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October 11, 2022

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Subject: Draft Groundwater Monitoring and Product Recovery Work Plan, Granite Point Production Facility and Granite Point Tank Farm

Mr. Anderson,

Susitna Environmental, LLC (Susitna) is pleased to submit the referenced draft Groundwater Monitoring and Product Recovery Work Plan to Hilcorp Alaska LLC (Hilcorp) for review. This work plan details environmental services to conduct routine groundwater monitoring activities, passive product recovery, and monitoring well repair and survey at Granite Point Production Facility (GPPF) Hazard ID: 1264 and Granite Point Tank Farm (GPTF) Hazard ID: 1280.

If you have any questions, please contact me at (907) 350-7952 or m.mayer@susitna.com.

Thank you,

M. Mayer

Melissa Mayer, Qualified Environmental Professional
Susitna Environmental, LLC

cc: Peter Campbell, ADEC

Hilcorp Alaska, LLC

Groundwater Monitoring and Product Recovery at

Granite Point Production Facility and Granite Point Tank Farm

Granite Point, Alaska

October 2022

Prepared by:

Melissa Mayer

Qualified Environmental Professional

Susitna Environmental, LLC

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Acronyms

°C	degrees Celsius
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ADS	Arctic Data Services LLC

ARCO	Atlantic Richfield Company
AST	above ground storage tank
Brice	Brice Environmental Services Corporation
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CoC	chain-of-custody
cy	cubic yard
DO	dissolved oxygen
DRO	diesel-range organics
GPPF	Granite Point Production Facility
GPTF	Granite Point Tank Farm
GRO	gasoline-range organics
HCl	hydrochloric acid
Hilcorp	Hilcorp Alaska, LLC
IDW	investigation derived waste
kg/m^3	kilograms per cubic meter
LLC	limited liability company
LNAPL	light non-aqueous phase liquid
Marathon	Marathon Petroleum Corporation
mg/L	milligrams per liter
mL	milliliters
mS/cm	millisiemens per second
MS/MSD	matrix spike/ matrix spike duplicate
mV	millivolts
NTU	nephelometric turbidity unit
ORP	oxidation-reduction potential
PAH	polycyclic aromatic hydrocarbons
PPE	personal protective equipment
PSA	Production and Storage Area
PVC	polyvinyl chloride
PWD	Produced Water Disposal Area
PWRB	Produced Water Retention Basin
QA/QC	quality assurance/quality control
QC	quality control
QEP	Qualified Environmental Professional
ROD	record of decision

RPD	relative percent difference
RRO	residual-range organics
S&W	Shannon & Wilson, Inc.
SGS	SGS North America Inc.
SLR	SLR Consulting
USEPA	United States Environmental Protection Agency
VOC	volatile organic compounds
Weston	Weston Solutions, Inc.
YSI	YSI 556 Water Quality Meter

1.0 Introduction

This work plan details environmental services to conduct routine groundwater monitoring activities at Granite Point Production Facility (GPPF) Hazard ID: 1264 and Granite Point Tank Farm (GPTF) Hazard ID: 1280, located 45 miles from Anchorage, Alaska (Figure 1). This work plan was prepared at the request of the Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Program in part, to satisfy conditions four and six of the Record of Decision (ROD) issued by ADEC on November 2, 2006, for Marathon Petroleum Corporation (Marathon) Granite Point Facility (ADEC 2006). Condition four requires groundwater monitoring until the groundwater quality meets applicable cleanup levels established for the site. Condition six requires a property use status report every five years addressing the site's compliance with other site conditions referenced in the ROD.

The objectives of this work plan are to monitor groundwater contamination at GPPF and GPTF and recovery of any free product in any of the existing monitoring wells. A long-term trend analysis will be conducted to evaluate contaminant concentrations that exceed ADEC cleanup levels at each monitoring well at the GPTF. These objectives will be achieved by sampling existing groundwater monitoring wells and reviewing historical groundwater sampling data. Existing monitoring wells will be sampled as outlined in this plan. Samples will be submitted to SGS North America Inc. (SGS) in Anchorage, Alaska, an ADEC-approved laboratory for analysis.

The contractor will provide all project management, safety oversight, field implementation, quality control (QC) management, and document preparation necessary to perform this project. Contractor personnel will coordinate field activities with Hilcorp Alaska, limited liability company (LLC) (Hilcorp) personnel and will assist Hilcorp personnel, as directed, with communications to ADEC.

