

Request for Information (RFI-HD-06152016) – POC Kris Ivarson (509) 376-1941

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### **Geological Description**

The well is to be drilled in the North-Eastern portion of the “Horn” area, north of 100-H area.

- Groundwater in this area is generally encountered at a depth ranging from 30 to 40 feet bgs. The water levels in this area fluctuate as much as 2 meters based on river stage.
- Vadose zone geology is Hanford formation, underlain by the Ringold Formation upper mud (RUM). Pockets of Ringold Formation unit E may also be present between the Hanford formation and RUM.
- The Hanford formation (upper vadose zone material) consists of unconsolidated sandy gravel and gravel, with some fines and an occasional boulder. The Ringold Formation unit E is also primarily gravel, but is a tighter formation with a higher percentage of fines and cementation.
- The RUM surface is known to be undulating in the drilling area. Based on initial review of the drilling area’s existing geological information, the RUM (which is the base of the unconfined aquifer) is typically found at 45 ft. bgs, but can be as deep as 55 ft. bgs. The RUM in this area is typically silt with varied amounts of sand and gravel.
- Well logs show the depth to water at the north end at 30-32 ft. bgs. with the RUM at 41-44 ft. bgs; and, the depth to water at the south end at 38-39 ft. bgs. with RUM at 55 ft. bgs.
- Borehole logs from wells previously drilled in the area are available upon request and must be requested no later than Tuesday, June 28, 2016
- Contamination is not anticipated.

### **Means and Methods**

The potential offeror shall propose means and methods for the following:

- The contractor must demonstrate capability to drill a horizontal extraction well, installed using either trenching technology or well drilling technology. The estimated drilling length is about ~1000 feet in total length, with daylighting accessible at both ends. The borehole is to be of adequate size to accommodate a 10 inch diameter well casing (or other size as described below).
- A larger diameter well, ~10 inches or larger, is anticipated, and the contractor is to propose methods and means as to size best suited for the application / scope.
- The type of well casing material is to be proposed by the contractor as best suited for the application / scope.
- The Contractor must demonstrate capability to service submersible pumps that are to be installed for groundwater extraction. Selection of pump size and capability will be determined following drilling completion based on the groundwater production from the well, however, a flow rate of 100 gpm is anticipated.

Attachment A – (RFI-HD-06152016)

Geological Description

Means/Methods

- Drilling with mud fluids will be acceptable. The contractor is to propose type of drilling mud and provide description of the materials.
- Contractor shall propose what angle of entry for the borehole would be used.
- Contractor shall propose how far the drill rig will need to be staged from the entry well location.
- Contractor shall propose how the drilling mud will be contained and disposal of muds following drilling completion.
- If Contractor proposes trenching, provide maximum depth. (Total length of desired screened area is about ~1000 feet in total length.)

[END]