

2023 Annual Report

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Port of Alaska, MS4 Permit 052426

Prepared for:



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2023 Annual Report

Port of Alaska, Storm Water Management Program

Contents

Tables.....	1
Appendices.....	1
Acronym List	1
1. Introduction	1
2. Regulatory Authority and Compliance.....	1
3. Minimum Control Measures	2
Public Education and Outreach	2
Public Involvement and Participation.....	2
Illicit Discharge Detection and Elimination	3
Wet Weather Monitoring	3
Dry Weather Screening.....	6
Construction Site Storm Water Runoff Control	8
Post-Construction Storm Water Management (New Development / Redevelopment)	8
Pollution Prevention and Good Housekeeping	8
Effectiveness of Controls.....	10
Maintenance Schedules and Records	10
Long-Term Inspection Procedures.....	10
Annual Evaluation.....	11
4. Monitoring, Evaluation, Reporting and Record-Keeping.....	12
Monitoring Program Plan and QAPP	12
Evaluation of Overall Program Effectiveness	12
Reporting	12
Spill Reporting	12
Annual Reporting.....	13
Record-Keeping	14

Tables

1. Outfall Sampling, Water Quality Parameter
2. Outfall Sampling Event 1, TAH Results
3. Outfall Sampling Event 2, TAH Results
4. Outfall Sampling Event 1, TAqH Results
5. Outfall Sampling Event 2, TAqH Results
6. Pollution Prevention and Good Housekeeping Elements per POA Area
7. Storm Water Management Program Measurable Goals, by MCM
8. Notable Spills & Leaks Reported, 1 January 2023 – 31 December 2023

Appendices

- A. Site Map
- B. Chain-of-Custody Forms and Analytical Results
- C. Review of POA and Leaseholder Best Management Practices
- D. 2023 SWPP Team Quarterly Meeting Minutes

Acronym List

ADEC	Alaska Department of Environmental Conservation
POA	Port of Alaska
SWMP	Storm Water Management Program
SWPP	Storm Water Pollution Prevention
APDES	Alaska Pollutant Discharge Elimination System
MOA	Municipality of Anchorage
IDDE	Illicit Discharge Detection and Elimination
PEO	Public Education and Outreach
MCM	Minimum Control Measure
USEPA	United States Environmental Protection Agency
USC	United States Code
MS4	Municipal Separate Storm Sewer System
DMR	Discharge Monitoring Report
QAPP	Quality Assurance Protection Plan
BMPs	Best Management Practices
TAH	Total Aromatic Hydrocarbons
TAqH	Total Aqueous Hydrocarbons
VOC	Volatile Organic Chemicals
AAC	Alaska Administrative Code
CGP	Construction General Permit
OWS	Oil-Water Separator
PP/GH	Pollution Prevention and Good Housekeeping
SDS	Storm drain system

1. Introduction

This Port of Alaska (POA) Storm Water Management Program (SWMP) Annual Report has been prepared for calendar year 2023, in accordance with requirements of the Alaska Pollutant Discharge Elimination System (APDES) Municipal Separate Storm Sewer System (MS4) Permit, number AKS052426, held by POA and renewed for five years as of August 2020.

This report provides a summary of the efficacy of each element or activity of the POA's SWMP for 2023 and includes a review of the following:

- Application of minimum control measures (MCMs) as identified in the MS4 Permit (see Section 3)
- Monitoring, evaluation, reporting and record-keeping activities

The purpose of this report is to:

- Provide an assessment of the efficacy of each of these elements.
- Identify any anticipated or expected changes to such implementation and activities including changes to monitoring frequency or extent, good housekeeping or BMPs.
- Evaluate the compliance of activities with the requirements of the MS4 permit.
- Identify progress towards measurable and long-term goals of the MS4 permit or the SWMP, and.
- Indicate any change in responsibility regarding geographic areas under POA or leaseholder management or changes in POA or third-party assistance towards fulfilling permit obligations.

The POA's MS4 permit (AKS052426) was renewed as of August 2020. Most of the prior elements, permit and reporting requirements remain the same as under the prior (2015-2020) MS4 permit authorization. One noteworthy change is the requirement for online 'e-reporting' of Discharge Monitoring Reports (DMRs) under the new NetDMR Reporting System managed by the U.S. Environmental Protection Agency (USEPA).

Responsibility for development and implementation of the SWMP processes and guidelines sits with the Port Director, Port Engineering Manager, leaseholders and SWPP Team members. The POA's designated representative is responsible for providing guidance, management, coordination, and implementation of the SWMP on behalf of POA and assisting POA on MS4 permitting matters as contractually requested.

2. Regulatory Authority and Compliance

This report is intended to comply with the requirements of the POA's MS4 reporting requirements under the APDES. Per 18 AAC 83, the APDES permit issuance and enforcement lies under the regulatory authority of AK Department of Environmental Conservation (ADEC). The APDES program is implemented to comply with the Clean Water Act (33 USC 1342) as regulated by the USEPA.

3. Minimum Control Measures

Section 3.0 of the MS4 permit lists the following six Minimum Control Measures (MCM) for proper storm water management and permit compliance:

- Public education and outreach.
- Public involvement and participation.
- Illicit discharge detection and elimination.
- Construction site storm water runoff control.
- Post-construction storm water management in new development and redevelopment.
- Pollution prevention and good housekeeping.

This section summarizes the implementation of these control measures during the 2023 reporting period, the effectiveness of each measure, and proposed changes (if any) for the subsequent year.

Public Education and Outreach

The Public Education and Outreach (PEO) component of the MS4 Permit was implemented in 2023. The PEO program is specifically targeted to both POA and leaseholder personnel who may have a role that could affect storm water quality, runoff, or illicit discharges and response. The PEO program focuses on illicit discharge detection and elimination (IDDE) training and is conducted annually.

This annual training typically consists of a presentation, in either video or slide format, that identifies:

- Identifies storm water regulations and regulatory authorities
- Indicates the purpose of storm water regulations and guidelines
- Identifies and defines illicit discharges, and
- Indicates methods for detecting and identifying illicit discharges to storm water systems.

Many of the POA leaseholders have contracts with an outside organization to provide this IDDE training.

In addition, IDDE elements, storm water controls, discharge events and other related topics were brought up and discussed at the quarterly SWPP Team meetings.

Another element of Public Education and Outreach under the POA MS4 permit and SWMP involves stenciling of all POA storm drain inlets on the property. In 2015, 100% of POA storm drain inlets were stenciled; however, much of this stenciling has been degraded and worn away. POA is undertaking a program to renew the stenciling. The goal is to have 50% of storm drain inlets stenciled by August 2022, and 100% of inlets stenciled by 2024. POA has stenciled 50% of inlets as of August 2022; however, ablation occurs due to heavy vehicle traffic, winter grit and other factors. POA will continue to stencil inlets to achieve the goal of having had all inlets (100%) stenciled between the years 2020 and 2024.

Public Involvement and Participation

The Public Involvement and Participation program is focused primarily on POA personnel and leaseholders. Public involvement and participation beyond the POA itself and the leaseholders are generally limited to information made available on the POA stormwater website:

<https://www.portofalaska.com/business/storm-water-management/>

This site provides public access to the following POA information related to its MS4 permit:

- List of SWPP Team members
- Prior three years' Annual MS4 Reports
- POA's current MS4 Permit
- Definitions of common storm water terms

The POA Storm Water website also indicates availability of SWPP Team meeting minutes up on request.

[Illicit Discharge Detection and Elimination](#)

The primary purpose of the SWMP under the MS4 permit is to detect, resolve, and eliminate all illicit discharges within the POA storm water system, and to prevent such discharges in the future. In addition to required compliance with 18 AAC 83 under ADEC's authority, the POA is also a branch of the Municipality of Anchorage and is thus subject to MOA Code 15.50.020. This describes 'Prohibited Acts' in the context of Watershed District Regulations, and among other such acts includes:

“(9). Pollute, contaminate, discharge, or dump any water, refuse, debris or material into any reservoir, pipeline, stream, rill, drainage, runoff, watercourse or other groundwater and surface water source or supply.”

[Wet Weather Monitoring](#)

The MS4 permit requires implementation of an ongoing wet weather screening program. The purpose of this screening program is to detect the presence of illicit discharges and connections or other pollution issues relating to the storm drain system (SDS). The POA's wet weather screening program consists of collecting visual observations and testing of water quality parameters once or twice per year (depending on parameter). Wet weather monitoring requirements, parameters, and frequency are outlined in the Monitoring Program Plan and QAPP. Outfalls 001, 002, and 003 were identified in the MS4 permit as the representative outfalls requiring monitoring and sampling; there are no monitoring requirements for Outfalls 004 through 008.

Wet weather monitoring, field observations, and analytical sample collection was conducted for Outfalls 001, 002, and 003 on 19 May (Event 1) and 2 October 2023 (Event 2). These results are included in the Event 1 summaries. Field samples were collected directly from the outfall locations in 5-gallon buckets and Nalgene bottles. Samples were then transported by hand from the outfall locations to a nearby flat ground surface for ease-of-transfer into laboratory supplied analytical containers and vials. Field measurements were conducted using the remaining water in the buckets and Nalgene bottles.

Temperature, conductivity, salinity, and dissolved oxygen were measured using a YSI ProSolo handheld digital water quality meter, while pH was measured using a YSI EcoSense pH10A pen. All instruments were calibrated the day of sampling prior to field deployment. The YSI ProSolo meter was calibrated using 1,413 µS/cm conductivity standard, and by entering the current local barometric pressure. The Ecosense pH meters were three-point calibrated using pH 4.01 pH 7.00, and pH 10.01 buffer solution.

Biochemical oxygen demand, chemical oxygen demand, total suspended solids and total dissolved solids were analyzed by a certified laboratory rather than in the field. For 2023, additional sampled analytes included metals (cadmium, copper, lead, zinc), hardness (CaCO₃), and salinity.

Table 1 indicates the findings of these water quality measurements.

Table 1: Outfall Sampling, Water Quality Parameter

Parameter	Unit	Acceptable Range	Outfall 1	Outfall 2	Outfall 3
Estimated Flow	C.F./s	N/A	0.067	0.067	0.06
Temperature	Deg. C	<15 C	6.5 – 8.2	5.7 – 8.4	5.3 – 8.7
pH		6.5 – 8.5	7.71 – 7.96	8.01 – 8.1	7.35 – 7.7
Turbidity	NTU	<50 or background ¹	22.5 – 72.7	25.3 – 81.8	48.7 – 67.9
Sheen		Virtually none	None	None	None ²
Dissolved Oxygen	mg/L	6.0 – 17.0	10.6 – 12.1	10.8 – 12.7	N/A
B.O.D.	mg/L	N/A	ND ³ 2.00 – 3.7	ND 2.00 – 2.66	N/A
C.O.D.	mg/L	N/A	443. – 1180	46.9 – 999	N/A
TSS	mg/L	N/A	54.5	133	N/A
Cadmium ⁴	µg/L	5	ND 0.500	ND 0.500	N/A
Copper ⁴	µg/L	N/A	3.64	6.16	N/A
Lead ⁴	µg/L	N/A	ND 2.00	ND 2.00	N/A
Zinc ⁴	µg/L	N/A	ND 10.0	ND 10.0	N/A
Hardness (as CaCO ₃)	mg/L	N/A	464	537	N/A
Salinity	mg/L	N/A	0.81 – 1.39	1.36 – 1.91	0.26 – 0.39

1 – Background levels equivalent to naturally occurring turbidity in Cook Inlet as the POA system is tidally influenced and receives incoming tidal water (including sediment) twice daily

2 – No sheen was noted at Outfall 003, however there was a slight but detectable hydrocarbon odor at this outfall

3 – ND = ‘non-detectable’; number following ‘ND’ indicates the lower detectable threshold for laboratory analysis

4 – Acceptable Range based on ‘Drinking Water’ standards from *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances* (ADEC, 2022)

Results were compared to acceptable ranges or action levels presented in the MS4 APDES permit authorization. The results were also used to complete the online discharge monitoring report (DMR) via the EPA’s NetDMR system. As of 2021, no paper DMRs are required or submitted. The fully executed chains-of custody are included in Appendix B.

Analytical results included testing for total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAQH), which are calculations based on analysis for volatile organic compounds (VOC) and polycyclic aromatic hydrocarbons. TAH and TAQH summations were compared to permit action levels which are based on 18 Alaska Administrative Code (AAC) 70, Water Quality Standards.

TAH analytical results are summarized in Tables 2 and 3 on the following page.

INTERNATIONAL

Table 2: Outfall Sampling Event 1, TAH Results (in µg/L)

Location (Outfall)	1	2	3
18 AAC 70 Action Level: 10 µg/L			
Benzene	ND 0.400	ND 0.400	2.27
Ethylbenzene	ND 1.00	ND 1.00	7.75
Xylenes (total)	ND 3.00	ND 3.00	11.92
Toluene	ND 1.00	ND 1.00	ND 1.00
TAH Summation	ND 2.70	ND 2.70	22.44

Table 3: Outfall Sampling Event 2, TAH Results (in µg/L)

Location (Outfall)	1	2	3
18 AAC 70 Action Level: 10 µg/L			
Benzene	ND 0.400	ND 0.400	2.65
Ethylbenzene	ND 1.00	ND 1.00	4.88
Xylenes (total)	ND 3.00	ND 3.00	17.56
Toluene	ND 1.00	ND 1.00	29.6
TAH Summation	ND 2.70	ND 2.70	54.69

TAH concentrations were all below both the action level of 10 micrograms per liter (µg/L) and the detectable thresholds for Outfalls 001 and 002 in all outfall samples across both sampling events. Analytes for Outfall 003, however, ranged from non-detectable to 11.92 µg/L for Event 1, and 2.65 µg/L to 29.6 µg/L for Event 2. The TAH summation for Outfall 003 is above the action level per 18 AAC 70; POA will develop a plan to identify the source and mitigate the TAH contaminants in 2024.

