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October 19, 2021

Mr. Peter Campbell, Project Manager
Alaska Department of Environmental Conservation / SPAR / CSP
43335 Kalifornsky Beach Road, Suite 11
Soldotna, AK 99669-8250

Re: Swanson River Unit, P&S Yard – 2021 Work Plan, Amendment 1
Sterling, Alaska
ADEC File Number: 2334.38.017
ADEC Hazard Identification Number: 452

Dear Mr. Campbell:

Please find enclosed for your files, the Amendment 1 to the *Work Plan for 2021 Activities at Swanson River Field Pipe and Supply yard*, Sterling, Alaska. The submittal was prepared by Stantec on behalf of Chevron Environmental Management Company (CEMC).

Please do not hesitate to contact Craig Wilson (907 266-1128) and/or Tom Madsen (801 743-4924) with Stantec or myself at 925-493-9858/SLathrop@chevron.com should you have any questions

Respectfully,

Chevron Environmental Management Company
on behalf of
Chevron U.S.A. Inc.

Shelby Lathrop
Operations Lead W

Stantec Consulting Services Inc.
725 East Fireweed Lane Suite 200, Anchorage AK 99503-2245

October 13, 2021
File: 203721236.350.007

Attention: Mr. Pete Campbell
Alaska Department of Environmental Conservation
Soldotna/Kenai Office
43335 Kalifonsky Beach Road, Suite 11
Soldotna, AK 99669-8250

Dear Mr. Campbell,

Reference: Swanson River Field Pipe & Supply Yard 2021 Work Plan, Amendment 1, ADEC File Number 2334.38.017

This letter serves as Amendment 1 to the *Work Plan for 2021 Activities at Swanson River Field Pipe and Supply Yard*, Swanson River Unit, Sterling, Alaska submitted to you on June 15, 2021 and approved on June 29, 2021, addressing the concerns raised in your letter of August 11, 2021 regarding additional sampling in the wetlands area to the east of the site and proper abandonment of boreholes consistent with ADEC guidance. Stantec Consulting Services Inc. (Stantec) is submitting this work plan amendment for your review on behalf of Chevron Environmental Management Company (CEMC).

For ease in readability the section numbering of this letter follows the section numbering of the approved work plan. Unless otherwise described in this amendment, all other aspects of the approved work plan remain unchanged.

Section 5, Wetlands Soil Sampling is revised as follows:

5.0 WETLANDS SOIL SAMPLING

Additional soil samples will be collected from the seep/wetlands area to the east of the slurry wall, in the vicinity of W-1 and W-1P, to further confirm the horizontal extent and evaluate the vertical delineation of the xylene impacted peats in the seep/wetlands area. This will be a continuation of the November 2020 sampling and will consist of hand borings in September and direct push borings in November (**Table 6**). Pending site freeze up, the direct push sampling will occur in November 2021 to take advantage of the low winter water table and frozen ground for access by a tracked drill rig. Proposed sampling locations for the November event are shown on **Figure 3**. The results of the sampling will be used to inform future decisions regarding remediation in that area.

Based on the previous extent of investigation in the seep/wetlands area and knowledge of past use of the area, site clearance of the upper 5 feet of the borings will not be required prior to direct push activities. Utility clearance procedures will be limited to a State-required one-call (811 Digline). A USFWS special use permit will be required before field work begins.

Table 6 Wetlands Soil Sampling

Sample Identification	Location	Sampling Frequency	Analysis
Wetlands	Soil samples from seep/wetlands area (6 locations)	Once (September)	8260-BTEX
Wetlands	Soil samples from seep/wetlands area (14 locations)	Once (November)	8260-BTEX 9060-FOC

5.1 HAND BORINGS

If practicable, up to 6 locations will be sampled by hand during the September site visit to determine if contaminant levels in the wetlands during non-freezing conditions. Two samples, one mid-depth and one at the peat/silt interface, will be collected from each location where practical.

5.2 SOIL BORINGS

It is anticipated that up to 14 soil borings will be advanced by direct push during the November site visit, with the actual number being determined by field conditions (**Figure 3**). The borings will be advanced through the peat layer to the underlying sediment, anticipated to be 8 feet or less bgs, based upon 2005 probing of the area and the results from the November 2020 borings. Ten of the borings will be located to delineate the southern extents of the contamination and four borings will be in known uncontaminated locations. The borings in the uncontaminated locations will be analyzed for fractional organic carbon (FOC), the other locations will be analyzed for BTEX. Six of the borings in locations anticipated to contain xylene contamination will include an additional deeper sample from within the saturated silt layer.