2.0 Site Descriptions and Background

Hilcorp's GPPF is located approximately 45 miles southwest of Anchorage, Alaska, and approximately 35 miles northwest of Kenai, Alaska (Figure 1). The site lies at approximately 61° 01' 02.73" N latitude and 151° 25' 27.92" W longitude, within Section 28, Township 11 North, Range 12 West, Seward Meridian. The nearest community is Shirleyville, located approximately 1 mile east of the facility.

The GPPF is a former crude oil and natural gas collection and processing facility. The GPPF was constructed in 1968 by Atlantic Richfield Company (ARCO) Alaska and was used as a production facility between 1968 and 1992. Marathon began leasing the facility in 1984 and continued to operate the facility for crude oil processing until 1992.

The GPPF is comprised of three main areas: Production and Storage Area (PSA), Produced Water Retention Basin (PWRB), and Produced Water Disposal area (PWD). The PSA was used to receive the offshore fluids, separate crude oil from water, and store recovered crude in the aboveground storage tanks (ASTs). The purpose of the PWRB was to contain the produced water from the crude oil. The produced water was then discharged into the PWD. Hilcorp assumed operation and maintenance of GPPF and GPTF from Chevron in 2012 (SLR Consulting [SLR] 2014).

Previous site activities at each of these sites are described below and proposed field activities are described in Section 3.2.

2.1 Granite Point Production Facility

ADEC Hazard ID: 1264 | ADEC File Number: 2337.38.038 | Status: Active

Several environmental site assessments were preformed between 1984 and 1999. Soil samples collected from the three areas indicated petroleum hydrocarbon impact at concentrations that exceeded ADEC soil cleanup levels. Groundwater samples collected from site monitoring wells installed across the facility also indicated metals and/or petroleum hydrocarbon impact above ADEC groundwater cleanup levels. Free-phase product has historically been observed within the PWRB area.

In 2004 and 2005, Marathon conducted removal actions resulting in the excavation and thermal treatment of 2,000 cubic yards (cy) of impacted soil from the PWRB area and 5 cy from the PSA area (Shannon & Wilson, Inc. [S&W] 2005).

Groundwater monitoring activities were conducted at GPPF on August 16, 2007, by American Environmental, under contract to Marathon. Reporting and coordination with the ADEC and other project stakeholders were conducted by Shannon & Wilson (S&W 2008).

In 2007, groundwater monitoring wells PF-MW-4 and PF-MW-8 (PSA), PF-MW-6 (PWRB) and PF-MW-9 through PF-MW-12 (PWD) were sampled. Eight groundwater samples, including one duplicate were analyzed for gasoline-range organics (GRO); diesel-range organics (DRO); residual-range organics (RRO); and benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, samples collected from the four PWDA wells (PF-MW-9 through PF-MW-12) were also analyzed for barium.

The results from groundwater samples collected from PSA wells PF-MW-4 and PF-MW-8, indicated no constituents of concern detected above ADEC Table C Groundwater Cleanup Levels. Therefore, future sampling of these wells was suspended per conditions outlined in the ROD.

Groundwater monitoring wells PF-MW-9 through PF-MW-12, located in the PWD area, were sampled for a final event in 2007 prior to their decommissioning. Groundwater results indicated that only RRO was detected above ADEC Table C Groundwater Cleanup Levels. The August 2007 analytical results were consistent with historical analytical results. Groundwater monitoring wells PF-MW-1, PF-MW-3, and PF-MW-9 through PF-MW-12 were decommissioned on August 16, 2007 and monitoring well PF-MW-5 was decommissioned on August 30, 2007. Groundwater samples collected from PF-MW-6 at the PWRB contained RRO above the ADEC Table C Groundwater Cleanup Level of 1.1 milligrams per liter (mg/L). Monitoring well PF-MW-7 was monitored for the presence of free-phase product (light non-aqueous phase liquids [LNAPL]). A layer of "thick black oil" at approximately 10 feet below ground surface was observed. A previous measurement of 1.40 feet of product was observed in the well in September 2004.

In 2012, Weston Solutions, Inc. (Weston) sampled monitoring well PF-MW-6 for GRO, DRO/RRO, and BTEX. DRO was detected at 1.3 mg/L and RRO was detected at 0.93 mg/L; both concentrations were below ADEC cleanup levels. Free product was reported by the field team at PF-MW-7, but the depth to LNAPL or the thickness was not recorded (Weston 2012).