TAQH analytical results are summarized in Tables 4 and 5, below.

Table 4: Outfall Sampling Event 1, TAQH Results (in µg/L)

Location (Outfall)	1	2	3
18 AAC 70 Action Level: 15 µg/L			
Acenaphthene	ND 0.0463	ND 0.0463	0.25
Acenaphthylene	ND 0.0463	ND 0.0463	ND 0.0455
Anthracene	ND 0.0463	ND 0.0463	ND 0.0455
Benzo(a)Anthracene	ND 0.0463	ND 0.0463	ND 0.0455
Benzo[a]pyrene	ND 0.0185	ND 0.0185	ND 0.0182
Benzo[b]Fluoranthene	ND 0.0463	ND 0.0463	ND 0.0455
Benzo[g,h,i]perylene	ND 0.0463	ND 0.0463	ND 0.0455
Benzo[k]fluoranthene	ND 0.0463	ND 0.0463	ND 0.0455
Chrysene	ND 0.0463	ND 0.0463	ND 0.0455
Dibenzo[a,h]anthracene	ND 0.0185	ND 0.0185	ND 0.0182
Fluoranthene	ND 0.0463	ND 0.0463	0.0704
Fluorene	ND 0.0463	ND 0.0463	0.215
Indeno[1,2,3-c,d] pyrene	ND 0.0463	ND 0.0463	ND 0.0455
Naphthalene	ND 0.0926	ND 0.0926	0.933
Phenanthrene	ND 0.0926	ND 0.0926	0.0549
Pyrene	ND 0.0463	ND 0.0463	ND 0.0455
TAQH Summation	ND 0.3889	ND 0.3889	1.7463

Table 5: Outfall Sampling Event 2, TAqH Results (in µg/L)

Location (Outfall)	1	2	3
18 AAC 70 Action Level: 15 µg/L			
Acenaphthene	ND 0.0455	ND 0.0455	0.0723
Acenaphthylene	ND 0.0455	ND 0.0455	ND 0.0455
Anthracene	ND 0.0455	ND 0.0455	ND 0.0455
Benzo(a)Anthracene	ND 0.0455	ND 0.0455	ND 0.0455
Benzo[a]pyrene	ND 0.0182	ND 0.0182	ND 0.0182
Benzo[b]Fluoranthene	ND 0.0455	ND 0.0455	ND 0.0455
Benzo[g,h,i]perylene	ND 0.0455	ND 0.0455	ND 0.0455
Benzo[k]fluoranthene	ND 0.0455	ND 0.0455	ND 0.0455
Chrysene	ND 0.0455	ND 0.0455	ND 0.0455
Dibenzo[a,h]anthracene	ND 0.0182	ND 0.0182	ND 0.0182
Fluoranthene	ND 0.0455	ND 0.0455	ND 0.0455
Fluorene	ND 0.0455	ND 0.0455	0.0678
Indeno[1,2,3-c,d] pyrene	ND 0.0455	ND 0.0455	ND 0.0455
Naphthalene	ND 0.0909	ND 0.0909	0.222
Phenanthrene	ND 0.0909	ND 0.0909	ND 0.0909
Pyrene	ND 0.0455	ND 0.0455	ND 0.0455
TAqH Summation	ND 0.3821	ND 0.3821	0.6533

TAqH concentrations were all well below the action level of 15 µg/L in samples from Outfalls 001, 002 and 003. All analytes from Outfalls 001 and 002 were below detectable thresholds for both Event 1 and Event 2. Most analytes for Outfall 003 were below detectable limits, however Acenaphthene, Fluoranthene, Fluorene, Naphthalene and Phenanthrene were detected for either or both Events 1 and 2. These detections were all below actionable limits, ranging from 0.0549 to 0.933 µg/L.

All the above water quality monitoring information may be found on the DMRs in Appendix B. Copies of complete analytical results are available upon request.

Dry Weather Screening

The MS4 permit requires implementation of an ongoing dry weather screening program. The purpose of this screening program is to detect the presence of illicit connections and discharges or other water quality issues affecting the Port's SDS. The POA's dry weather screening program consists of:

- An awareness program for POA and leaseholder personnel.
- Outfall screening efforts.
- Regular site-wide visual inspections.

No dry weather analytical testing was conducted on any of the outfalls during 2023.

I N T E R N A T I O N A L

The main idea behind dry weather screening is to determine whether illicit discharges are occurring, in theory made easier because dry weather should include no flow. ***However, given the high tidal range of Cook Inlet, the POA's geographical position within this tidal range, and the extent of the POA drainage network, our observations start with the fact that even after the low tide, the POA storm drain system continues to discharge tidal water that is flushed up through the system twice daily.*** The tidal extent is identifiable based on the presence of silts and fines within the SDS matching the sediment in Cook Inlet.

It is worth noting that, as part of the program of storm drain system improvements, POA is introducing tide valves, which may affect or curtail the extent of inundation into and up the SDS network during regular high tides.

Outfalls 001, 002, and 003 are visually screened at least once per year during a period of relatively dry weather close to low tide. Outfall screening is aimed at detecting illicit discharges and/or connections via the presence of solid waste, petroleum sheen, and/or unusual odors. The general condition and functionality of each outfall is noted to ensure the system is discharging appropriately. As required by the MS4 permit, each outfall was observed within the term of the permit and documented accordingly.

On 12 April, 17 May, 10 July, 18 July, and 22 September 2023, outfalls were visually inspected at low tide. All inspections included Outfalls 001, 002 and 003. The 17 May and 10 July inspections included additional outfalls (004 through 008). Outfall 007 is not observable, as it is hidden behind and below fill material.

All observed outfalls appeared to be functional, adequately discharging storm water and/or tidal water from the system. Outfall 004 is in poor physical condition, with visible degradation of the corrugated pipe; however, it is still discharging storm water appropriately. Low to moderate, continuous flows of clear or slightly turbid water with no sheen were observed. A very slight hydrocarbon odor was detectable at Outfall 003; this outfall serves the storm system running below and through much of the tank farm area along the southern extent of POA property. There is also likely residual ground and groundwater contamination in this area, and the pipe seams of the storm water system may be aging and allowing groundwater penetration.

As of late 2023, Outfall 002 is in a new location, approximately 150 feet south of the original outfall pipe which is still in place and visible.

Site-wide visual inspections were performed in 2023 during relatively dry weather periods to look for evidence of illicit discharges, poor housekeeping, storm water control effectiveness and to confirm whether POA and leaseholders are adhering to the SWMP. The site-wide visual inspection consists of inspecting exterior areas across the entire Port (i.e., excluding buildings and interior spaces). The site-wide visual inspection focuses on identifying illicit discharges, solid waste accumulation, identifying onsite and off-site sources of potential pollution, and checking for prohibited outdoor work activities. A total of two unannounced inspections were conducted throughout 2023.

In general, the Port facilities are maintained in good, clean condition. The issue noted most frequently during site inspections was the presence of debris, particularly in and around snow storage areas and areas where winter grit had accumulated and not been appropriately collected and stored for disposal or reuse. Temporary BMPs no longer needed were noted in a few areas around the Port. Good housekeeping,

BMP maintenance and post-winter cleanup of sand and grit were mentioned and reiterated at SWMP Team quarterly meetings; these notes will be mentioned in 2024 as well.

Construction Site Storm Water Runoff Control

The Construction Site Storm Water Runoff Control program was successfully implemented in 2023. For active construction projects disturbing greater than one acre within the jurisdiction of the Port, the Contractor shall obtain authorization under the APDES Construction General Permit (CGP). Projects disturbing greater than 10,000 square feet, but less than one acre, must coordinate improvements with the Port to avoid, minimize, and mitigate adverse impacts to water quality. A Construction Site Form must be prepared by the Contractor and signed by the Port before construction may commence.

The Port reviewed two construction Storm Water Pollution Prevention Plan (SWPPP) for a construction project in 2023 to ensure compliance with the Port's SWMP. Coverage under the CGP was required for Port construction projects associated with storm drain outfall repairs and the Northern Expansion Stabilization projects.

Unannounced site inspections of Port facilities were conducted on an intermittent basis throughout 2023. Active construction projects were observed for general compliance with storm water regulations and informally inspected at least once during active construction.

Post-Construction Storm Water Management (New Development / Redevelopment)

The Post-Construction Storm Water Management program for new development or redevelopment was implemented in 2023. POA requires a plan review for any proposed permanent storm water conveyance, drainage or treatment designs or changes. POA must receive, review, and approve a Post-Construction Site Form, prepared by the relevant contractor, prior to allowing any such construction to proceed.

The responsible party for any such construction project must prepare a post-construction design for permanent storm water controls as applicable. This design should include plans, specifications, design details and descriptions of BMPs that will be implemented to minimize or prevent discharge of pollutants to the POA's MS4 system following completion of construction.

Pollution Prevention and Good Housekeeping

The POA covers approximately 220 acres in total. Of that, approximately 81 acres are managed under long-term lease by the leaseholders, including Tote, Matson, Marathon, Delta Western, AFSC/Menzies, and ABI/AS&G. Another 31 acres is used for temporary staging. The POA is directly responsible for public areas not under lease agreement, while the leaseholders are responsible for the 81 acres under lease. A description of leaseholder pollution prevention and good housekeeping (PP/GH) and storm water controls can be found in Section 3.0 of the SWMP.

Table 6 summarizes the PP/GH measures typical of each land use type under POA responsibility.

Table 6: Pollution Prevention and Good Housekeeping Elements per POA Area

POA Area Type	Applicable Pollution Prevention / Good Housekeeping Measures
Roads / streets	POA is responsible for maintaining and cleaning public drive access across the POA, and implements grit placement in winter as well as street sweeping, washing, and vacuuming as appropriate to minimize and remove accumulated grit, dust, and debris
Parking lots	POA implements ongoing street sweeping, washing, and vacuuming procedures to minimize the accumulation of suspended solids in storm water and to reduce air pollution. This effort is prevalent during spring breakup.
Maintenance / storage areas	POA maintenance and storage areas are controlled, covered areas where traffic patterns are not a hazard. Materials are stored within a secondary containment unit or above a sealed ground surface to avoid incidental contact with surface water runoff.
Waste transfer stations	Solid wastes are disposed of in non-leaking, lidded dumpsters to prevent refuse from blowing away or precipitation from entering and corroding the dumpsters. Any solid waste container leaks are contained so that the leakage and/or solid waste will not enter the SDS. Any dumpster found to be leaking is repaired or replaced immediately. Solid waste containers are located at least 50 feet from the nearest storm drain inlet.
Snow storage areas	Snow storage sites comply with ADEC snow storage site requirements and guidelines. Dumping, pushing, placing, or blowing snow into any drainage ditch or storm drain inlet is strictly prohibited.
Fleet maintenance shops	POA maintenance and fabrication activities for vehicle fleet and equipment are performed inside or under cover unless it is not possible to do so. Primary fleet maintenance areas incorporate a contained trap for grit and other pollutants. Outdoor storage areas have materials stored within secondary containment units or above a sealed ground surface to avoid incidental contact with surface water runoff.
Sand / salt storage areas	Sand is stored in a large, prefabricated tent to shield the stockpile from storm (wind or rain) erosion and sedimentation. The tent door is opened for import of new sand or removal of sand for winter placement. The amount removed is limited to the amount needed for application. When no sand is being loaded or removed from the hut, the doors are shut.
Ditches, culverts, catch basins, storm drains and outfalls	POA maintains an ongoing program of cleaning, maintenance, and repair of ditches, catch basins, culverts, and outfalls. Following a comprehensive MS4 system review, POA is undertaking MS4 system repairs and improvements. POA will continue to monitor, inspect, evaluate, and improve the SDS.

Pollution prevention and housekeeping of areas under lease, including parking, drive lanes, staging and material storage, vehicle maintenance, and solid waste storage are the responsibility of the leaseholder. Areas serving as bulk fuel or contaminant storage have additional pollution prevention requirements.

Effectiveness of Controls

A summary of the efficacy of BMPs, source reduction and elimination measures, and source control measures implemented by POA and leaseholders within the MS4 coverage area may be found in the tables in Appendix C. These BMPs have been installed and implemented in accordance with the SWMP. This review also identifies discrepancies between current measures and controls enacted by POA or leaseholders and those required under the SWMP. Any such discrepancy noted will include a discussion of each discrepancy and recommendations on how to correct or ameliorate the discrepancy so as to bring each facility into compliance with the SWMP. If no discrepancy currently exists, the Port or Stakeholder facility is not mentioned here.

Maintenance Schedules and Records

POA and each leaseholder is responsible for adhering to their own facility-specific maintenance schedules, and for documenting and retaining associated maintenance records. These records are not included in this report but can be made available upon request to POA. To improve maintenance record tracking, retention, and availability, an Oil-Water Separator (OWS) and Sump Inspection Plan along with associated maintenance log were created in March 2017. This Plan and Inspection Log is retained in the Port Maintenance Building.

Long-Term Inspection Procedures

Long-term inspection procedures include a preventative maintenance program and regular inspections of the POA and leaseholder areas. The preventive maintenance program involves inspections of components of the storm water management system. The following systems and equipment are inspected at POA and leaseholder facilities:

1. **Storm drain network.** The whole system within the MS4 boundary is inspected annually, at a minimum. In addition, the system is inspected immediately when impeded flow conditions are detected. Debris that has collected in ditches, swales and catch basins is removed periodically throughout the year, although this activity is most frequent following spring melt and runoff.
2. **Fuel storage, refueling areas, and tank truck loading racks.** These features are inspected periodically and no less than annually. Inspections in these areas look for system integrity issues such as leaks, cracking, corrosion, or other wear or physical damage that can pose an increased risk of spill or indicate reduced containment capacity. Additional contaminant spill prevention requirements apply to these areas. If contaminants – such as fuels – are noted to have escaped into secondary containment, or if an obvious risk of contaminant release or secondary containment failure is noted, the facility in question will be immediately closed off and shut down until corrective action is taken and completed.
3. **Oil-water separators.** These features are inspected frequently by POA maintenance personnel. Depending upon the condition when inspected, these features are cleaned and services as necessary to maintain functionality and prevent overloading. If critical integrity concerns are identified, the OWS is removed from use and repairs or other corrective action is implemented immediately.

