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April 30, 2019

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Via: paul.horwath@alaska.gov

RE: Cook Inlet Processing, Uganik Bay, Kodiak Island, Alaska; ADEC File No. 2638.38.001

Subj: Site Characterization Work Plan – Area 2 Soils Exceeding MAC for DRO

This Site Characterization Work Plan presents Environmental Management, Inc.'s (EMI) approach to conducting additional characterization of fuel impacted soils in Area 2 of the Cook Inlet Processing Plant, Uganik Bay, Kodiak Island, Alaska (the Property). This work plan has been developed for Polar Equipment Inc. by EMI.

The purpose of the site characterization is to delineate the extent of soils in Area 2 where EMI's 2018 site characterization work identified contaminant levels exceeding the maximum allowable concentration (MAC) established by the Alaska Department of Environmental Conservation (ADEC). This work was requested by ADEC on February 28, 2019.

BACKGROUND

The site is an active ADEC contaminated site identified as the Cook Inlet Processing - Uganik, Alaska (ADEC File No. 2638.38.001). The Processing Plant was built in 1926 and has been purchased by various companies starting as early as 1978, and is currently owned by Polar Equipment, Inc.

Previous site assessment work performed in 2002 by GeoEngineers identified DRO contamination in multiple locations at the site. The site assessment report indicated there are two likely sources responsible for the contamination on the site. At the request of ADEC, in 2018 EMI conducted additional site characterization work which was documented in EMI's *Cook Inlet Processing Plant Site Characterization Report*, November 16, 2018. As described within EMI's report, two boreholes within Area 2 had DRO in concentrations exceeding ADEC's MAC. Following ADEC's review of EMI's report they requested in a letter dated February 28, 2019, that a work plan for additional site characterization work be developed.

FIELD ACTIVITIES

EMI plans to conduct additional site characterization within Area 2 of the Property by advancing boreholes and collecting field screening and analytical soil samples. Additionally, surface waters will be visually inspected and an analytical water sample will be collected from a seep. The proposed borehole locations are illustrated in Figure 2. EMI will conduct field screening and analytical sampling as described in the below sections. All field screening and analytical sampling will be conducted by a Qualified Environmental Professional (QEP) as defined by ADEC. Work described herein will be conducted in accordance with the ADEC August 2017 *Field*

Sampling Guidance (FSG). The FSG is incorporated by reference into this work plan and will accompany the sampler in the field.

Visual Inspection

Prior to sampling activities, EMI will traverse Area 2 to assess the current site conditions. The information from the visual inspection will be incorporated into the sampling efforts, including modifying the sample locations based on visual indicators.

Soil Boreholes Screening and Sampling

Based on results of the EMI's November 16, 2018 report there were two sample locations where petroleum contamination exceeded the MAC. Both of these locations (TP-04 and TP-06) were located in the northwest area of Area 2. It is believed both of these samples represent a semi-continuous plume of DRO contamination, the boundaries of which are unknown and the delineation of the boundaries are the focus of this work. To delineate the plume EMI will initially advance boreholes in a 20-foot grid over the general area that exceeds the MAC. See Figure 2 for proposed sampling grid, noting the locations may vary based on site features, accessibility, and observations during the visual inspection.

The boreholes will be advanced using a hand auger or hand tools, to bedrock which varies from 1 foot to 4.5 feet throughout the Property. Exhumed soils will be placed immediately adjacent to the boreholes and will be used as backfill following field screening and analytical sample collection. At the time of backfilling, impacted soils will be placed back at the depth at which they originated.

Ambient soil vapor readings will also be collected during the borehole exhumations at a minimum of one foot intervals. Where bedrock is less than one-foot, ambient screening will take place at the top, middle, and bottom of the borehole.