In 2017, Brice Environmental Services Corporation (Brice) sampled PF-MW-6 and analyzed for GRO, DRO, RRO, volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). Results did not indicate any exceedances above the ADEC cleanup levels. Free product (LNAPL) was encountered in PF-MW-7 and the well was not sampled. It was recommended that biennial product removal via absorbent socks be conducted with measurements of product recovery provided to ADEC as an additional section in the GPPF ROD groundwater sampling report in monitoring wells where free product was encountered.

Monitoring well PF-MW-6 is downgradient from PF-MW-7, which has free product. Although the ROD allows clean wells to be removed from the sampling program and PF-MW-6 did not exceed cleanup levels in 2012 or 2017, PF-MW-6 will continue to be sampled to monitor for contaminant migration from PF-MW-7.

The next five-year monitoring event for PF-MW-6 and PF-MW-7 is scheduled to take place in 2022.

2.2 Granite Point Tank Farm

ADEC Hazard ID: 1280 | ADEC File Number: 2337.38.033 | Status: Active

In 1993, during a Site Assessment/Remedial Investigation, 15,000 cy of contaminated soil was estimated to be located at the GPTF within 10 different areas. Contaminants of concern were GRO, DRO, RRO, benzene, ethylbenzene, total xylenes, 2-methylnaphthalene, methylene chloride, arsenic, barium, chromium, and lead.

In September 2013, SLR performed groundwater sampling at GPTF at four monitoring wells. All BTEX concentrations were detected below ADEC cleanup levels except benzene detected in TF-WP-4 (0.06 mg/L) above the ADEC cleanup level of 0.05 mg/L (SLR 2014).

In 2017, Brice investigated the extent of contamination associated with road surface staining and seeps at the GPTF. Groundwater samples were collected from six monitoring wells and spring seeps downgradient of the GPTF were evaluated. Inspections of monitoring wells and well points at the GPTF were also conducted. Sampling from the road stain area indicated localized contamination above ADEC cleanup levels, but not migrating offsite or impacting the groundwater in the area.

In May 2018, Hilcorp personnel excavated a 4 by 9-foot area by 1 foot deep where the road stain was located. Hilcorp is continuing to monitor the area of excavation for reappearance of the stain or development of new staining. It was recommended that additional investigation of the road staining and seep area should be conducted during facility decommissioning (Brice 2018)

3.0 Field Work

3.1 Analytical Sampling Procedures

Groundwater samples will be used to assess the current conditions of contamination at GPPF and GPTF. An ADEC Qualified Environmental Professional (QEP) will be responsible for the collection of analytical samples and generation of field measurement data according to the methods specified in this work plan. The analytical laboratory will analyze the samples, review sample information (e.g., chain-of-custody [CoC] forms) and generate the data packages. All analytical samples will be collected in accordance with ADEC Field Sampling Guidance (ADEC 2022) and contractor standard operating procedures.

3.2 Monitoring Well Repair and Survey

Using the previous well survey conducted by Brice and response to comments on the Final 2017 Groundwater Monitoring, Road Stain and Seep Investigation Report (Brice 2018), personnel on site will perform monitoring well maintenance at GPTF. This will include monitoring well repair where possible. All monitoring wells previously identified as needing maintenance will be inspected and repaired if possible (Table 1). Damaged wells beyond repair are not planned for replacement during this field work.

Table 1: Monitoring Well Survey Summary

Monitoring Well	Condition	2017 Field Notes
TF-MW-1	Good	Well is in good working condition; located within 20 feet of source well for camp drinking water.
TF-MW-2	Not located	Well removed
TF-MW-3	Not located	Well removed
TF-MW-4	Good	Slight frost jacking has caused plug to butt up against hasp which jammed the lock. The polyvinyl chloride (PVC) should be cut down, and the lock requires replacement. The well will be repaired to correct this issue and the plug, hasp, and/or lock will be replaced as needed.
TF-MW-5	Good	Plug is corroded and needs replacement.
TF-MW-6	Not located	Well removed
TF-MW-7	Not located	Well removed
TF-MW-8	Not located	Well removed
TF-MW-9	Good	Plug is missing
TF-MW-10	Not located	Well removed
TF-MW-11	Not located	Well removed
TF-MW-12	Good	Appears to be in working condition.