Annual Evaluation

The PP/GH MCM was successfully implemented in 2023. POA and all leaseholders followed PP/GH measures outlined in the SWMP. The measurable PP/GH goals proposed for POA are on track for achievement according to the schedule in Table 7.

Table 7: Storm Water Management Program Measurable Goals, by MCM

Minimum Control Measure and Measurable Goal	Attainment Date
Public Education and Outreach	
- <i>POA Staff and Leaseholder training</i>	31 December 2023
Public Involvement and Participation	
- <i>Maintain storm water management section on POA website</i>	31 December 2023 (ongoing)
- <i>Renew storm drain stenciling coverage (50% of inlets)</i>	31 August 2022
- <i>Renew storm drain stenciling coverage (100% of inlets)</i>	31 August 2024
Illicit Discharge Detection and Elimination	
- <i>Conduct wet weather water quality monitoring</i>	2 October 2023 (ongoing)
- <i>Conduct dry weather outfall screening</i>	17 May 2023 (ongoing)
- <i>Identify water quality baseline for surface water draining into POA system</i>	2 October 2023 (ongoing)
- <i>Identify locations of groundwater contaminant penetration into POA system</i>	2 October 2023 (ongoing)
- <i>Complete comprehensive survey/assessment of storm system</i>	21 October 2021
Construction site Storm Water Runoff	
- <i>Implement the POA Construction Site Runoff Control Program</i>	31 December 2023 (ongoing)
Post-Construction Storm Water Management (Re- or New Development)	
- <i>Implement the POA Post-Construction Runoff Program</i>	31 December 2023 (ongoing)
Pollution Prevention and Good Housekeeping	
- <i>Assess storm drain network for priority maintenance needs</i>	31 December 2023 (ongoing)
- <i>Develop a comprehensive maintenance schedule for the storm system</i>	21 October 2021
- <i>Incorporate maintenance and IDDE tracking into the POA's GIS database</i>	Ongoing

The storm drain network was thoroughly reviewed in 2021 and a comprehensive, systemwide improvements schedule for the Port facilities is underway. This comprehensive redevelopment began in late 2023 with the design of SDS #1; this system is expected to be in reconstruction in 2025. Remaining SDSs are planned for design and repair implementation over subsequent years. The Port is completing their integration of facility systems and records into a GIS database system. An ongoing goal is to incorporate MCMs under the MS4 permit into this new tracking system. The Port considers this plan to be effective and in compliance with the current MS4 permit; no changes to the program itself or associated measurable goals are proposed for the upcoming year.

4. Monitoring, Evaluation, Reporting and Record-Keeping

Monitoring Program Plan and QAPP

Results of dry and wet weather monitoring efforts have been presented in the preceding sections and indicate that monitoring and screening programs are effective at detecting illicit discharges and/or connections or other water quality impacts. Both the MS4 Monitoring Program Plan and QAPP are being updated in early 2024 to ensure compliance with the reissued MS4 permit.

Evaluation of Overall Program Effectiveness

A review of the adequacy and efficacy of the overall Storm Water Management Program will be provided in this section of current and future Annual Reports. POA has had a storm water management plan in effect since 1995, when the MS4 permit was first issued by the USEPA under the National Pollutant and Discharge Elimination System (now APDES). As a result, protection of storm water quality and prevention of sedimentation, erosion and contaminant pollution has been a priority for POA for over 25 years. BMPs, structural controls, education programs, and maintenance practices to protect water quality have always been a common goal amongst the Port and Stakeholders. Key elements of the 2023 reporting period were detailed in Section 3.0.

Reporting

Spill Reporting

Table 8, below, provides a summary of all reported spills, leaks and accidental discharges of pollutants that occurred within the POA's boundary during 2023.

Table 8: Notable Spills & Leaks Reported, 1 January 2023 – 31 December 2023

Facility	Date	Description
Port of Alaska	2/22/23	A hydraulic line ruptured, releasing approximately 10 gallons of hydraulic fluid into the surrounding snow. Contaminated snow was removed with a loader bucket, and transported to the oil-water separator at the POA Maintenance Shop.
	3/17/23	A hydraulic line ruptured, releasing approximately 1/3 cup of hydraulic fluid into the surrounding snow. Contaminated snow was removed and transported to the oil-water separator at the POA Maintenance Shop.
AFSC	3/29/23	Less than 5 gallons of Jet A fuel was released due to a leak found on a valve of the pig launcher. Contaminated snow was shoveled into drums, and a vac truck removed the remainder of the contaminated snow. The truck then took its contents and the drum and disposed of all in the Slop Tank.
	6/20/23	A Hotsy pressure washer had a leaking fuel injection nozzle, releasing approximately 1 gallon of diesel. Contaminated soil was placed in a covered & labelled container. Sorbent pads were incinerated, and the containerized soil was disposed of by US Ecology.
Marathon	2023	No reported spills for 2023
TOTE	2/1/23	Approximately 2 gallons of radiator fluid / antifreeze was released due to a broken line on a tractor. Absorbent material was applied, and disposed of in the TOTE shop disposal area

	5/5/23	Approximately 1 quart of oil was spilled due to overflow. Absorbent material was applied and the contaminants disposed of in the TOTE shop disposal area
	6/27/23	Approximately 1 gallon of engine oil was released by a 3rd-party semi tractor cap being improperly secured. Sea Star and US Ecology responded, using absorbent material and a vac truck to remove the contaminants and dispose of them appropriately
	7/23/23	Approximately 1 quart of diesel was released from a cracked fueling hose. Sea Star and TOTE responded with absorbent materials, which were disposed of properly
	8/16/23	Approximately 1 gallon of hydraulic fluid was released from a compromised fluid tank. Absorbent materials and a vac truck were used to collect the spill, and US Ecology removed and disposed of the contaminated media.
	9/11/23	Approximately 1 gallon of diesel was released from a 3rd-party fuel cap being improperly secured. Sea Star and US Ecology responded with absorbent materials, which were disposed of properly
	9/19/23	Approximately 1 gallon of diesel was released from a tractor whose fuel cap was improperly secured. Sea Star responded with absorbent materials, which were disposed of properly
	10/12/23	Approximately 1/8 gallon of hydraulic fluid leaked from a vehicle into the TOTE yard. Their shop and US Ecology responded, using absorbent materials and a vac truck to collect the contaminant, US Ecology disposed of the contaminated media
	10/19/23	Approximately 2 gallons of potentially contaminated rainwater spilled due to a bad seal on a container door. Their shop and US Ecology responded, using absorbent materials and a vac truck to collect the contaminant, US Ecology disposed of the contaminated media
	11/7/23	Approximately 1 quart of hydraulic fluid was released due to a failed line fitting. Sea Star and TOTE responded with absorbent material on the trestle.
Matson	7/15/23	Agent leaked up to 15 gallons of diesel in Matson Admin parking lot
	10/23/23	Approximately 2 gallons of coolant were spilled. No further details provided
	10/29/23	Approximately 1 gallon of diesel was spilled. No further details provided
	11/16/23	Up to 65 gallons of unknown hydrocarbon spilled. No further details provided.
ABI/AS&G	2023	No reported spills for 2023

This table is updated annually. Any spills, leaks or discharges not reported to POA or observed by POA personnel will not be included in Table 7 nor in this report; any such discharges would be noncompliant with terms of the MS4 permit and the leaseholder agreements with POA.

Annual Reporting

Annual reports will be prepared each for each reporting period (calendar year) to document MS4 compliance methods and efficacy for that reporting period. These summary reports will include supporting documentation, including the SWMP. These reports will be submitted to ADEC each year by

February 15 of the year following the reporting period, will be posted on the POA's website, and will be distributed to all SWPP Team members and leaseholders.

[Record-Keeping](#)

The POA maintains records and copies of all relevant and pertinent reporting materials under the MS4 permit, including:

- Copies of each year's DMRs
- The current APDES permit (AKS052426)
- SWPP Team Quarterly Meeting minutes
- Records of data used to complete the annual reporting
- Data used to complete the APDES permit application
- Data used to generate the SWMP

These records will be retained for a period of at least three years, or for the term of the current 5-year permit (2020-2025), whichever is longer. These records will be made available to ADEC or the public if requested to do so in writing.



● 2023 Sampling Location	--- Storm Water Ditch	ABI	Manson Construction Company
● Storm Water Outfall	□ MS4 Boundary	ACS	Menzies Aviation
● MOA Storm Water Outfall	Leases Current	AT&T	North Star Terminal & Stevedore, LLC
□ Storm Water Catchment Basin	■ Matson	Crowley Fuels LLC	PRL
— Storm Water Pipe	■ TOTE	Delta Western	Tesoro
		Intertek USA Caleb Brett	

**Port of Alaska
MS4 Area and Outfall Locations**

0 500 1,000
US Feet



SGS North America Inc.
CHAIN OF CUSTODY RECORD

S
2
A
E
W

1232127



Profile #: 375766 Int.: DOR

CLIENT: Michael Baker

Instructions: Sections 1 - 5 must be filled out.
Omissions may delay the onset of analysis.

Page 1 of 1

CONTACT: Patrick Whitesell

PHONE #:

Section 3

Preservative

PROJECT NAME: POA MS4 Outfall

Project/Permit Number:

NPDL Number(DOD):

REPORTS TO:

E-MAIL:

Patrick.Whitecell@mbakerintl.com

INVOICE TO:

QUOTE #:

P.O. #:

C
O
N
T
A
I
N
E
R
S

none H₂SO₄ none HCl none none

Sample
Type
Comp
Grab
MI

Analysis*

NOTE:

*The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

RESERVED
for lab use

SAMPLE IDENTIFICATION

DATE
mm/dd/yy

TIME
HH:MM

MATRIX/
MATRIX
CODE

BOD

COD

TSS

TAH

TAH

Dis. Metals

REMARKS/LOC ID

① AI
② AI
③ AE

Outfall 1
Outfall 2
Outfall 3

05/19/23
05/19/23
05/19/23

1455
1434
1405

✓
✓
✓

109 Lab
109 Lab
109 Lab

1
1
1

1
1
1

1
1
1

3
3
3

2
2
2

1
1
1

Section 1

Section 2

Comments:

DOD Project? YES NO

Data Deliverables Requested

DataView
Level 4

SEDD
ERPIMS

EQUIS
Other:

Turnaround Time Requested

Standard
Rush

Requested Rush Report Date:

SGS Sample Receipt (Lab Use Only)

Delivery Method: Client

Commercial

Did each cooler have a
corresponding COC?

Yes

No

Chain of Custody Seal Condition:

INTACT

BROKEN

ABSENT

COC Seal Location(s):

RELINQUISHED BY:

DATE:

TIME:

RECEIVED BY:

1.

Cooler ID

Temperature (°C)

Therm. ID

If more than three coolers are
received, or for documentation of non-
compliant coolers, use form FS-0029.

2.

3.

Note: If temp. is outside 0-6° and samples were not taken <8 hours ago OR are
waste samples, Client or PM should initial here or attach an email change order
to proceed with analysis. If ice is present, note on form F102B.

Initials:

Laboratory Use Only

<http://www.sgs.com/terms-and-conditions>

Section 5



1232127



SAMPLE RECEIPT FORM

Project Manager Completion				
Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?)	☒ Yes	☐ No	☐ N/A	
Was temperature between 0-6° C?	☒ Yes	☐ No	☐ N/A	If "No", are the samples either exempt* or sampled <8 hours prior to receipt?
Were all analyses received within holding time*?	☒ Yes	☐ No	☐ N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	☒ Yes	☐ No	☐ N/A	Please use kit req. for metals list + hardness OR
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	☐ Yes	☐ No	☒ N/A	
If rush was requested by the client, was the requested TAT approved?	☐ Yes	☐ No	☒ N/A	If "NO", what is the approved TAT?
If SEDD Deliverables are required, were Location ID's and an NPDN Number provided?	☐ Yes	☐ No	☒ N/A	If "NO", contact client for information.
Sample Login Completion				
Do ID's on sample containers match COC?	☒ Yes	☐ No	☐ N/A	
If provided on containers, do dates/times collected match COC?	☐ Yes	☐ No	☒ N/A	Note: If times differ <1 hr., record details below and login per COC.
Were all sample containers received in good condition?	☒ Yes	☐ No	☐ N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? *See form F-083 "Sample Guide"	☐ Yes	☒ No	☐ N/A	Note: If 200.8/6020 Total Metals are received unpreserved, preserve and note HNO3 lot here: If 200.8/6020 Dissolved Metals are received unpreserved, log in for LABFILTER and do not preserve. For all non-metals methods, inform Project Manager. metals lab filter
Were Trip Blanks (VOC, GRO, Low-Level Hg, etc.) received with samples, where applicable*?	☒ Yes	☐ No	☐ N/A	
Were all VOA vials free of headspace >6mm?	☒ Yes	☐ No	☐ N/A	
Were all soil VOA samples received field extracted with Methanol?	☐ Yes	☐ No	☒ N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	☐ Yes	☐ No	☒ N/A	
If special handling is required, were containers labelled appropriately? e.g. MI/ISM, foreign soils, lab filter, Ref Lab, limited volume	☒ Yes	☐ No	☐ N/A	Lab Filter
For Rush/Short Holding time, was the lab notified?	☒ Yes	☐ No	☐ N/A	
For any question answered "NO", was the Project Manager notified?	☐ Yes	☐ No	☐ N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	☒ Yes	☐ No	☐ N/A	Reviewer Initials: MM
Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:				



SGS North America Inc.

