

**FIELD CHANGE REQUEST FORM**  
**ARNG PFAS SITE INSPECTION PROGRAM**

**Contract:** Contract No. W912DR-19-D-0005

**Installation:** Nome AAOF

**Project No.:** EA Project No. 634250383

**Requested By:** John Jones, Installation Lead

**Field Change Request Number:** 01

**Description of Modification:** Drilling methods for the field work were proposed to be completed by direct push by the drilling team based on anticipated depth to groundwater of up to 30 ft bgs. Per the QAPP, once the borehole has been advanced to the specified depth, the temporary well would be constructed of one or two 5-ft sections of 1-inch Schedule 40 poly-vinyl chloride (PVC) screen with sufficient casing to reach ground surface. New PVC pipe would be used for each sampling location. The QAPP also calls out SOP 47 which presents multiple acceptable ways to collect groundwater samples including geoprobe methods with reusable screening. The equipment provided by the drilling subcontract was a Screen Point 16 (SP-16) geoprobe system which had 1.6 in. OD /0.75 in ID rods. This system included a sampling tool for collection of groundwater. The sampling tool had a sheath that covers the length of screen which is exposed to the formation to allow groundwater to enter the device. The screening was set to the maximum opening to cover the sampling zone and stainless steel screening was used in the samplers to collect the samples. This sampling equipment was thoroughly decontaminated between locations and reused. Field blanks were collected to ensure decontamination techniques were adequate. Because temporary well casings were not used, a survey pin was installed at each of the 6 boring locations at ground surface. Distance between each survey point (pin) and top of casing was measured prior to SP16 casing being removed from each temporary well location. The elevation survey was completed using the survey point/pin instead of the casing as noted in the QAPP.

**Reason for Modification:** After evaluation of supply chain issues and concerns for field delays related to a very remote site, it was determined that different method of groundwater sample collection needed to be identified and employed to maintain schedule and complete the project before winter. This method also reduces the potential for soil collapsing back into the hole, which may occur when using 1" PVC and it reduces logistics to allow for completion of field work within the scheduled work window.

**Description of Modification:** Unidentified Petroleum release/potential vessel was identified during drilling of ID: AOI01-04. EA encountered a location with a petroleum release. Prior to getting down to 12 ft bgs, there was no change in grain size or soil characteristics from other well sites (fairly homogenous throughout site/borings so far). No metal pieces or permafrost noted in any cores from site. No obvious indicators of Contamination and no petroleum odor. At 12 ft, contamination started to appear. EA logged a PID reading greater than : 15,000 after a sample was containerized and bagged. The soil had a dark grey/black color and a noticeable/heavy petroleum smell, but no notable sheen. Contamination obvious at 13ft (refer to pics). Potential contamination through 15 ft / no changes. Drillers proceeded with the 15-20 ft core but encountered no resistance at approximately 17-18 ft. The Rig was pulled back and advanced again to verify. The core from 15-18 was 0% recovered due to potential of unknown abandoned structure. EA Stopped work immediately and reported the issue to ARNG to determine the path forward. ARNG requested that

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EA grab a sample of the potentially contaminated soil. Confirmed with onsite maintenance manager (Steve Smith) and DOT representative (Christian Osentoski) that no known structure was in that location, reviewed as-builts and confirmed again that no utilities were in the area. Selected an alternate location for 04 (ID: AOI01-04A) approximately 10 ft to the southwest and successfully placed temp well. No noticeable contamination or odor/sheen was observed in the sample from the alternate location (it was clear with normal parameters). Two additional grain size samples were taken from 04A. AOI01-04 was backfilled with core material and GPS location was logged.

**Reason for Modification:** Petroleum impact and potential for underground tank or drum.

**Description of Modification:** Reduction of Hand Auger Depth

**Reason for Modification:** The work plan required that all borings be hand augered to a depth of 5 feet to reduce the possibility of damaging a subsurface utility. However, at Nome, the soil was extremely rocky, and the field team was unable to auger deeper than about 2 feet at several locations. The utility information was reviewed, and a decision was made to conduct the borings without further hand augering at the locations where hand augering could not be conducted to 5 feet.