Monitoring Well	Condition	2017 Field Notes
TF-MW-13	Not located	Well removed
TF-MW-14	Unknown	Well located in standing water in flare pit. Unable to access.
TF-MW-15	Fair	Erosion has caused instability in well.
TF-MW-16	Poor	Severe frost jacking has caused plug to be pushed up against hasp, causing lock to be wedged.
TF-MW-17	Fair	Frost jacking is evident.
TF-WP-1	Not located	Well removed
TF-WP-2	Not located	Well removed
TF-WP-3	Poor	No metal casing and no lock; PVC is broken at base.
TF-WP-4	Not located	Well removed
TF-WP-23	Not located	Well removed
PF-MW-6	Good	Sampled in 2017
PF-MW-7	Good	Free product in well in 2017. Not sampled.

3.3 Monitoring Well Purging

The field team will purge and sample the wells in accordance with low-flow techniques outlined in the United States Environmental Protection Agency (USEPA) Low Stress (low flow) Purging and Sampling Procedures for the Collection of Ground Water Samples from Monitoring Wells (USEPA 2017) and the ADEC Field Sampling Guidance (ADEC 2022). The wells will be purged using an ADEC-approved submersible-style pump and dedicated tubing. Susitna will deploy the pump to a depth within one foot of the top of the groundwater. The groundwater will be pumped through the YSI 556 Water Quality Meter (YSI) for measuring water quality parameters. In accordance with low-flow sampling requirements, water quality parameters are considered stable when three successive readings (four successive readings if temperature is used), collected 3-5 minutes apart, are within:

- Temperature (minimum of ± 0.2 °C)
- ± 0.1 pH units
- ± 3% millisiemens per centimeter (mS/cm) conductivity
- ± 10 millivolts (mV) oxidation-reduction potential (ORP)
- ± 10% dissolved oxygen (DO) for values > 0.5 mg/L
- ± 10% turbidity for values > than 5 nephelometric turbidity units (NTUs)

The field team will monitor the depth to water during purging to avoid water level drawdown. If the minimum drawdown requirement of less than 0.3 feet cannot be achieved, three well volumes will be purged prior to sampling. If a low yield well is purged dry before stabilization is achieved, the well will be allowed to recover until approximately 80% of the initial well volume has recharged and then groundwater samples will be collected. In addition to water quality parameters, visual observations (color, odor, sheening, etc.) will be recorded on the groundwater sampling forms. Turbidity measurements, in NTUs, will be measured with a portable Hach Turbidimeter.

3.4 Groundwater Sampling

Following monitoring well purging activities, Susitna will collect a groundwater sample for laboratory analysis. Groundwater monitoring wells will be sampled using low-flow sampling techniques (USEPA 2017). Up to nine monitoring wells will be sampled during 2022 fieldwork. Samples will be analyzed for:

GRO by AK101

DRO by AK102

RRO by AK103

BTEX by SW 8260D

Field personnel will collect the analytical samples in order of the most volatile to least volatile analytes to ensure a minimal loss of volatile concentrations. Samples for GRO and BTEX only by SW8260D analysis will be collected first into laboratory-provided, 40-milliliter (mL) VOA vials preserved with hydrochloric acid (HCl). The vials will be filled completely to prevent volatilization. The containers will be capped, turned over and tapped to verify no air bubbles are present. Samples submitted for DRO and RRO analysis will be collected into laboratory-provided 250-mL containers preserved with HCl preservative.

The samples will be appropriately labeled, and immediately placed into a cooler with sufficient gel ice to maintain sample temperatures between 0 and 6 degrees Celsius (°C) during transport to SGS for laboratory analysis.

Granite Point Production Facility

Two groundwater monitoring wells (PF-MW-6 and PF-MW-7) will be sampled at GPPF for GRO, DRO, RRO, and BTEX (Figure 2). At well PF-MW-7, free product was encountered during the last sampling event in 2017, and it is expected to be encountered during the summer 2022 field work. If free product is encountered, a sample will not be collected; rather, the thickness of the product will be measured, and biannual product recovery will be initiated. For product recovery at PF-MW-7, field personnel will use a sorbent sock attached to a line lowered into the monitoring well designed to absorb the free product. The sock will be weighed before and after product recovery to determine the weight of free product recovered from the well. The measurement will be converted into a volume using an average density conversion factor for LNAPL of 800 kilograms per cubic meter (kg/m^3). This volume will be recorded in the field notes. Free product will be disposed of properly with the coordination of Hilcorp's waste specialist. If the free product can be sufficiently removed and no sheen is observed on the surface of the groundwater, then the well will be sampled. Upon completion of sampling a new sorbent sock will be placed in the well with a line attached that will be recovered and weighed by Hilcorp personnel biannually until it is determined that recovery is no longer needed, or no free product is encountered.