200 W. Potter Dr., 3180 Peger Rd. Ste.
Anchorage, AK 99518 (ph) 190, Fairbanks, AK
907-562-2343, (fax) 907- 99709 (ph) 907-474-
561-5301 8656

Sample Kit Request

Client pickup Date: **5/19/2023** Time: **8:00**

Be sure to ask if client will ship by ground (DOT) or air carrier (IATA)

Deliver to client: _____

Ship by/Air Carrier: _____

Airbill Number: _____

Date to ship by: _____

Notes: _____

Kit request taken by: DBR Date: May 17, 2023

Kit prepared by: ACE Date: 5/18/23

Kit (including lid tightness for pres'd bottles) checked by: EPH Date: 5/18/23

Kit packed & shipped by: DBR Date: 5/18/23

Does a Profile exist in LIMS? If not, please send a request for new profile build.

Client Name: Michael Baker

Ordered By: Patrick Whitesell

Email: patrick.whitesell@mbakerintl.com

Project Name: POA MS4 Outfall

Quote #: _____

Delivery Address: _____

Filename: SKIT_Michael Baker_POA MS4 Outfall_2023-05-17 *Required Items

No.	Matrix	Analysis	Container Size & Type	Pres.	Bottle Lot #	Preservative Lot #	Hold Time	# QC Bottles	Total Bottles
2	Water	BOD	1 x 1-L	HDPE	None ✓		48 h	0	2
2	Water	COD	1 x 125-mL	HDPE	H2SO4 ✓		28 d	0	2
2	Water	TSS	1 x 1-L	HDPE	None ✓		7 d	0	2
3	Water	TAH	3 x 40-mL	VOA vials	HCl ✓		14 d	0	9
3	Water	TAqH	2 x 250-ml	amber glass	None ✓		14 d	0	6
2	Water	Diss. Metals: Cadmium, Copper, Lead, Zinc, Hardness (Field Filter)	1 x 125-mL	HDPE	HNO3		180 d	0	2
2	Water	Diss. Metals: Cadmium, Copper, Lead, Zinc, Hardness (Lab Filter)	1 x 125-mL	HDPE	None ✓		14 d	0	2

Note: The first 10 Analysis and Preservative columns will auto-fill up to the capacity of the associated COC.

Additional Information		Notes for Kit Prep	Attention Client/Sampler:
Pack for Shipment via:	N/A		1. Do not rinse container, be aware of any acid preservative.
Temperature Blank:	Yes - Small (125 mL)		2. Fill container, but do not overfill (except volatiles).
Trip Blank:	Yes - Water (8260, AK101, 8021, 624)		3. Label the container with your sample ID and date/time of collection
Coolers:	Yes		4. Fill out the Chain of Custody.
Gel Ice:	Yes		5. Add frozen gel packs to your cooler and pack to prevent breakage.
Labels:	Yes		If you have any questions please contact your Project Manager.
Custody Seals:	Yes		
Paper Chain of Custody:	Yes - Standard COC		
Lot Number Tracking (Required for DOD):	No		



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1232127001-A	No Preservative Required	OK			
1232127001-B	H2SO4 to pH < 2	OK			
1232127001-C	No Preservative Required	OK			
1232127001-D	HCL to pH < 2	OK			
1232127001-E	HCL to pH < 2	OK			
1232127001-F	HCL to pH < 2	OK			
1232127001-G	No Preservative Required	OK			
1232127001-H	No Preservative Required	OK			
1232127001-I	No Preservative Required	OK			
1232127002-A	No Preservative Required	OK			
1232127002-B	H2SO4 to pH < 2	OK			
1232127002-C	No Preservative Required	OK			
1232127002-D	HCL to pH < 2	OK			
1232127002-E	HCL to pH < 2	OK			
1232127002-F	HCL to pH < 2	OK			
1232127002-G	No Preservative Required	OK			
1232127002-H	No Preservative Required	OK			
1232127002-I	No Preservative Required	OK			
1232127003-A	HCL to pH < 2	OK			
1232127003-B	HCL to pH < 2	OK			
1232127003-C	HCL to pH < 2	OK			
1232127003-D	No Preservative Required	OK			
1232127003-E	No Preservative Required	OK			
1232127004-A	HCL to pH < 2	OK			
1232127004-B	HCL to pH < 2	OK			
1232127004-C	HCL to pH < 2	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

Laboratory Report of Analysis

To: Michael Baker International
3900 C St Suite 900
Anchorage, AK 99503

Report Number: **1232127**

Client Project: **POA MS4 Outfall**

Dear Pat Whitesell,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.



Justin Nelson
2023.06.12
16:28:31 -08'00'

Justin Nelson
Project Manager
Justin.Nelson@sgs.com

Date

Case Narrative

SGS Client: **Michael Baker International**

SGS Project: **1232127**

Project Name/Site: **POA MS4 Outfall**

Project Contact: **Pat Whitesell**

Refer to sample receipt form for information on sample condition.

Outfall 1 (1232127001) PS

8270D SIM - PAH surrogate recovery for 2-methylnaphthalene-d10 does not meet QC criteria.

Outfall 2 (1232127002) PS

8270D SIM - PAH surrogate recovery for 2-methylnaphthalene-d10 does not meet QC criteria.

1232149002DUP (1714008) DUP

2540D - Total Suspended Solids - Sample duplicate RPD was outside of acceptance limits. The difference between sample and duplicate results is less than the LOQ.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 06/12/2023 10:09:34AM

Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
EPA 625M SIM (PAH) LV				
1232127003	Outfall 3	XMS13654	Phenanthrene	BLC

Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

Print Date: 06/12/2023 10:09:36AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (JDW Chemistry & Microbiology (Provisionally Certified as of 6/05/2023 for Fluoride EPA300.0, Alkalinity SM2320B, Orthophosphate SM4500P-E and Beryllium, Copper and Mercury 200.8) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Outfall 1	1232127001	05/19/2023	05/19/2023	Water (Surface, Eff., Ground)
Outfall 2	1232127002	05/19/2023	05/19/2023	Water (Surface, Eff., Ground)
Outfall 3	1232127003	05/19/2023	05/19/2023	Water (Surface, Eff., Ground)
Trip Blank	1232127004	05/19/2023	05/19/2023	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
EPA 602/624	602 Aromatics by 624 (W)
EPA 625M SIM (PAH) LV	625 PAH SIM GC/MS Low Volume
SM21 5210B	Biochemical Oxygen Demand SM21 5210B
EPA 410.4	Chemical Oxygen Demand
SM21 2340B	Hardness as CaCO ₃ by ICP-MS
EP200.8	Metals in Drinking Water by ICP-MS DISSO
EP200.8	Metals in Water by 200.8 ICP-MS
SM21 2540D	Total Suspended Solids SM20 2540D

Print Date: 06/12/2023 10:09:38AM

Detectable Results Summary

Client Sample ID: **Outfall 1**

Lab Sample ID: 1232127001

	<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diss. Metals by ICP/MS (Provisional Be,Cu 652 Metals by ICP/MS	Copper	3.64	ug/L
	Calcium	87900	ug/L
	Hardness as CaCO ₃	464	mg/L
	Magnesium	59400	ug/L
	Biochemical Oxygen Demand	3.71	mg/L
Microbiology Laboratory Waters Department	Chemical Oxygen Demand	1180	mg/L
	Total Suspended Solids	54.5	mg/L

Client Sample ID: **Outfall 2**

Lab Sample ID: 1232127002

	<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diss. Metals by ICP/MS (Provisional Be,Cu 652 Metals by ICP/MS	Copper	6.16	ug/L
	Calcium	106000	ug/L
	Hardness as CaCO ₃	537	mg/L
	Magnesium	66300	ug/L
	Biochemical Oxygen Demand	2.66	mg/L
Microbiology Laboratory Waters Department	Chemical Oxygen Demand	999	mg/L
	Total Suspended Solids	133	mg/L

Client Sample ID: **Outfall 3**

Lab Sample ID: 1232127003

	<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Polynuclear Aromatics GC/MS	Acenaphthene	0.250	ug/L
	Fluoranthene	0.0704	ug/L
	Fluorene	0.215	ug/L
	Naphthalene	0.933	ug/L
	Phenanthrene	0.294	ug/L
	Pyrene	0.0549	ug/L
	Benzene	2.27	ug/L
Volatile GC/MS	Ethylbenzene	7.75	ug/L
	o-Xylene	1.32	ug/L
	P & M -Xylene	10.6	ug/L

Print Date: 06/12/2023 10:09:39AM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Member of SGS Group



Results of Outfall 1

Client Sample ID: **Outfall 1**
Client Project ID: **POA MS4 Outfall**
Lab Sample ID: 1232127001
Lab Project ID: 1232127

Collection Date: 05/19/23 14:55
Received Date: 05/19/23 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Diss. Metals by ICP/MS (Provisional Be,Cu 6520)

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Copper	3.64		3.00	1.00	ug/L	1		06/08/23 13:03

Batch Information

Analytical Batch: MMS11950
Analytical Method: EP200.8
Analyst: ACF
Analytical Date/Time: 06/08/23 13:03
Container ID: 1232127001-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11950
Analytical Method: EP200.8
Analyst: ACF
Analytical Date/Time: 06/08/23 13:12
Container ID: 1232127001-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/12/2023 10:09:41AM

Results of Outfall 1

Client Sample ID: **Outfall 1**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127001
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:55
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/08/23 13:03
Lead	2.00 U	2.00	0.500	ug/L	1		06/08/23 13:03
Zinc	10.0 U	10.0	3.10	ug/L	1		06/08/23 13:03

Batch Information

Analytical Batch: MMS11950
 Analytical Method: EP200.8
 Analyst: ACF
 Analytical Date/Time: 06/08/23 13:03
 Container ID: 1232127001-I

Prep Batch: MXX35909
 Prep Method: E200.2
 Prep Date/Time: 06/06/23 14:55
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Analytical Batch: MMS11950
 Analytical Method: EP200.8
 Analyst: ACF
 Analytical Date/Time: 06/08/23 13:12
 Container ID: 1232127001-I

Prep Batch: MXX35909
 Prep Method: E200.2
 Prep Date/Time: 06/06/23 14:55
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Print Date: 06/12/2023 10:09:41AM

Results of Outfall 1

Client Sample ID: **Outfall 1**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127001
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:55
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	87900		2500	750	ug/L	5		06/08/23 13:12
Magnesium	59400		250	75.0	ug/L	5		06/08/23 13:12

Batch Information

Analytical Batch: MMS11950
 Analytical Method: EP200.8
 Analyst: ACF
 Analytical Date/Time: 06/08/23 13:03
 Container ID: 1232127001-I

Prep Batch: MXX35909
 Prep Method: E200.2
 Prep Date/Time: 06/06/23 14:55
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Analytical Batch: MMS11950
 Analytical Method: EP200.8
 Analyst: ACF
 Analytical Date/Time: 06/08/23 13:12
 Container ID: 1232127001-I

Prep Batch: MXX35909
 Prep Method: E200.2
 Prep Date/Time: 06/06/23 14:55
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	464		25.0	25.0	mg/L	5		06/08/23 13:12

Batch Information

Analytical Batch: MMS11950
 Analytical Method: SM21 2340B
 Analyst: ACF
 Analytical Date/Time: 06/08/23 13:12
 Container ID: 1232127001-I

Prep Batch: MXX35909
 Prep Method: E200.2
 Prep Date/Time: 06/06/23 14:55
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Print Date: 06/12/2023 10:09:41AM



Results of **Outfall 1**

Client Sample ID: **Outfall 1**
Client Project ID: **POA MS4 Outfall**
Lab Sample ID: 1232127001
Lab Project ID: 1232127

Collection Date: 05/19/23 14:55
Received Date: 05/19/23 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	3.71		1.50	1.50	mg/L	0.75		05/19/23 17:21

Batch Information

Analytical Batch: BOD7454
Analytical Method: SM21 5210B
Analyst: M.A
Analytical Date/Time: 05/19/23 17:21
Container ID: 1232127001-A

Print Date: 06/12/2023 10:09:41AM

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Results of Outfall 1

Client Sample ID: **Outfall 1**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127001
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:55
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Acenaphthylene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Anthracene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Benzo(a)Anthracene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Benzo[a]pyrene	0.0185	U	0.0185	0.00574	ug/L	1		05/26/23 23:19
Benzo[b]Fluoranthene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Benzo[g,h,i]perylene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Benzo[k]fluoranthene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Chrysene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Dibenzo[a,h]anthracene	0.0185	U	0.0185	0.00574	ug/L	1		05/26/23 23:19
Fluoranthene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Fluorene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Indeno[1,2,3-c,d] pyrene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Naphthalene	0.0926	U	0.0926	0.0287	ug/L	1		05/26/23 23:19
Phenanthrene	0.0926	U	0.0926	0.0287	ug/L	1		05/26/23 23:19
Pyrene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:19
Surrogates								
2-Methylnaphthalene-d10 (surr)	36.5	*	38-100		%	1		05/26/23 23:19
Fluoranthene-d10 (surr)	60.8		30-111		%	1		05/26/23 23:19

Batch Information

Analytical Batch: XMS13654
 Analytical Method: EPA 625M SIM (PAH) LV
 Analyst: NRB
 Analytical Date/Time: 05/26/23 23:19
 Container ID: 1232127001-G

Prep Batch: XXX47895
 Prep Method: SW3535A
 Prep Date/Time: 05/24/23 16:00
 Prep Initial Wt./Vol.: 270 mL
 Prep Extract Vol: 1 mL

Print Date: 06/12/2023 10:09:41AM

Results of Outfall 1

Client Sample ID: **Outfall 1**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127001
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:55
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Benzene	0.400	U	0.400	0.120	ug/L	1		05/20/23 21:44
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		05/20/23 21:44
o-Xylene	1.00	U	1.00	0.310	ug/L	1		05/20/23 21:44
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		05/20/23 21:44
Toluene	1.00	U	1.00	0.310	ug/L	1		05/20/23 21:44
Surrogates								
1,2-Dichloroethane-D4 (surr)	105		81-118		%	1		05/20/23 21:44
4-Bromofluorobenzene (surr)	104		85-114		%	1		05/20/23 21:44
Toluene-d8 (surr)	100		89-112		%	1		05/20/23 21:44

