

**Environmental
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Management**

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Mr. Joshua Barsis
Environmental Program Specialist
Alaska Department of Environmental Conservation
Contaminated Sites Program
555 Cordova Street
Anchorage, AK 99501



Subject: Addendum to GC-1 Skid 40, 2016 Contaminated
Sites Monitoring Report, Revised November 2017

Dear Mr. Barsis:

ERM Alaska, Inc. (ERM) has reviewed available data for spill site Gathering Center 1 (GC-1) Skid 40, located in the Western Operating Area of Prudhoe Bay Unit (PBU). The spill site is located within the GC-1 production facility. Skid 40 is known as the Snow Shelter or the Blow-Down Module. The GC-1 Skid 40 spill site is listed in the Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Program Database: File Number 300.38.305, Hazard Identification Number 26013.

This addendum to the revised 2016 monitoring report is in response to an email sent on 05 January 2018 by Mr. Joshua Barsis of ADEC's Contaminated Sites Program to Mr. Mike McAnulty of BP Exploration (Alaska), Inc. (BPXA). ADEC's letter discusses a data gap and requests further delineation of surface soils at the gravel-water interface. This topic was further discussed in a meeting held at ERM's offices on 25 January 2018. During this meeting, ERM presented photographic evidence illustrating that the soil samples collected in 2016 were collected from the zone of gravel-water interface. ADEC and the BPXA project team agreed during the meeting that ERM would prepare a letter addendum to the revised 2016 monitoring report illustrating that the data gap is filled without the need for additional soil sampling on site. As such, and on behalf of BPXA and BP Remediation Management, this letter is being submitted as an addendum to the *GC-1 Skid 40, 2016 Contaminated Sites Monitoring Report* (ERM 2017) to address the apparent data gap and to clarify the locations and depths of surface soil samples collected in 2016.

2016 Surface Water and Surface Soil Sampling

ERM collected five co-located surface water and surface soil samples at the GC-1 Skid 40 spill site in 2016. ERM personnel collected surface soil samples approximately one to three feet from the edge of the surface water, at depths of at least six inches below ground surface, following the surface sample collection procedures included in the *2016 Contaminated Sites Water Quality Monitoring Work Plan* (ERM 2016 – Joe Casey and Annie Surratt).

CORRECTION TO ERM'S REPORT

In reviewing documents to respond to ADEC's request, ERM identified that not all photographs taken during the field effort in 2016 were included in our *GC-1 Skid 40, 2016 Contaminated Sites Monitoring Report* (ERM 2017). Therefore, the photograph log (Attachment A hereto) has been amended to include additional photographs of surface soil locations SS-01 and SS-05. The photographs of surface soil locations SS-01, SS-02, SS-03, and SS-05 show that they were taken near the gravel-water interface. A photograph was not taken at surface soil location SS-04. However, the field sampling team confirmed verbally that sample location SS-04 was also within one to three feet from the surface water edge, and that figures in the report accurately reflect soil sampling location SS-04.

The field sample sheets were reviewed and it was noted that the depths of surface soil samples were recorded as zero feet (signifying a surface sample). The field sampling team was contacted to verify that the surface soil sampling procedures listed in the work plan were followed. The field sampling work instruction FS-WI-03 states that surface soil samples are collected with a hand trowel, at a depth of six inches below the surface, and not deeper than two feet. At this site, the field sampling team stated that they collected samples from a depth of at least six inches below the surface, but no more than 12 inches below ground surface.

CONCLUSIONS AND RECOMMENDATIONS

ADEC's letter requested further delineation at the gravel-water interface in the vicinity of contamination remaining in place beneath the flow lines. The 2016 surface soil locations SS-01, SS-02, SS-03, SS-04, and SS-05 were located near the surface water edge, closest to the former excavation areas DD-14, EE-14 and EE-13. It is ERM's conclusion that the surface soil samples collected in 2016 delineate the gravel-water interface.

Cleanup to date successfully removed contaminated soil associated with the release, and follow up soil and surface water sampling indicate petroleum hydrocarbons remaining on site beneath the flow line and VSMs do not pose a risk to human health or the environment. As such, ERM recommends seeking a site closure with an institutional controls determination from the ADEC. If necessary, two institutional controls that could be documented in ADEC's contaminated sites database are described below:

- 1) Record concentrations and locations where contaminated soil exceeds 18 AAC 75 Method One Table A2 cleanup levels (VSM and flow line area).
- 2) Transportation of soil off site requires ADEC approval (also to be documented in BPXA's operational controls).

Sincerely,



Jeffrey D. Leety
Partner

cc: Mike McAnulty, BPXA
Thomas Beckman, ERM

Attachments:

1. Appendix A 2016 GC1 Skid 40 Photograph Log

References

ERM Alaska, Inc. (ERM). 2016. *2016 Contaminated Sites Water Quality Monitoring Work Plan*. 05 August 2016.
ERM. 2017. *GC-1 Skid 40, 2016 Contaminated Sites Monitoring Report, Revised*. November 2017.

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PHOTOGRAPH 1: SURFACE WATER LOCATION SW-03; FACING NW.



PHOTOGRAPH 2: SURFACE WATER LOCATION SW-04; FACING N.



PHOTOGRAPH 3: SURFACE WATER LOCATION SW-05; FACING NW.



PHOTOGRAPH 4: SURFACE SOIL SAMPLE LOCATION SS-02 IN THE FOREGROUND, SURFACE WATER LOCATION SW-02 IN THE BACKGROUND; FACING NW.



PHOTOGRAPH 5: SURFACE SOIL SAMPLE LOCATION SS-03; FACING NW.



PHOTOGRAPH 6: SURFACE SOIL SAMPLE LOCATION SS-01



PHOTOGRAPH 7: SURFACE SOIL SAMPLE LOCATION SS-05