Hilcorp personnel will log the weight and volume of product recovered using the conversion factor described above. Any monitoring well damage or issues will be noted in the field notes.

Granite Point Tank Farm

Up to seven wells will be sampled at GPTF (TF-MW-1, TF-MW-4, TF-MW-5, TF-MW-9, TF-MW-12, TF-MW-15, TF-MW-17) in 2022 (Figure 2). Groundwater samples collected from these wells will be analyzed for GRO, DRO, RRO, and BTEX.

Sample naming will consist of the two-digit year, project code (**GPPF** or Production Facility or **GPTF** for Tank Farm), matrix, sample number. Example: 21GPPF-MW-01 Samples will be labelled with the following details:

Project code or number

Sampling date and time

Full sample name and number

Sample depth below top of casing

Sampler's initials

Analyses requested

3.5 Regulatory Criteria

Groundwater sample results will be compared to the most stringent values from ADEC Table C, Groundwater Human Health cleanup levels 18 Alaska Administrative Code (AAC) 75.345 (ADEC 2021). Table 2 presents the analyte list and corresponding ADEC groundwater cleanup levels.

Table 2: Groundwater Contaminant List and ADEC Cleanup Levels

Analyte	ADEC Cleanup Level[1] (µg/L)
Petroleum, Oil, and Lubricants	
GRO	2,200
DRO	1,500
RRO	1,100
Petroleum-Related VOCs (including BTEX)	
Benzene	4.6
Toluene	1,100
Ethylbenzene	15
Total xylenes	190

Notes:
For definitions, see the Acronyms and Abbreviations section.
ADEC Cleanup Level = ADEC Table C, Groundwater Human Health cleanup levels (ADEC 2021).

3.6 Field Logbooks

Logbooks and field form entries will be printed legibly using a waterproof pen. All field forms will be completed daily. The following information will be recorded at the beginning of each daily entry:

- Project name/site location/client
- Date
- Weather, site conditions, and other observations
- Names of onsite personnel and visitors with their affiliation and project title (e.g., team leader)
- Daily objectives
- Time and location of activity
- Field observations and comments

For investigation activities, daily entries will contain a complete record of activities including, but not limited to, the following information, unless the data are recorded on a field form:

- Deviations from the work plan
- Photographic log
- Site sketches with reference (e.g., north arrow)
- Survey and location (e.g., samples or debris) providing global positioning system coordinates when possible
- Field measurements
- Equipment calibrations and maintenance
- Sample records including the following:
  - Sample identification numbers
  - Date, time, sampler
  - Media container(s), preservations including the lot number
  - QC samples
  - Analysis
  - CoC form numbers
  - Sample shipments (when, what, destination, shipment air bill numbers)
  - Decontamination procedures used
  - Waste tracking (when, how much, destination)
- Daily summary of activities (e.g., number of samples collected)
- Time of departure from the site

3.7 Health and Safety

Personnel will comply with Hilcorp and Susitna safety policies. Hilcorp will provide access to the site and will provide the site-specific safety briefing, as needed. The contractor will provide level D personal protective equipment (PPE) consisting of hardhats, high-visibility safety vests, safety toed boots, safety glasses, and gloves appropriate to the task. Fire-resistant clothing will be worn as determined necessary while personnel are working on active production pads or as required where fire hazards exist at active production facilities. When handling sample containers, disposable nitrile gloves will be worn to prevent exposure to sample preservatives and prevent cross-contamination between samples.

3.7.1 Site Control

Work zones will be designated at the daily site safety meetings. Site control will be maintained by establishing fencing and barricades to indicate restricted and/or closed areas, if warranted. These areas will be coordinated with the onsite Hilcorp personnel to verify that no conflicting work activities are planned and to mitigate safety issues related to these conflicts. Hilcorp personnel's operations and maintenance activities will take precedence over investigation and remediation activities.

3.8 Decontamination and Investigation-derived Waste

Sampling equipment will be decontaminated between monitoring wells to prevent cross contamination. Decontamination of the submersible pump will include the use of a triple rinse system using three PVC tubes. The pump will be placed in the first tube containing an Alconox and tap water solution while cycling the solution through the pump, followed by a tap water rinse in the second tube and a final rinse with deionized water (third tube).

Investigation-derived waste (IDW) generated during field activities is anticipated to include purge and decontamination water, nitrile gloves, paper towels, disposable tubing, and disposable spoons. All IDW will be placed into containers provided by Hilcorp and disposed of by Hilcorp pending analytical results.