Batch Information

Analytical Batch: VMS22409
 Analytical Method: EPA 602/624
 Analyst: PHK
 Analytical Date/Time: 05/20/23 21:44
 Container ID: 1232127001-D

Prep Batch: VXX39878
 Prep Method: SW5030B
 Prep Date/Time: 05/20/23 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 06/12/2023 10:09:41AM



Results of Outfall 1

Client Sample ID: **Outfall 1**
Client Project ID: **POA MS4 Outfall**
Lab Sample ID: 1232127001
Lab Project ID: 1232127

Collection Date: 05/19/23 14:55
Received Date: 05/19/23 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Chemical Oxygen Demand	1180		400	124	mg/L	20		05/26/23 12:15

Batch Information

Analytical Batch: WSP5828
Analytical Method: EPA 410.4
Analyst: MEB
Analytical Date/Time: 05/26/23 12:15
Container ID: 1232127001-B

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	54.5		5.00	1.55	mg/L	1		05/23/23 15:12

Batch Information

Analytical Batch: STS7559
Analytical Method: SM21 2540D
Analyst: EBH
Analytical Date/Time: 05/23/23 15:12
Container ID: 1232127001-C

Print Date: 06/12/2023 10:09:41AM

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Results of Outfall 2

Client Sample ID: **Outfall 2**
Client Project ID: **POA MS4 Outfall**
Lab Sample ID: 1232127002
Lab Project ID: 1232127

Collection Date: 05/19/23 14:35
Received Date: 05/19/23 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Diss. Metals by ICP/MS (Provisional Be,Cu 6520)

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Copper	6.16		3.00	1.00	ug/L	1		06/08/23 14:06

Batch Information

Analytical Batch: MMS11950
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/08/23 14:06
Container ID: 1232127002-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11950
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/08/23 14:45
Container ID: 1232127002-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/12/2023 10:09:41AM

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Results of Outfall 2

Client Sample ID: **Outfall 2**
Client Project ID: **POA MS4 Outfall**
Lab Sample ID: 1232127002
Lab Project ID: 1232127

Collection Date: 05/19/23 14:35
Received Date: 05/19/23 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/08/23 14:06
Lead	2.00 U	2.00	0.500	ug/L	1		06/08/23 14:06
Zinc	10.0 U	10.0	3.10	ug/L	1		06/08/23 14:06

Batch Information

Analytical Batch: MMS11950
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/08/23 14:06
Container ID: 1232127002-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11950
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/08/23 14:45
Container ID: 1232127002-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/12/2023 10:09:41AM



Results of Outfall 2

Client Sample ID: **Outfall 2**
Client Project ID: **POA MS4 Outfall**
Lab Sample ID: 1232127002
Lab Project ID: 1232127

Collection Date: 05/19/23 14:35
Received Date: 05/19/23 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Calcium	106000		5000	1500	ug/L	10		06/08/23 14:45
Magnesium	66300		500	150	ug/L	10		06/08/23 14:45

Batch Information

Analytical Batch: MMS11950
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/08/23 14:06
Container ID: 1232127002-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11950
Analytical Method: EP200.8
Analyst: HGS
Analytical Date/Time: 06/08/23 14:45
Container ID: 1232127002-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	537		50.0	50.0	mg/L	10		06/08/23 14:45

Batch Information

Analytical Batch: MMS11950
Analytical Method: SM21 2340B
Analyst: HGS
Analytical Date/Time: 06/08/23 14:45
Container ID: 1232127002-I

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 06/06/23 14:55
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/12/2023 10:09:41AM



Results of **Outfall 2**

Client Sample ID: **Outfall 2**
Client Project ID: **POA MS4 Outfall**
Lab Sample ID: 1232127002
Lab Project ID: 1232127

Collection Date: 05/19/23 14:35
Received Date: 05/19/23 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.66		2.00	2.00	mg/L	1		05/19/23 17:21

Batch Information

Analytical Batch: BOD7454
Analytical Method: SM21 5210B
Analyst: M.A
Analytical Date/Time: 05/19/23 17:21
Container ID: 1232127002-A

Print Date: 06/12/2023 10:09:41AM

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Results of Outfall 2

Client Sample ID: **Outfall 2**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127002
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:35
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Acenaphthylene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Anthracene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Benzo(a)Anthracene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Benzo[a]pyrene	0.0185	U	0.0185	0.00574	ug/L	1		05/26/23 23:39
Benzo[b]Fluoranthene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Benzo[g,h,i]perylene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Benzo[k]fluoranthene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Chrysene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Dibenzo[a,h]anthracene	0.0185	U	0.0185	0.00574	ug/L	1		05/26/23 23:39
Fluoranthene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Fluorene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Indeno[1,2,3-c,d] pyrene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Naphthalene	0.0926	U	0.0926	0.0287	ug/L	1		05/26/23 23:39
Phenanthrene	0.0926	U	0.0926	0.0287	ug/L	1		05/26/23 23:39
Pyrene	0.0463	U	0.0463	0.0139	ug/L	1		05/26/23 23:39
Surrogates								
2-Methylnaphthalene-d10 (surr)	26.2	*	38-100		%	1		05/26/23 23:39
Fluoranthene-d10 (surr)	37.9		30-111		%	1		05/26/23 23:39

Batch Information

Analytical Batch: XMS13654
 Analytical Method: EPA 625M SIM (PAH) LV
 Analyst: NRB
 Analytical Date/Time: 05/26/23 23:39
 Container ID: 1232127002-G

Prep Batch: XXX47895
 Prep Method: SW3535A
 Prep Date/Time: 05/24/23 16:00
 Prep Initial Wt./Vol.: 270 mL
 Prep Extract Vol: 1 mL

Print Date: 06/12/2023 10:09:41AM

Results of Outfall 2

Client Sample ID: **Outfall 2**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127002
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:35
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.400	U	0.400	0.120	ug/L	1		05/20/23 21:59
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		05/20/23 21:59
o-Xylene	1.00	U	1.00	0.310	ug/L	1		05/20/23 21:59
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		05/20/23 21:59
Toluene	1.00	U	1.00	0.310	ug/L	1		05/20/23 21:59
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		05/20/23 21:59
4-Bromofluorobenzene (surr)	103		85-114		%	1		05/20/23 21:59
Toluene-d8 (surr)	101		89-112		%	1		05/20/23 21:59

Batch Information

Analytical Batch: VMS22409
 Analytical Method: EPA 602/624
 Analyst: PHK
 Analytical Date/Time: 05/20/23 21:59
 Container ID: 1232127002-D

Prep Batch: VXX39878
 Prep Method: SW5030B
 Prep Date/Time: 05/20/23 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 06/12/2023 10:09:41AM



Results of **Outfall 2**

Client Sample ID: **Outfall 2**
Client Project ID: **POA MS4 Outfall**
Lab Sample ID: 1232127002
Lab Project ID: 1232127

Collection Date: 05/19/23 14:35
Received Date: 05/19/23 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Chemical Oxygen Demand	999		400	124	mg/L	20		05/26/23 12:15

Batch Information

Analytical Batch: WSP5828
Analytical Method: EPA 410.4
Analyst: MEB
Analytical Date/Time: 05/26/23 12:15
Container ID: 1232127002-B

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	133		5.00	1.55	mg/L	1		05/23/23 15:12

Batch Information

Analytical Batch: STS7559
Analytical Method: SM21 2540D
Analyst: EBH
Analytical Date/Time: 05/23/23 15:12
Container ID: 1232127002-C

Print Date: 06/12/2023 10:09:41AM

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Results of Outfall 3

Client Sample ID: **Outfall 3**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127003
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:05
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.250		0.0455	0.0136	ug/L	1		05/27/23 00:00
Acenaphthylene	0.0455	U	0.0455	0.0136	ug/L	1		05/27/23 00:00
Anthracene	0.0455	U	0.0455	0.0136	ug/L	1		05/27/23 00:00
Benzo(a)Anthracene	0.0455	U	0.0455	0.0136	ug/L	1		05/27/23 00:00
Benzo[a]pyrene	0.0182	U	0.0182	0.00564	ug/L	1		05/27/23 00:00
Benzo[b]Fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		05/27/23 00:00
Benzo[g,h,i]perylene	0.0455	U	0.0455	0.0136	ug/L	1		05/27/23 00:00
Benzo[k]fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		05/27/23 00:00
Chrysene	0.0455	U	0.0455	0.0136	ug/L	1		05/27/23 00:00
Dibenzo[a,h]anthracene	0.0182	U	0.0182	0.00564	ug/L	1		05/27/23 00:00
Fluoranthene	0.0704		0.0455	0.0136	ug/L	1		05/27/23 00:00
Fluorene	0.215		0.0455	0.0136	ug/L	1		05/27/23 00:00
Indeno[1,2,3-c,d] pyrene	0.0455	U	0.0455	0.0136	ug/L	1		05/27/23 00:00
Naphthalene	0.933		0.0909	0.0282	ug/L	1		05/27/23 00:00
Phenanthrene	0.294		0.0909	0.0282	ug/L	1		05/27/23 00:00
Pyrene	0.0549		0.0455	0.0136	ug/L	1		05/27/23 00:00
Surrogates								
2-Methylnaphthalene-d10 (surr)	44		38-100		%	1		05/27/23 00:00
Fluoranthene-d10 (surr)	73.7		30-111		%	1		05/27/23 00:00

Batch Information

Analytical Batch: XMS13654
 Analytical Method: EPA 625M SIM (PAH) LV
 Analyst: NRB
 Analytical Date/Time: 05/27/23 00:00
 Container ID: 1232127003-D

Prep Batch: XXX47895
 Prep Method: SW3535A
 Prep Date/Time: 05/24/23 16:00
 Prep Initial Wt./Vol.: 275 mL
 Prep Extract Vol: 1 mL

Print Date: 06/12/2023 10:09:41AM

Results of Outfall 3

Client Sample ID: **Outfall 3**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127003
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:05
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	2.27		0.400	0.120	ug/L	1		05/20/23 22:14
Ethylbenzene	7.75		1.00	0.310	ug/L	1		05/20/23 22:14
o-Xylene	1.32		1.00	0.310	ug/L	1		05/20/23 22:14
P & M -Xylene	10.6		2.00	0.620	ug/L	1		05/20/23 22:14
Toluene	1.00	U	1.00	0.310	ug/L	1		05/20/23 22:14
Surrogates								
1,2-Dichloroethane-D4 (surr)	106		81-118		%	1		05/20/23 22:14
4-Bromofluorobenzene (surr)	100		85-114		%	1		05/20/23 22:14
Toluene-d8 (surr)	100		89-112		%	1		05/20/23 22:14

Batch Information

Analytical Batch: VMS22409
 Analytical Method: EPA 602/624
 Analyst: PHK
 Analytical Date/Time: 05/20/23 22:14
 Container ID: 1232127003-A

Prep Batch: VXX39878
 Prep Method: SW5030B
 Prep Date/Time: 05/20/23 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 06/12/2023 10:09:41AM

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **POA MS4 Outfall**
 Lab Sample ID: 1232127004
 Lab Project ID: 1232127

Collection Date: 05/19/23 14:05
 Received Date: 05/19/23 15:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Benzene	0.400	U	0.400	0.120	ug/L	1		05/20/23 20:00
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		05/20/23 20:00
o-Xylene	1.00	U	1.00	0.310	ug/L	1		05/20/23 20:00
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		05/20/23 20:00
Toluene	1.00	U	1.00	0.310	ug/L	1		05/20/23 20:00
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		05/20/23 20:00
4-Bromofluorobenzene (surr)	102		85-114		%	1		05/20/23 20:00
Toluene-d8 (surr)	102		89-112		%	1		05/20/23 20:00

Batch Information

Analytical Batch: VMS22409
 Analytical Method: EPA 602/624
 Analyst: PHK
 Analytical Date/Time: 05/20/23 20:00
 Container ID: 1232127004-A

Prep Batch: VXX39878
 Prep Method: SW5030B
 Prep Date/Time: 05/20/23 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 06/12/2023 10:09:41AM



Method Blank

Blank ID: MB for HBN 1855537 [BOD/7454]

Blank Lab ID: 1713450

QC for Samples:

1232127001, 1232127002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 5210B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Biochemical Oxygen Demand	2.00U	2.00	2.00	2.00	mg/L

Batch Information

Analytical Batch: BOD7454

Analytical Method: SM21 5210B

Instrument:

Analyst: M.A

Analytical Date/Time: 5/19/2023 11:40:00AM

Print Date: 06/12/2023 10:09:43AM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1232127 [BOD7454]

Blank Spike Lab ID: 1713451

Date Analyzed: 05/19/2023 11:40

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127001, 1232127002

Results by SM21 5210B

Parameter	Blank Spike (mg/L)			CL
	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	
Biochemical Oxygen Demand	198	228	115	(84.6-115.4

Batch Information

Analytical Batch: **BOD7454**

Analytical Method: **SM21 5210B**

Instrument:

Analyst: **M.A**

Print Date: 06/12/2023 10:09:45AM



Method Blank

Blank ID: MB for HBN 1856739 [MXX/35909]
Blank Lab ID: 1716067

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1232127001, 1232127002

Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Cadmium	0.250U	0.500	0.150	0.250	ug/L
Calcium	250U	500	150	250	ug/L
Copper	1.50U	3.00	1.00	1.50	ug/L
Lead	1.00U	2.00	0.500	1.00	ug/L
Magnesium	25.0U	50.0	15.0	25.0	ug/L
Zinc	3.46J	10.0	3.10	5.00	ug/L

Batch Information

Analytical Batch: MMS11950
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: ACF
Analytical Date/Time: 6/8/2023 12:58:52PM

Prep Batch: MXX35909
Prep Method: E200.2
Prep Date/Time: 6/6/2023 2:55:00PM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/12/2023 10:09:48AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1232127 [MXX35909]