One headspace field screening sample will also be collected from the most elevated ambient reading in the boreholes. The purpose of the headspace sample is to provide a corresponding field screening result to the analytical samples collected. The soils will be collected directly from the boreholes. The headspace will be collected and analyzed in accordance with the FSG. All headspace results will be recorded in the field note book. A MiniRAE 3000 PID (or similar) will be the primary field screening instrument used on site.

One analytical sample will be collected from the location of the highest ambient screening from each of the primary boreholes. Additional boreholes may be advanced laterally from the primary boreholes to define the extent of contamination. These secondary boreholes will be screened in the same fashion as the primary boreholes; however, analytical samples will only be collected as necessary to delineate the boundaries of soils exceeding the MAC. Typically, samples will be collected if field screening results indicate a potential change in DRO concentrations. The analytical sampling of secondary boreholes will be based on the discretion of the QEP. For planning purposes up to twenty-nine primary samples are anticipated along with an additional ten delineation samples.

The laboratory samples will be collected directly from the boreholes or auger using clean stainless steel or disposable spoons and placed directly into clean laboratory provided containers.

Surface Water or Shallow Groundwater Sampling



EMI will perform a visual inspection of the surface waters in and around Area 2, including the marine waters along the coastline and any seeps seen discharging from the site. The visual inspection will look for visual staining, which would indicate potential contamination. A single analytical water sample will be collected from a seep at the site. This will be collected from either surface waters with visual indicators of contamination or from the seep closest to the known area exceeding the MAC if there is no evidence of contamination.

Investigation Derived Waste

Investigation derived waste (IDW) will include sampling supplies (i.e., Ziplock bags, gloves). Soil generated will be used to backfill each hole with the soil being placed back at the approximate depth in which it was removed. Disposable or new, clean stainless-steel spoons will be used for sample collection so no decontamination water is expected to be generated from the soil sampling. Sampling supplies will be disposed of as solid waste.

Laboratory Analysis

The samples will be submitted to SGS North America, Inc. (SGS) laboratory in Anchorage, Alaska for sample analysis. The soil samples will be submitted for standard turnaround and analyzed for DRO by AK 102. The water samples will be submitted for standard turnaround and analyzed for Total Aromatic Hydrocarbons (TAH) by EPA 624 and Total Aqueous Hydrocarbons (TAqH) by EPA 625. No surface water field duplicates will be collected, but one trip blank (TAH) will be included and submitted for analysis.

Reporting

A report will be prepared by EMI which will include a summary of the field effort, including site conditions, field screening results, sample locations and deviations from the work plan, and a discussion of the analytical results. The report narrative will also discuss, to the degree possible, the extent of contamination exceeding MAC, both vertically and horizontally as determined by the investigation. Identified data gaps will also be discussed. Tables will summarize the soil and water results in comparison to applicable cleanup levels, and sample and field screening locations will be depicted on figures. Photographs, complete copies of field notes, laboratory data packages, and the ADEC laboratory review checklists will be provided as attachments to the report.

If you have any questions or wish to discuss this project further please do not hesitate to contact Glenn Hasburgh or the undersigned at (907) 272-9336.