Borings will be advanced using a small GeoProbe® direct push rig, utilizing a Macro-Core® MC5 soil system for sample collection, or equivalent system. The MC5 system uses 2.25 inch outside diameter tooling. Two samples, one mid-depth and one at the peat/silt interface, will be collected from each location where practical, along with an additional silt layer sample at six locations. The silt layer sample will be collected approximately 18-24 inches below the peat-silt interface or at point of refusal of the direct push rig.

Boreholes will be abandoned and backfilled with bentonite chips in accordance with ADEC guidance.

Section 6 of this work plan provides details of the soil sample collection and analytical methods associated with this activity.

6.0 SAMPLING PLAN

Table 7 in *Section 6.1, Target Analytes* is revised to include the additional soil samples from the saturated silt layer.

Reference: Swanson River Field Pipe & Supply Yard 2021 Work Plan, Amendment 1, ADEC File Number 2334.38.017

Table 1 Target Analytes by Location (Revised Row Only)

Location	Parameter / Method	Field Samples	Field Duplicates	Matrix Spike	Matrix Spike Duplicate	Trip Blanks
Wetlands soil sampling (direct push)	BTEX EPA 8260D	30	3	2	2	2

Section 6.3, Sample Collection Methods is modified by subdividing *Section 6.3.3, Soil* as follows:

6.3.3 Soil

Field screened soil samples will be collected from direct push cores. Field screening will be conducted by partially filling (one-third to one-half) a re-sealable plastic bag with the soil and warming the sample soil to a minimum of 40 degrees Fahrenheit. Soils will be warmed for at least 10 minutes but no longer than 1 hour. The bag will be agitated for 15 seconds at the beginning and end of the headspace development period to assist volatilization. After headspace development, a PID will be used to measure relative organic vapors, and the result will be recorded on the soil boring logs.

6.3.3.1 BTEX

Samples for laboratory analyses will be collected from the ten direct push cores located south of monitoring well TW-12. Two samples will be collected from the peat layer in each core, and an additional silt layer sample will be collected from six locations. Peat layer samples will be collected from the middle of the peat layer and from immediately above the peat-silt interface. Silt layer samples will be collected approximately 18-24 inches below the peat-silt interface.

For each volatile soil sample, approximately 50 grams of material will be collected in a pre-tared, 4-ounce, amber-glass jar using a dedicated stainless-steel spoon and field-preserved in 25 milliliters of methanol. An additional unpreserved volume of soil will be collected with each volatile soil sample for percent-solid analysis. Sample containers will be immediately labeled and placed in a cooler with ice.

6.3.3.2 Fraction of Organic Carbon

Samples for laboratory analysis will be collected from the four direct push cores located to the north of the known contamination. Two samples will be collected from each core, one at a shallow depth within the water-saturated peat and one immediately above the peat-silt interface. Each sample will consist of approximately 50 grams of material and will be collected in a pre-tared, 4-ounce, amber-glass jar using a dedicated stainless-steel spoon.

7.0 SAMPLING PLAN

Table 8 in *Section 7.1, Quality Control Samples* is modified to reflect the increased number of samples to be collected during the November soil sampling event.

Reference: Swanson River Field Pipe & Supply Yard 2021 Work Plan, Amendment 1, ADEC File Number 2334.38.017

Table 2 Quality Control Requirements (Revised Row Only)

Sampling Event	Parameter	Primary Samples	QA/QC Samples	Total Number of Samples
November Soil Sampling	BTEX	30	3 Field Duplicates 1 Trip Blank 2 MS/MSD	36

Please contact either me or Ms. Shelby Lathrop (CEMC, SLathrop@chevron.com) if you have any questions or wish to discuss these changes to the work plan. The November soil sampling described in this letter amendment is currently scheduled to occur the week of November 15-19, 2021.

Best regards,

Stantec Consulting Services Inc.

Craig Wilson
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Cell: 907 240 3752
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c. Shelby Lathrop, CEMC (email)

chw https://stantec.sharepoint.com/teams/swansonriverunit/shared documents/01_2021 work plan/chevron sru 2021 work plan amendment 1 oct2021.docx