Blank Spike Lab ID: 1716068

Date Analyzed: 06/08/2023 13:01

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127001, 1232127002

Results by EP200.8

Blank Spike (ug/L)				
Parameter	Spike	Result	Rec (%)	CL
Cadmium	100	97.5	98	(85-115)
Calcium	10000	10100	101	(85-115)
Copper	1000	981	98	(85-115)
Lead	1000	1000	100	(85-115)
Magnesium	10000	10400	104	(85-115)
Zinc	1000	997	100	(85-115)

Batch Information

Analytical Batch: MMS11950

Analytical Method: EP200.8

Instrument: P7 Agilent 7800

Analyst: ACF

Prep Batch: MXX35909

Prep Method: E200.2

Prep Date/Time: 06/06/2023 14:55

Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:



Matrix Spike Summary

Original Sample ID: 1716070
MS Sample ID: 1716072 MS
MSD Sample ID:

Analysis Date: 06/08/2023 13:03
Analysis Date: 06/08/2023 13:06
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127001

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Cadmium	0.250U	100	94.5	95				70-130		
Calcium	87900	10000	98900	110				70-130		
Copper	3.64	1000	986	98				70-130		
Lead	1.00U	1000	1000	100				70-130		
Magnesium	59400	10000	71000	117				70-130		
Zinc	5.87J	1000	991	99				70-130		

Batch Information

Analytical Batch: MMS11950
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: ACF
Analytical Date/Time: 6/8/2023 1:06:00PM

Prep Batch: MXX35909
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 6/6/2023 2:55:00PM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Print Date: 06/12/2023 10:09:52AM



Matrix Spike Summary

Original Sample ID: 1716071
MS Sample ID: 1716073 MS
MSD Sample ID:

Analysis Date: 06/08/2023 13:08
Analysis Date: 06/08/2023 13:10
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127002

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Cadmium	0.250U	100	97.1	97				70-130		
Calcium	62600	10000	73700	111				70-130		
Copper	14.5	1000	1010	99				70-130		
Lead	1.00U	1000	1000	100				70-130		
Magnesium	17400	10000	28100	107				70-130		
Zinc	4.98J	1000	1030	102				70-130		

Batch Information

Analytical Batch: MMS11950
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: ACF
Analytical Date/Time: 6/8/2023 1:10:00PM

Prep Batch: MXX35909
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 6/6/2023 2:55:00PM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Print Date: 06/12/2023 10:09:52AM



Method Blank

Blank ID: MB for HBN 1856250 [STS/7559]

Blank Lab ID: 1714004

QC for Samples:

1232127001, 1232127002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 2540D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Total Suspended Solids	0.500U	1.00	0.310	0.500	mg/L

Batch Information

Analytical Batch: STS7559

Analytical Method: SM21 2540D

Instrument:

Analyst: EBH

Analytical Date/Time: 5/23/2023 3:12:45PM

Print Date: 06/12/2023 10:09:57AM

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Duplicate Sample Summary

Original Sample ID: 1232100001

Duplicate Sample ID: 1714007

QC for Samples:

1232127001, 1232127002

Analysis Date: 05/23/2023 15:12

Matrix: Water (Surface, Eff., Ground)

Results by SM21 2540D

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Suspended Solids	48.0	49.0	mg/L	2.10	(< 5)

Batch Information

Analytical Batch: STS7559

Analytical Method: SM21 2540D

Instrument:

Analyst: EBH

Print Date: 06/12/2023 10:09:58AM

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Duplicate Sample Summary

Original Sample ID: 1232149002

Duplicate Sample ID: 1714008

QC for Samples:

1232127001, 1232127002

Analysis Date: 05/23/2023 15:12

Matrix: Water (Surface, Eff., Ground)

Results by SM21 2540D

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Suspended Solids	31.1	33.1	mg/L	6.20*	(< 5)

Batch Information

Analytical Batch: STS7559

Analytical Method: SM21 2540D

Instrument:

Analyst: EBH

Print Date: 06/12/2023 10:09:58AM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1232127 [STS7559]
 Blank Spike Lab ID: 1714005
 Date Analyzed: 05/23/2023 15:12

Spike Duplicate ID: LCSD for HBN 1232127 [STS7559]
 Spike Duplicate Lab ID: 1714006
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127001, 1232127002

Results by SM21 2540D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Suspended Solids	25	25.9	104	25	25.7	103	(75-125)	0.78	(< 5)

Batch Information

Analytical Batch: STS7559
 Analytical Method: SM21 2540D
 Instrument:
 Analyst: EBH

Print Date: 06/12/2023 10:10:00AM



Method Blank

Blank ID: MB for HBN 1856165 [VXX/39878]
Blank Lab ID: 1713870

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1232127001, 1232127002, 1232127003, 1232127004

Results by EPA 602/624

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.200U	0.400	0.120	0.200	ug/L
Ethylbenzene	0.500U	1.00	0.310	0.500	ug/L
o-Xylene	0.500U	1.00	0.310	0.500	ug/L
P & M -Xylene	1.00U	2.00	0.620	1.00	ug/L
Toluene	0.500U	1.00	0.310	0.500	ug/L

Surrogates

1,2-Dichloroethane-D4 (surr)	108	81-118		0	%
4-Bromofluorobenzene (surr)	102	85-114		0	%
Toluene-d8 (surr)	102	89-112		0	%

Batch Information

Analytical Batch: VMS22409
Analytical Method: EPA 602/624
Instrument: Agilent 7890-75MS
Analyst: PHK
Analytical Date/Time: 5/20/2023 5:59:00PM

Prep Batch: VXX39878
Prep Method: SW5030B
Prep Date/Time: 5/20/2023 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/12/2023 10:10:02AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1232127 [VXX39878]
 Blank Spike Lab ID: 1713871
 Date Analyzed: 05/20/2023 18:14

Spike Duplicate ID: LCSD for HBN 1232127
 [VXX39878]
 Spike Duplicate Lab ID: 1713872
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127001, 1232127002, 1232127003, 1232127004

Results by EPA 602/624

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	28.5	95	30	29.1	97	(79-120)	2.00	(< 20)
Ethylbenzene	30	29.4	98	30	30.2	101	(79-121)	2.40	(< 20)
o-Xylene	30	29.0	97	30	29.7	99	(78-122)	2.30	(< 20)
P & M -Xylene	60	58.9	98	60	60.6	101	(80-121)	2.80	(< 20)
Toluene	30	27.6	92	30	28.2	94	(80-121)	2.10	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		98	30		99	(81-118)	0.99	
4-Bromofluorobenzene (surr)	30		100	30		99	(85-114)	0.99	
Toluene-d8 (surr)	30		100	30		100	(89-112)	0.19	

Batch Information

Analytical Batch: VMS22409
 Analytical Method: EPA 602/624
 Instrument: Agilent 7890-75MS
 Analyst: PHK

Prep Batch: VXX39878
 Prep Method: SW5030B
 Prep Date/Time: 05/20/2023 06:00
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 06/12/2023 10:10:04AM



Method Blank

Blank ID: MB for HBN 1856381 [WSP/5828]

Blank Lab ID: 1714556

QC for Samples:

1232127001, 1232127002

Matrix: Water (Surface, Eff., Ground)

Results by EPA 410.4

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Chemical Oxygen Demand	10.0U	20.0	6.20	10.0	mg/L

Batch Information

Analytical Batch: WSP5828

Analytical Method: EPA 410.4

Instrument: HACH DR2700 Spec.

Analyst: MEB

Analytical Date/Time: 5/26/2023 12:15:00PM

Print Date: 06/12/2023 10:10:07AM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1232127 [WSP5828]
 Blank Spike Lab ID: 1714557
 Date Analyzed: 05/26/2023 12:15

Spike Duplicate ID: LCSD for HBN 1232127
 [WSP5828]
 Spike Duplicate Lab ID: 1714558
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127001, 1232127002

Results by EPA 410.4

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chemical Oxygen Demand	500	499	100	500	502	100	(90-110)	0.55	(< 25)

Batch Information

Analytical Batch: **WSP5828**
 Analytical Method: **EPA 410.4**
 Instrument: **HACH DR2700 Spec.**
 Analyst: **MEB**

Print Date: 06/12/2023 10:10:09AM



Matrix Spike Summary

Original Sample ID: 1232127001

MS Sample ID: 1714559 MS

MSD Sample ID:

Analysis Date: 05/26/2023 12:15

Analysis Date: 05/26/2023 12:15

Analysis Date:

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127001, 1232127002

Results by EPA 410.4

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chemical Oxygen Demand	1180	10000	10600	95				90-110		

Batch Information

Analytical Batch: WSP5828

Analytical Method: EPA 410.4

Instrument: HACH DR2700 Spec.

Analyst: MEB

Analytical Date/Time: 5/26/2023 12:15:00PM

Print Date: 06/12/2023 10:10:11AM

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Method Blank

Blank ID: MB for HBN 1856314 [XXX/47895]
Blank Lab ID: 1714247

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1232127001, 1232127002, 1232127003

Results by EPA 625M SIM (PAH) LV

Parameter	Results	LOQ/CL	DL	LOD	Units
Acenaphthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	0.0250	ug/L
Anthracene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	0.0100	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Chrysene	0.0250U	0.0500	0.0150	0.0250	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	0.0100	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Fluorene	0.0250U	0.0500	0.0150	0.0250	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	0.0250	ug/L
Naphthalene	0.0500U	0.100	0.0310	0.0500	ug/L
Phenanthrene	0.0500U	0.100	0.0310	0.0500	ug/L
Pyrene	0.0250U	0.0500	0.0150	0.0250	ug/L
Surrogates					
2-Methylnaphthalene-d10 (surr)	39.9	38-100		0	%
Fluoranthene-d10 (surr)	78.3	30-111		0	%

Batch Information

Analytical Batch: XMS13654
Analytical Method: EPA 625M SIM (PAH) LV
Instrument: Agilent GC 7890B/5977A SWA
Analyst: NRB
Analytical Date/Time: 5/26/2023 9:16:00PM

Prep Batch: XXX47895
Prep Method: SW3535A
Prep Date/Time: 5/24/2023 4:00:36PM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 06/12/2023 10:10:12AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1232127 [XXX47895]
 Blank Spike Lab ID: 1714248
 Date Analyzed: 05/26/2023 21:36

Spike Duplicate ID: LCSD for HBN 1232127 [XXX47895]
 Spike Duplicate Lab ID: 1714249
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1232127001, 1232127002, 1232127003

Results by EPA 625M SIM (PAH) LV

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Acenaphthene	2	1.35	68	2	1.18	59	(48-114)	13.50	(< 20)
Acenaphthylene	2	1.43	71	2	1.26	63	(35-121)	12.50	(< 20)
Anthracene	2	1.62	81	2	1.41	71	(53-119)	13.70	(< 20)
Benzo(a)Anthracene	2	1.47	74	2	1.39	70	(59-120)	5.40	(< 20)
Benzo[a]pyrene	2	1.59	80	2	1.54	77	(53-120)	3.10	(< 20)
Benzo[b]Fluoranthene	2	1.52	76	2	1.57	79	(53-126)	3.00	(< 20)
Benzo[g,h,i]perylene	2	1.86	93	2	1.79	90	(44-128)	3.80	(< 20)
Benzo[k]fluoranthene	2	1.72	86	2	1.63	82	(54-125)	5.20	(< 20)
Chrysene	2	1.72	86	2	1.65	82	(57-120)	4.50	(< 20)
Dibenzo[a,h]anthracene	2	1.83	92	2	1.79	89	(44-131)	2.60	(< 20)
Fluoranthene	2	1.74	87	2	1.55	78	(58-120)	11.50	(< 20)
Fluorene	2	1.52	76	2	1.33	67	(50-118)	13.30	(< 20)
Indeno[1,2,3-c,d] pyrene	2	1.77	89	2	1.72	86	(48-130)	2.80	(< 20)
Naphthalene	2	1.14	57	2	1.08	54	(43-114)	5.70	(< 20)
Phenanthrene	2	1.52	76	2	1.34	67	(53-115)	12.40	(< 20)
Pyrene	2	1.75	88	2	1.58	79	(53-121)	10.10	(< 20)

Surrogates

2-Methylnaphthalene-d10 (surr)	2		50	2		46	(38-100)	9.20	
Fluoranthene-d10 (surr)	2		80	2		74	(30-111)	7.80	

Batch Information

Analytical Batch: XMS13654
 Analytical Method: EPA 625M SIM (PAH) LV
 Instrument: Agilent GC 7890B/5977A SWA
 Analyst: NRB

Prep Batch: XXX47895
 Prep Method: SW3535A
 Prep Date/Time: 05/24/2023 16:00
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 06/12/2023 10:10:15AM



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1232127001-A	No Preservative Required	OK			
1232127001-B	H2SO4 to pH < 2	OK			
1232127001-C	No Preservative Required	OK			
1232127001-D	HCL to pH < 2	OK			
1232127001-E	HCL to pH < 2	OK			
1232127001-F	HCL to pH < 2	OK			
1232127001-G	No Preservative Required	OK			
1232127001-H	No Preservative Required	OK			
1232127001-I	No Preservative Required	OK			
1232127002-A	No Preservative Required	OK			
1232127002-B	H2SO4 to pH < 2	OK			
1232127002-C	No Preservative Required	OK			
1232127002-D	HCL to pH < 2	OK			
1232127002-E	HCL to pH < 2	OK			
1232127002-F	HCL to pH < 2	OK			
1232127002-G	No Preservative Required	OK			
1232127002-H	No Preservative Required	OK			
1232127002-I	No Preservative Required	OK			
1232127003-A	HCL to pH < 2	OK			
1232127003-B	HCL to pH < 2	OK			
1232127003-C	HCL to pH < 2	OK			
1232127003-D	No Preservative Required	OK			
1232127003-E	No Preservative Required	OK			
1232127004-A	HCL to pH < 2	OK			
1232127004-B	HCL to pH < 2	OK			
1232127004-C	HCL to pH < 2	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.



