

Brian Brennan, Contracting Specialist