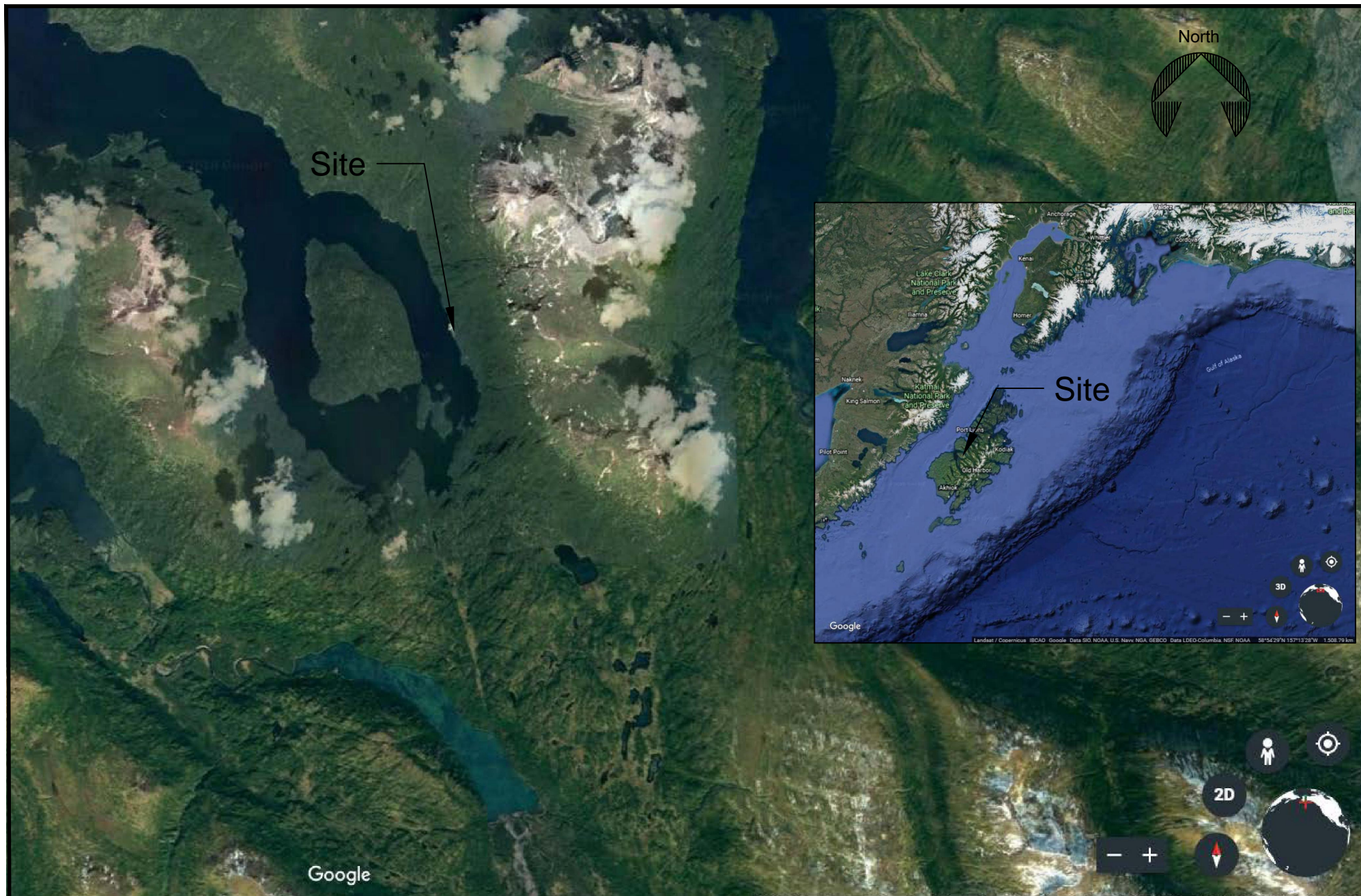
Respectfully,
Environmental Management, Inc.



Glenn Hasburgh
Environmental Scientist, QEP

Encl: Figure 1 – Project Location and Vicinity Maps
Figure 2 – Area 2 Proposed Borehole Locations