1235482



SAMPLE RECEIPT FORM

Project Manager Completion				
Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?)	☒ Yes	☐ No	☐ N/A	
Was temperature between 0-6° C?	☒ Yes	☐ No	☐ N/A	If "No", are the samples either exempt* or sampled <8 hours prior to receipt?
Were all analyses received within holding time*?	☒ Yes	☐ No	☐ N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	☒ Yes	☐ No	☐ N/A	
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	☐ Yes	☐ No	☒ N/A	
If rush was requested by the client, was the requested TAT approved?	☐ Yes	☐ No	☒ N/A	If "NO", what is the approved TAT?
If SEDD Deliverables are required, were Location ID's and an NPDL Number provided?	☐ Yes	☐ No	☒ N/A	If "NO", contact client for information.
Sample Login Completion				
Do ID's on sample containers match COC?	☒ Yes	☐ No	☐ N/A	
If provided on containers, do dates/times collected match COC?	☐ Yes	☐ No	☒ N/A	Note: If times differ <1 hr., record details below and login per COC.
Were all sample containers received in good condition?	☒ Yes	☐ No	☐ N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? *See form F-083 "Sample Guide"	☒ Yes	☐ No	☐ N/A	Note: If 200.8/6020 Total Metals are received unpreserved, preserve and note HNO3 lot here: If 200.8/6020 Dissolved Metals are received unpreserved, log in for LABFILTER and do not preserve. For all non-metals methods, inform Project Manager.
Were Trip Blanks (VOC, GRO, Low-Level Hg, etc.) received with samples, where applicable*?	☐ Yes	☐ No	☒ N/A	
Were all VOA vials free of headspace >6mm?	☐ Yes	☐ No	☒ N/A	
Were all soil VOA samples received field extracted with Methanol?	☐ Yes	☐ No	☒ N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	☐ Yes	☐ No	☒ N/A	
If special handling is required, were containers labelled appropriately? e.g. MI/ISM, foreign soils, lab filter, Ref Lab, limited volume	☐ Yes	☐ No	☒ N/A	
For Rush/Short Holding time, was the lab notified?	☒ Yes	☐ No	☐ N/A	
For any question answered "NO", was the Project Manager notified?	☐ Yes	☐ No	☒ N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	☒ Yes	☐ No	☒ N/A	Reviewer Initials: <i>[Signature]</i>
Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:				



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1235482001-A	No Preservative Required	OK			
1235482001-B	No Preservative Required	OK			
1235482001-C	HCL to pH < 2	OK			
1235482001-D	HCL w/Ascorbic Acid	OK			
1235482001-E	HCL w/Ascorbic Acid	OK			
1235482002-A	No Preservative Required	OK			
1235482002-B	No Preservative Required	OK			
1235482002-C	No Preservative Required	OK			
1235482002-D	No Preservative Required	OK			
1235482002-E	HCL to pH < 2	OK			
1235482002-F	HCL to pH < 2	OK			
1235482002-G	HCL to pH < 2	OK			
1235482002-H	H2SO4 to pH < 2	OK			
1235482003-A	No Preservative Required	OK			
1235482003-B	No Preservative Required	OK			
1235482003-C	No Preservative Required	OK			
1235482003-D	No Preservative Required	OK			
1235482003-E	HCL to pH < 2	OK			
1235482003-F	HCL to pH < 2	OK			
1235482003-G	HCL to pH < 2	OK			
1235482003-H	H2SO4 to pH < 2	OK			
1235482004-A	HCL w/Ascorbic Acid	OK			
1235482004-B	HCL w/Ascorbic Acid	OK			
1235482004-C	HCL w/Ascorbic Acid	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

Laboratory Report of Analysis

To: Michael Baker International
3900 C St Suite 900
Anchorage, AK 99503

Report Number: **1235482**

Client Project: **POA Stormdrain Outfall**

Dear Pat Whitesell,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.



Justin Nelson
2023.10.26
08:50:02 -08'00'

Justin Nelson
Project Manager
Justin.Nelson@sgs.com

Date

Case Narrative

SGS Client: **Michael Baker International**
SGS Project: **1235482**
Project Name/Site: **POA Stormdrain Outfall**
Project Contact: **Pat Whitesell**

Refer to sample receipt form for information on sample condition.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 10/26/2023 7:45:24AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Outfall 3	1235482001	10/02/2023	10/03/2023	Water (Surface, Eff., Ground)
Outfall 1	1235482002	10/02/2023	10/03/2023	Water (Surface, Eff., Ground)
Outfall 2	1235482003	10/02/2023	10/03/2023	Water (Surface, Eff., Ground)
Trip Blank	1235482004	10/02/2023	10/03/2023	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
EPA 602/624	602 Aromatics by 624 (W)
EPA 625M SIM (PAH) LV	625 PAH SIM GC/MS Low Volume
SM21 5210B	Biochemical Oxygen Demand SM21 5210B
EPA 410.4	Chemical Oxygen Demand

Print Date: 10/26/2023 7:45:28AM

Detectable Results Summary

Client Sample ID: **Outfall 3**

Lab Sample ID: 1235482001

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Acenaphthene	0.0723	ug/L
Fluorene	0.0678	ug/L
Naphthalene	0.222	ug/L
Benzene	2.65	ug/L
Ethylbenzene	4.88	ug/L
o-Xylene	6.36	ug/L
P & M -Xylene	11.2	ug/L
Toluene	29.6	ug/L

Volatile GC/MS

Client Sample ID: **Outfall 1**

Lab Sample ID: 1235482002

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Chemical Oxygen Demand	44.3	mg/L

Client Sample ID: **Outfall 2**

Lab Sample ID: 1235482003

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Chemical Oxygen Demand	46.9	mg/L

Results of Outfall 3

Client Sample ID: **Outfall 3**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482001
 Lab Project ID: 1235482

Collection Date: 10/02/23 16:55
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0723		0.0455	0.0136	ug/L	1		10/20/23 19:34
Acenaphthylene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Anthracene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Benzo(a)Anthracene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Benzo[a]pyrene	0.0182	U	0.0182	0.00564	ug/L	1		10/20/23 19:34
Benzo[b]Fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Benzo[g,h,i]perylene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Benzo[k]fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Chrysene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Dibenzo[a,h]anthracene	0.0182	U	0.0182	0.00564	ug/L	1		10/20/23 19:34
Fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Fluorene	0.0678		0.0455	0.0136	ug/L	1		10/20/23 19:34
Indeno[1,2,3-c,d] pyrene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Naphthalene	0.222		0.0909	0.0282	ug/L	1		10/20/23 19:34
Phenanthrene	0.0909	U	0.0909	0.0282	ug/L	1		10/20/23 19:34
Pyrene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:34
Surrogates								
2-Methylnaphthalene-d10 (surr)	59.6		38-100		%	1		10/20/23 19:34
Fluoranthene-d10 (surr)	70.3		30-111		%	1		10/20/23 19:34

Batch Information

Analytical Batch: XMS14000
 Analytical Method: EPA 625M SIM (PAH) LV
 Analyst: HMW
 Analytical Date/Time: 10/20/23 19:34
 Container ID: 1235482001-A

Prep Batch: XXX48798
 Prep Method: SW3535A
 Prep Date/Time: 10/07/23 10:00
 Prep Initial Wt./Vol.: 275 mL
 Prep Extract Vol: 1 mL

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 3

Client Sample ID: **Outfall 3**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482001
 Lab Project ID: 1235482

Collection Date: 10/02/23 16:55
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	2.65		0.400	0.120	ug/L	1		10/13/23 21:39
Ethylbenzene	4.88		1.00	0.310	ug/L	1		10/13/23 21:39
o-Xylene	6.36		1.00	0.310	ug/L	1		10/13/23 21:39
P & M -Xylene	11.2		2.00	0.620	ug/L	1		10/13/23 21:39
Toluene	29.6		1.00	0.310	ug/L	1		10/13/23 21:39

Surrogates

1,2-Dichloroethane-D4 (surr)	98.7		81-118		%	1		10/13/23 21:39
4-Bromofluorobenzene (surr)	102		85-114		%	1		10/13/23 21:39
Toluene-d8 (surr)	100		89-112		%	1		10/13/23 21:39

Batch Information

Analytical Batch: VMS22894
 Analytical Method: EPA 602/624
 Analyst: JY
 Analytical Date/Time: 10/13/23 21:39
 Container ID: 1235482001-C

Prep Batch: VXX40638
 Prep Method: SW5030B
 Prep Date/Time: 10/13/23 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 1

Client Sample ID: **Outfall 1**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482002
 Lab Project ID: 1235482

Collection Date: 10/02/23 17:27
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00	U	2.00	2.00	mg/L	1		10/04/23 15:07

Batch Information

Analytical Batch: BOD7568
 Analytical Method: SM21 5210B
 Analyst: M.A
 Analytical Date/Time: 10/04/23 15:07
 Container ID: 1235482002-C

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 1

Client Sample ID: **Outfall 1**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482002
 Lab Project ID: 1235482

Collection Date: 10/02/23 17:27
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Acenaphthylene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Anthracene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Benzo(a)Anthracene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Benzo[a]pyrene	0.0182	U	0.0182	0.00564	ug/L	1		10/20/23 19:54
Benzo[b]Fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Benzo[g,h,i]perylene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Benzo[k]fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Chrysene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Dibenzo[a,h]anthracene	0.0182	U	0.0182	0.00564	ug/L	1		10/20/23 19:54
Fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Fluorene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Indeno[1,2,3-c,d] pyrene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Naphthalene	0.0909	U	0.0909	0.0282	ug/L	1		10/20/23 19:54
Phenanthrene	0.0909	U	0.0909	0.0282	ug/L	1		10/20/23 19:54
Pyrene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 19:54
Surrogates								
2-Methylnaphthalene-d10 (surr)	60.5		38-100		%	1		10/20/23 19:54
Fluoranthene-d10 (surr)	78.5		30-111		%	1		10/20/23 19:54

Batch Information

Analytical Batch: XMS14000
 Analytical Method: EPA 625M SIM (PAH) LV
 Analyst: HMW
 Analytical Date/Time: 10/20/23 19:54
 Container ID: 1235482002-A

Prep Batch: XXX48798
 Prep Method: SW3535A
 Prep Date/Time: 10/07/23 10:00
 Prep Initial Wt./Vol.: 275 mL
 Prep Extract Vol: 1 mL

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 1

Client Sample ID: **Outfall 1**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482002
 Lab Project ID: 1235482

Collection Date: 10/02/23 17:27
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.400	U	0.400	0.120	ug/L	1		10/13/23 21:54
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		10/13/23 21:54
o-Xylene	1.00	U	1.00	0.310	ug/L	1		10/13/23 21:54
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		10/13/23 21:54
Toluene	1.00	U	1.00	0.310	ug/L	1		10/13/23 21:54

Surrogates

1,2-Dichloroethane-D4 (surr)	98.4		81-118		%	1		10/13/23 21:54
4-Bromofluorobenzene (surr)	103		85-114		%	1		10/13/23 21:54
Toluene-d8 (surr)	99.4		89-112		%	1		10/13/23 21:54

Batch Information

Analytical Batch: VMS22894
 Analytical Method: EPA 602/624
 Analyst: JY
 Analytical Date/Time: 10/13/23 21:54
 Container ID: 1235482002-E

Prep Batch: VXX40638
 Prep Method: SW5030B
 Prep Date/Time: 10/13/23 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 1

Client Sample ID: **Outfall 1**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482002
 Lab Project ID: 1235482

Collection Date: 10/02/23 17:27
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Waters Department

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chemical Oxygen Demand	44.3		20.0	6.20	mg/L	1		10/12/23 10:18

Batch Information

Analytical Batch: WSP5849
 Analytical Method: EPA 410.4
 Analyst: MEB
 Analytical Date/Time: 10/12/23 10:18
 Container ID: 1235482002-H

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 2

Client Sample ID: **Outfall 2**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482003
 Lab Project ID: 1235482

Collection Date: 10/02/23 17:55
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00	U	2.00	2.00	mg/L	1		10/04/23 15:07

Batch Information

Analytical Batch: BOD7568
 Analytical Method: SM21 5210B
 Analyst: M.A
 Analytical Date/Time: 10/04/23 15:07
 Container ID: 1235482003-C

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 2

Client Sample ID: **Outfall 2**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482003
 Lab Project ID: 1235482

Collection Date: 10/02/23 17:55
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Acenaphthylene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Anthracene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Benzo(a)Anthracene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Benzo[a]pyrene	0.0182	U	0.0182	0.00564	ug/L	1		10/20/23 20:14
Benzo[b]Fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Benzo[g,h,i]perylene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Benzo[k]fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Chrysene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Dibenzo[a,h]anthracene	0.0182	U	0.0182	0.00564	ug/L	1		10/20/23 20:14
Fluoranthene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Fluorene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Indeno[1,2,3-c,d] pyrene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Naphthalene	0.0909	U	0.0909	0.0282	ug/L	1		10/20/23 20:14
Phenanthrene	0.0909	U	0.0909	0.0282	ug/L	1		10/20/23 20:14
Pyrene	0.0455	U	0.0455	0.0136	ug/L	1		10/20/23 20:14
Surrogates								
2-Methylnaphthalene-d10 (surr)	56.3		38-100		%	1		10/20/23 20:14
Fluoranthene-d10 (surr)	74.4		30-111		%	1		10/20/23 20:14

Batch Information

Analytical Batch: XMS14000
 Analytical Method: EPA 625M SIM (PAH) LV
 Analyst: HMW
 Analytical Date/Time: 10/20/23 20:14
 Container ID: 1235482003-A

Prep Batch: XXX48798
 Prep Method: SW3535A
 Prep Date/Time: 10/07/23 10:00
 Prep Initial Wt./Vol.: 275 mL
 Prep Extract Vol: 1 mL

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 2

Client Sample ID: **Outfall 2**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482003
 Lab Project ID: 1235482