4.0 Sample Quality Assurance and Quality Control

Applicable sample custody and collection protocols and analytical methods will be used as specified in the Field Sampling Guidance (ADEC 2022). Soil sampling protocol requires the following QC samples:

One field duplicate QC sample for every 10 or fewer primary samples. If sampling occurs over multiple days, a minimum of one field duplicate will be collected per day, if possible.

A matrix spike/ matrix spike duplicate (MS/MSD) pair will be collected at a minimum frequency of 5% for each analysis.

A trip blank for each batch of 20 water samples or one per cooler for GRO and VOC analyses. Each trip blank will be documented on the CoC form and submitted to the laboratory for analysis.

An equipment blank sample will be collected from the sampling pump at the end of sampling activities after decontamination procedures have been completed. An equipment blank sample will be collected by submerging the sampling pump into a new 1-gallon jug of deionized water and pumping the water into clean sample containers.

All field instruments utilized for well development and sampling processes will be calibrated before each workday, if applicable. Operation and maintenance will be performed in accordance with the instrument manufacturer's specifications.

All data generated by the laboratory will be reviewed by Arctic Data Services, LLC (ADS). The data quality review conducted by ADS will evaluate precision, accuracy, sensitivity, representativeness, comparability, and completeness of the data by reviewing laboratory-supplied quality assurance/quality control (QA/QC) information as well as conducting independent QA/QC checks on the data. The review will be conducted in accordance with ADS Standard Operating Procedures for Stage 2A Data Validation v1.1, which meet requirements of the ADEC Technical Memorandum on Data Quality Objectives, Checklists, Quality Assurance Requirements for Laboratory Data, and Sample Handling. Laboratory QC sample recoveries and relative percent differences (RPDs) will be compared to laboratory control limits. Field-duplicate RPDs will be compared to ADEC-recommended measurement quality objectives.

5.0 Reporting

A report will be prepared by the QEP to summarize work performed as part of the 2022 groundwater sampling and product recovery activities. The contents of this report will include a summary of field activities and results of sampling and analysis, trend analysis of contaminant concentrations for groundwater sampling from historic and current sampling events, as well as figures and a photographic log representative of project activities. This report will demonstrate that the sampling and analyses performed at the sites successfully meet the requirements set forth in the 2006 ROD and the continued monitoring effort at GPTF. The report will include recommendations for each site and will also include an assessment of the analytical data quality, including ADEC Laboratory Data Review Checklists. The analytical laboratory data packages will be provided as an appendix to the report. The five-year property use status report will be updated from the 2022 analytical results.

6.0 Schedule

This workplan will be submitted to ADEC in Fall 2022. Fieldwork is anticipated to occur in Fall 2022. The report is anticipated to be submitted to ADEC by the end of 2022.

7.0 References

Alaska Department of Environmental Conservation (ADEC) 2022. Field Sampling Guidance. Division of Spill Prevention and Response, Contaminated Sites Program. January.

ADEC 2021. Oil and Other Hazardous Substances Pollution Control. Division of Spill Prevention and Response, Contaminated Sites Program. 18 AAC 75. November.

ADEC 2006. Marathon Granite Point ADEC Spill #1991230105303, Record of Decision- Conditional Closure. Letter from ADEC Contaminated Sites to Marathon Petroleum Corp. November.

Brice Environmental Services Corporation (Brice) 2018. 2017 Groundwater Monitoring, Road Stain and Seep Investigation Report. May.

Shannon & Wilson, Inc. (S&W) 2005. Remedial Action Report, Granite Point Production Facility, West Cook Inlet, Alaska. November.