PROJECT LOCATION
AND VICINITY MAPS

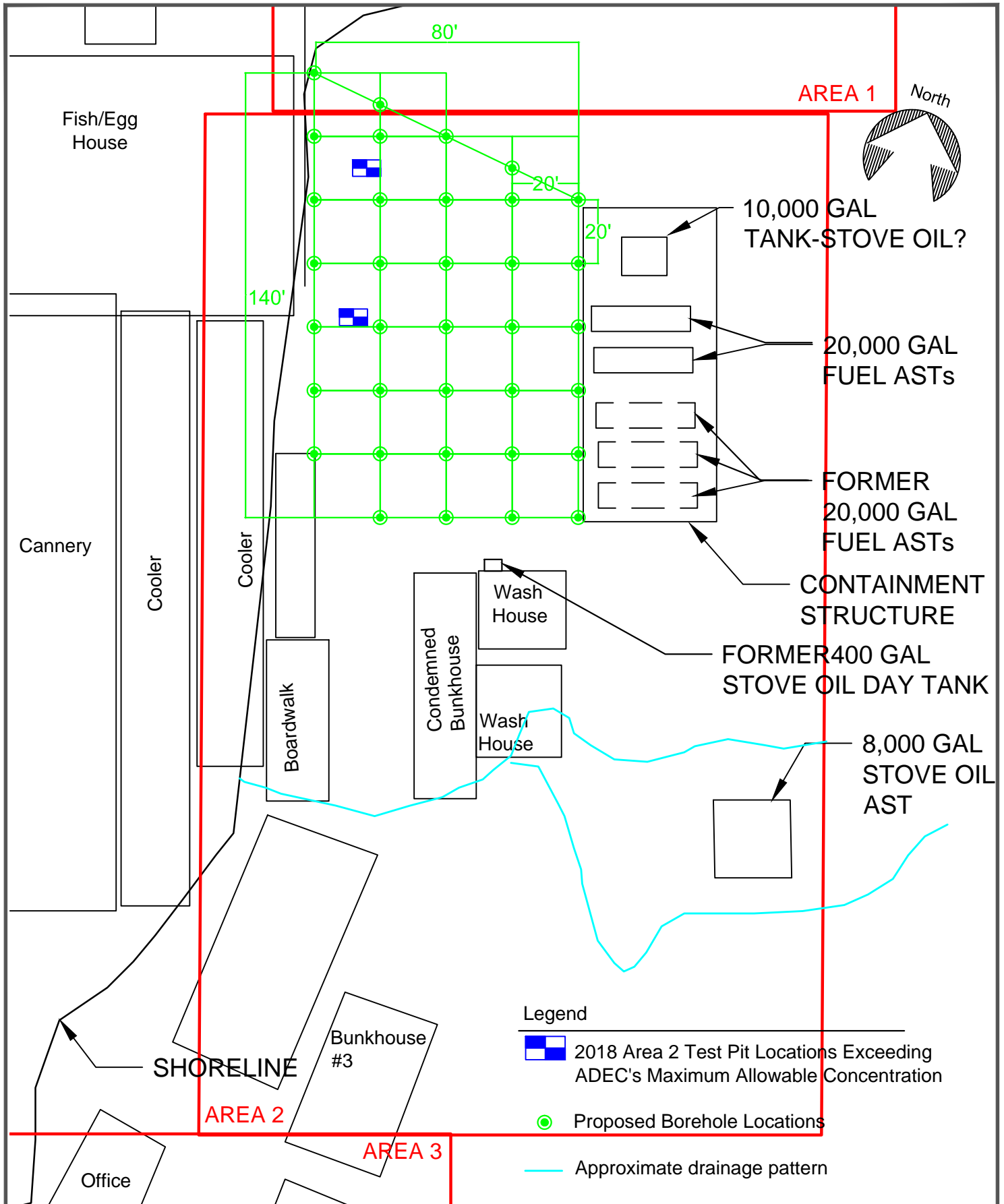
COOK INLET PROCESSING,
UGANIK BAY,
KODIAK ISLAND, ALASKA



PREPARED: HJD
DRAWN: HJD
REVIEWED: GH
DATE: 4/19/19

FIGURE

1



AREA 2 PROPOSED
BOREHOLE LOCATIONS

COOK INLET PROCESSING
UGANIK BAY
KODIAK ISLAND, AK



PREPARED: HJD
DRAWN: HJD
REVIEWED: GH
DATE: 4/29/19

FIGURE
2