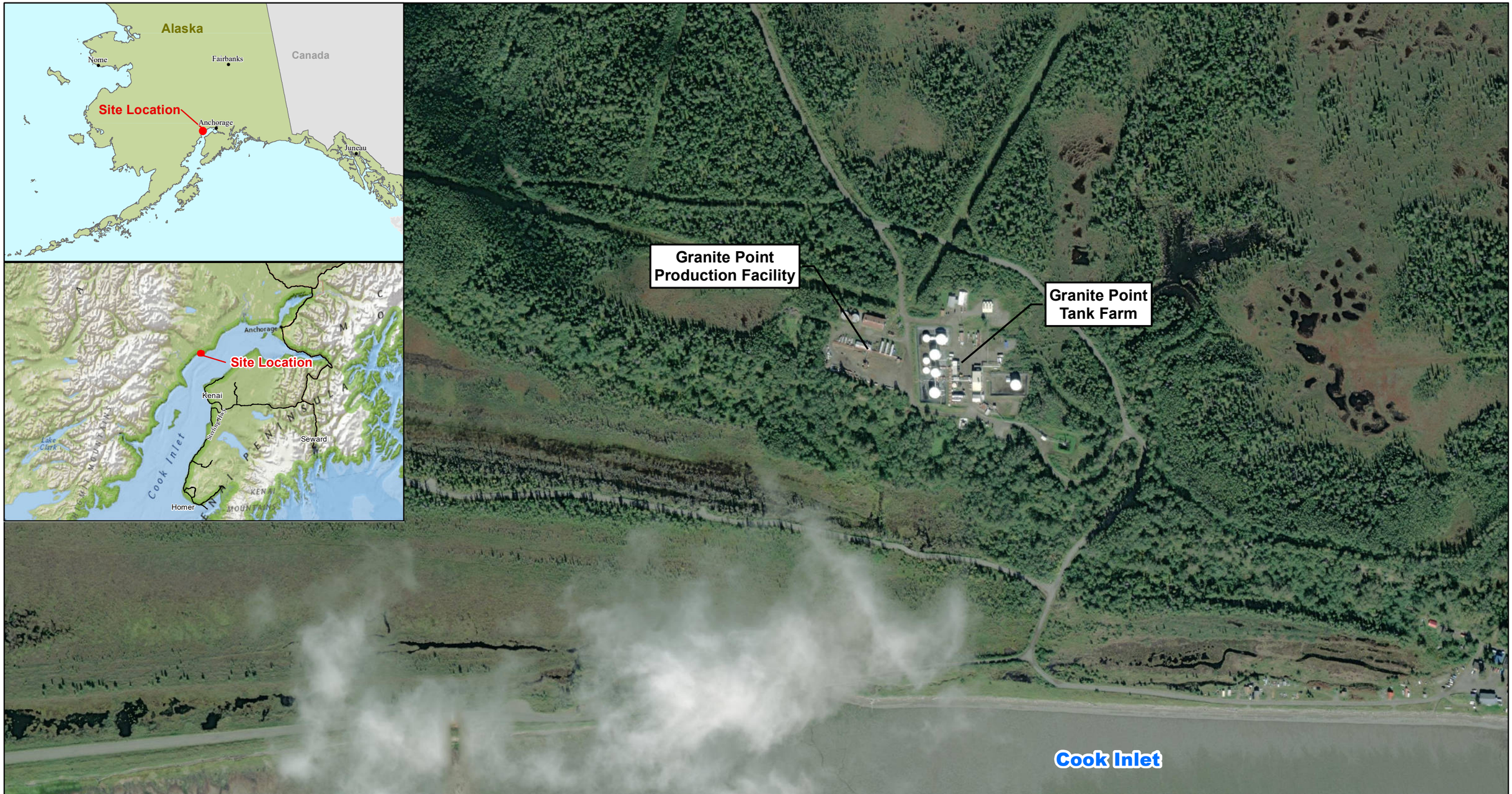
S&W 2008. August 2007 Groundwater Monitoring, Granite Point Production Facility, West Cook Inlet, Alaska. January.

SLR Consulting (SLR) 2014. 2013 Groundwater Monitoring Report Granite Point Tank Farm. ADEC File No. 2337.38.038 Hazard ID: 1280. July.

United States Environmental Protection Agency (USEPA) 2017. Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells. September.

Weston Solutions Inc. (Weston) 2012. 2012 Groundwater Monitoring Granite Point Production Facility; ADEC File No. 2337.38.038; ADEC Spill No. 1991-230105303, West Cook Inlet, Alaska. August.

Figures



Hilcorp Alaska, LLC

3800 Centerpoint Dr. Ste.1400
Anchorage, AK 99503

Map Date: 4/29/2022

SITE LOCATION AND VICINITY-
GRANITE POINT TANK FARM
AND PRODUCTION FAILITY
2022 GROUNDWATER MONITORING
WORK PLAN

Note:
Imagery and Basemap data provided by ESRI April 2022.

Map Scale 1:5,280

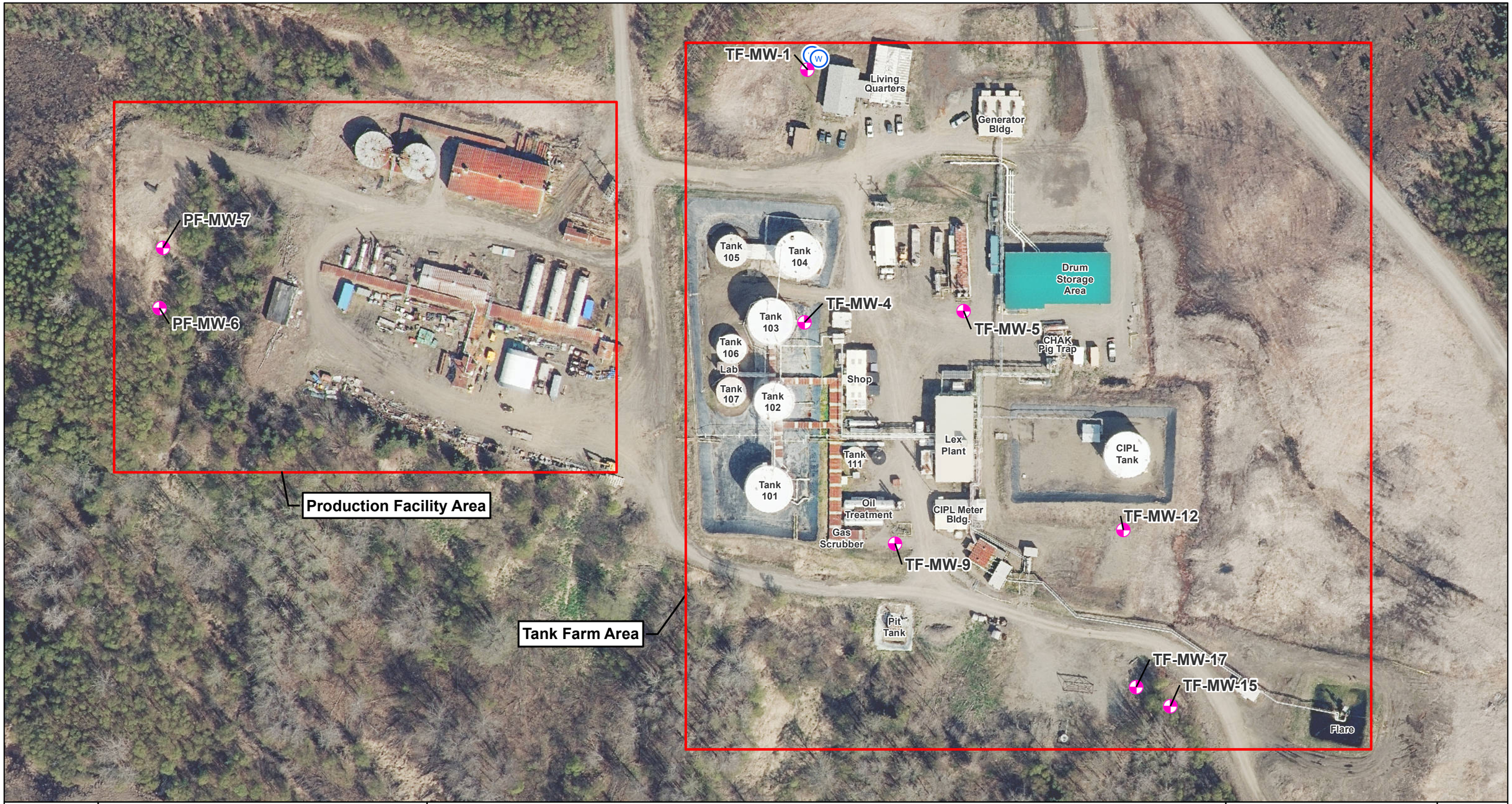
Map Projection:
Alaska State Plane 4 NAD 1983 (feet)

0 100 200
Feet

N

FIGURE:

1



Hilcorp Alaska, LLC
3800 Centerpoint Dr. Ste.1400
Anchorage, AK 99503
Map Date: 4/29/2022

PROPOSED MONITORING WELL SAMPLE LOCATIONS - GRANITE POINT TANK FARM AND PRODUCTION FACILITY
2022 GROUNDWATER MONITORING WORK PLAN

Legend
- Proposed Monitoring Well Sample Locations
- Drinking Water Well

Note:
Imagery provided by Hilcorp acquired May 2021.

Map Scale 1:1,200
Map Projection:
Alaska State Plane 4 NAD 1983 (feet)
0 50 100
Feet
N

FIGURE:
2