Collection Date: 10/02/23 17:55
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.400	U	0.400	0.120	ug/L	1		10/11/23 04:54
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		10/11/23 04:54
o-Xylene	1.00	U	1.00	0.310	ug/L	1		10/11/23 04:54
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		10/11/23 04:54
Toluene	1.00	U	1.00	0.310	ug/L	1		10/11/23 04:54

Surrogates

1,2-Dichloroethane-D4 (surr)	106		81-118		%	1		10/11/23 04:54
4-Bromofluorobenzene (surr)	99.2		85-114		%	1		10/11/23 04:54
Toluene-d8 (surr)	101		89-112		%	1		10/11/23 04:54

Batch Information

Analytical Batch: VMS22902
 Analytical Method: EPA 602/624
 Analyst: JY
 Analytical Date/Time: 10/11/23 04:54
 Container ID: 1235482003-E

Prep Batch: VXX40646
 Prep Method: SW5030B
 Prep Date/Time: 10/10/23 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 10/26/2023 7:45:32AM

Results of Outfall 2

Client Sample ID: **Outfall 2**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482003
 Lab Project ID: 1235482

Collection Date: 10/02/23 17:55
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Waters Department

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chemical Oxygen Demand	46.9		20.0	6.20	mg/L	1		10/12/23 10:18

Batch Information

Analytical Batch: WSP5849
 Analytical Method: EPA 410.4
 Analyst: MEB
 Analytical Date/Time: 10/12/23 10:18
 Container ID: 1235482003-H

Print Date: 10/26/2023 7:45:32AM

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **POA Stormdrain Outfall**
 Lab Sample ID: 1235482004
 Lab Project ID: 1235482

Collection Date: 10/02/23 00:00
 Received Date: 10/03/23 11:24
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.400	U	0.400	0.120	ug/L	1		10/13/23 20:24
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		10/13/23 20:24
o-Xylene	1.00	U	1.00	0.310	ug/L	1		10/13/23 20:24
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		10/13/23 20:24
Toluene	1.00	U	1.00	0.310	ug/L	1		10/13/23 20:24

Surrogates

1,2-Dichloroethane-D4 (surr)	104		81-118		%	1		10/13/23 20:24
4-Bromofluorobenzene (surr)	101		85-114		%	1		10/13/23 20:24
Toluene-d8 (surr)	99.7		89-112		%	1		10/13/23 20:24

Batch Information

Analytical Batch: VMS22894
 Analytical Method: EPA 602/624
 Analyst: JY
 Analytical Date/Time: 10/13/23 20:24
 Container ID: 1235482004-A

Prep Batch: VXX40638
 Prep Method: SW5030B
 Prep Date/Time: 10/13/23 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 10/26/2023 7:45:32AM

Method Blank

Blank ID: MB for HBN 1865302 [BOD/7568]

Blank Lab ID: 1738144

QC for Samples:

1235482002, 1235482003

Matrix: Water (Surface, Eff., Ground)

Results by SM21 5210B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Biochemical Oxygen Demand	2.00U	2.00	2.00	2.00	mg/L

Batch Information

Analytical Batch: BOD7568

Analytical Method: SM21 5210B

Instrument:

Analyst: M.A

Analytical Date/Time: 10/4/2023 3:07:00PM

Print Date: 10/26/2023 7:45:34AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1235482 [BOD7568]

Blank Spike Lab ID: 1738145

Date Analyzed: 10/04/2023 15:07

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235482002, 1235482003

Results by SM21 5210B

Parameter	Blank Spike (mg/L)			CL
	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	
Biochemical Oxygen Demand	198	209	106	(84.6-115.4

Batch Information

Analytical Batch: **BOD7568**

Analytical Method: **SM21 5210B**

Instrument:

Analyst: **M.A**

Print Date: 10/26/2023 7:45:37AM



Method Blank

Blank ID: MB for HBN 1866153 [VXX/40638]
Blank Lab ID: 1741351

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1235482001, 1235482002, 1235482004

Results by EPA 602/624

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.200U	0.400	0.120	0.200	ug/L
Ethylbenzene	0.500U	1.00	0.310	0.500	ug/L
o-Xylene	0.500U	1.00	0.310	0.500	ug/L
P & M -Xylene	1.00U	2.00	0.620	1.00	ug/L
Toluene	0.500U	1.00	0.310	0.500	ug/L

Surrogates

1,2-Dichloroethane-D4 (surr)	107	81-118		0	%
4-Bromofluorobenzene (surr)	101	85-114		0	%
Toluene-d8 (surr)	98.5	89-112		0	%

Batch Information

Analytical Batch: VMS22894
Analytical Method: EPA 602/624
Instrument: VPA 780/5975 GC/MS
Analyst: JY
Analytical Date/Time: 10/13/2023 6:24:00PM

Prep Batch: VXX40638
Prep Method: SW5030B
Prep Date/Time: 10/13/2023 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 10/26/2023 7:45:40AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1235482 [VXX40638]
 Blank Spike Lab ID: 1741352
 Date Analyzed: 10/13/2023 18:39

Spike Duplicate ID: LCSD for HBN 1235482
 [VXX40638]
 Spike Duplicate Lab ID: 1741353
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235482001, 1235482002, 1235482004

Results by EPA 602/624

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	29.4	98	30	29.6	99	(79-120)	0.71	(< 20)
Ethylbenzene	30	29.3	98	30	29.4	98	(79-121)	0.37	(< 20)
o-Xylene	30	29.1	97	30	29.4	98	(78-122)	1.00	(< 20)
P & M -Xylene	60	58.1	97	60	59.0	98	(80-121)	1.50	(< 20)
Toluene	30	28.7	96	30	28.8	96	(80-121)	0.31	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		98	30		98	(81-118)	0.00	
4-Bromofluorobenzene (surr)	30		101	30		101	(85-114)	0.59	
Toluene-d8 (surr)	30		101	30		101	(89-112)	0.30	

Batch Information

Analytical Batch: VMS22894
 Analytical Method: EPA 602/624
 Instrument: VPA 780/5975 GC/MS
 Analyst: JY

Prep Batch: VXX40638
 Prep Method: SW5030B
 Prep Date/Time: 10/13/2023 06:00
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 10/26/2023 7:45:43AM

Method Blank

Blank ID: MB for HBN 1866177 [VXX/40646]
Blank Lab ID: 1741432

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1235482003

Results by EPA 602/624

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.200U	0.400	0.120	0.200	ug/L
Ethylbenzene	0.500U	1.00	0.310	0.500	ug/L
o-Xylene	0.500U	1.00	0.310	0.500	ug/L
P & M -Xylene	1.00U	2.00	0.620	1.00	ug/L
Toluene	0.500U	1.00	0.310	0.500	ug/L

Surrogates

1,2-Dichloroethane-D4 (surr)	106	81-118		0	%
4-Bromofluorobenzene (surr)	101	85-114		0	%
Toluene-d8 (surr)	99.9	89-112		0	%

Batch Information

Analytical Batch: VMS22902
Analytical Method: EPA 602/624
Instrument: VPA 780/5975 GC/MS
Analyst: JY
Analytical Date/Time: 10/10/2023 11:40:00PM

Prep Batch: VXX40646
Prep Method: SW5030B
Prep Date/Time: 10/10/2023 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 10/26/2023 7:45:46AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1235482 [VXX40646]
 Blank Spike Lab ID: 1741433
 Date Analyzed: 10/10/2023 23:56

Spike Duplicate ID: LCSD for HBN 1235482 [VXX40646]
 Spike Duplicate Lab ID: 1741434
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235482003

Results by EPA 602/624

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	30.1	100	30	30.0	100	(79-120)	0.25	(< 20)
Ethylbenzene	30	30.9	103	30	30.3	101	(79-121)	1.80	(< 20)
o-Xylene	30	30.8	103	30	30.2	101	(78-122)	1.90	(< 20)
P & M -Xylene	60	60.3	100	60	59.4	99	(80-121)	1.40	(< 20)
Toluene	30	30.5	102	30	29.9	100	(80-121)	2.10	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		98	30		96	(81-118)	1.80	
4-Bromofluorobenzene (surr)	30		100	30		100	(85-114)	0.30	
Toluene-d8 (surr)	30		102	30		101	(89-112)	1.10	

Batch Information

Analytical Batch: VMS22902
 Analytical Method: EPA 602/624
 Instrument: VPA 780/5975 GC/MS
 Analyst: JY

Prep Batch: VXX40646
 Prep Method: SW5030B
 Prep Date/Time: 10/10/2023 06:00
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 10/26/2023 7:45:49AM



Method Blank

Blank ID: MB for HBN 1865890 [WSP/5849]

Blank Lab ID: 1740470

QC for Samples:

1235482002, 1235482003

Matrix: Water (Surface, Eff., Ground)

Results by EPA 410.4

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Chemical Oxygen Demand	10.0U	20.0	6.20	10.0	mg/L

Batch Information

Analytical Batch: WSP5849

Analytical Method: EPA 410.4

Instrument: HACH DR2700 Spec.

Analyst: MEB

Analytical Date/Time: 10/12/2023 10:18:00AM

Print Date: 10/26/2023 7:45:52AM

SGS North America Inc.

200 West Potter Drive Anchorage, AK 95518

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Member of SGS Group

Blank Spike Summary

Blank Spike ID: LCS for HBN 1235482 [WSP5849]
 Blank Spike Lab ID: 1740471
 Date Analyzed: 10/12/2023 10:18

Spike Duplicate ID: LCSD for HBN 1235482 [WSP5849]
 Spike Duplicate Lab ID: 1740472
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235482002, 1235482003

Results by EPA 410.4

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chemical Oxygen Demand	500	507	101	500	509	102	(90-110)	0.41	(< 25)

Batch Information

Analytical Batch: **WSP5849**
 Analytical Method: **EPA 410.4**
 Instrument: **HACH DR2700 Spec.**
 Analyst: **MEB**

Print Date: 10/26/2023 7:45:55AM



Matrix Spike Summary

Original Sample ID: 1235482003

MS Sample ID: 1740473 MS

MSD Sample ID:

QC for Samples: 1235482002, 1235482003

Analysis Date: 10/12/2023 10:18

Analysis Date: 10/12/2023 10:18

Analysis Date:

Matrix: Water (Surface, Eff., Ground)

Results by EPA 410.4

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chemical Oxygen Demand	46.9	500	536	98				90-110		

Batch Information

Analytical Batch: WSP5849

Analytical Method: EPA 410.4

Instrument: HACH DR2700 Spec.

Analyst: MEB

Analytical Date/Time: 10/12/2023 10:18:00AM

Print Date: 10/26/2023 7:45:57AM

Method Blank

Blank ID: MB for HBN 1865534 [XXX/48798]
Blank Lab ID: 1739219

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1235482001, 1235482002, 1235482003

Results by EPA 625M SIM (PAH) LV

Parameter	Results	LOQ/CL	DL	LOD	Units
Acenaphthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	0.0250	ug/L
Anthracene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	0.0100	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Chrysene	0.0250U	0.0500	0.0150	0.0250	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	0.0100	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Fluorene	0.0250U	0.0500	0.0150	0.0250	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	0.0250	ug/L
Naphthalene	0.0500U	0.100	0.0310	0.0500	ug/L
Phenanthrene	0.0318J	0.100	0.0310	0.0500	ug/L
Pyrene	0.0250U	0.0500	0.0150	0.0250	ug/L
Surrogates					
2-Methylnaphthalene-d10 (surr)	55.2	38-100		0	%
Fluoranthene-d10 (surr)	74.1	30-111		0	%

Batch Information

Analytical Batch: XMS14025
Analytical Method: EPA 625M SIM (PAH) LV
Instrument: Agilent 8890 GC/MS SYA
Analyst: HMW
Analytical Date/Time: 10/24/2023 3:51:00PM

Prep Batch: XXX48798
Prep Method: SW3535A
Prep Date/Time: 10/7/2023 10:00:00AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1235482 [XXX48798]
 Blank Spike Lab ID: 1739220
 Date Analyzed: 10/20/2023 13:05

Spike Duplicate ID: LCSD for HBN 1235482 [XXX48798]
 Spike Duplicate Lab ID: 1739221
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235482001, 1235482002, 1235482003

Results by EPA 625M SIM (PAH) LV

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Acenaphthene	2	1.54	77	2	1.42	71	(48-114)	8.40	(< 20)
Acenaphthylene	2	1.65	83	2	1.49	75	(35-121)	10.40	(< 20)
Anthracene	2	1.69	84	2	1.59	79	(53-119)	6.10	(< 20)
Benzo(a)Anthracene	2	1.66	83	2	1.51	76	(59-120)	9.50	(< 20)
Benzo[a]pyrene	2	1.87	94	2	1.66	83	(53-120)	12.00	(< 20)
Benzo[b]Fluoranthene	2	1.79	90	2	1.65	83	(53-126)	8.00	(< 20)
Benzo[g,h,i]perylene	2	1.93	97	2	1.75	88	(44-128)	9.80	(< 20)
Benzo[k]fluoranthene	2	1.84	92	2	1.66	83	(54-125)	10.20	(< 20)
Chrysene	2	1.77	89	2	1.59	79	(57-120)	11.10	(< 20)
Dibenzo[a,h]anthracene	2	1.90	95	2	1.75	88	(44-131)	8.10	(< 20)
Fluoranthene	2	1.75	87	2	1.56	78	(58-120)	11.30	(< 20)
Fluorene	2	1.57	79	2	1.54	77	(50-118)	2.20	(< 20)
Indeno[1,2,3-c,d] pyrene	2	1.90	95	2	1.75	88	(48-130)	7.70	(< 20)
Naphthalene	2	1.38	69	2	1.28	64	(43-114)	7.90	(< 20)
Phenanthrene	2	1.68	84	2	1.62	81	(53-115)	3.90	(< 20)
Pyrene	2	1.72	86	2	1.57	79	(53-121)	8.90	(< 20)

Surrogates

2-Methylnaphthalene-d10 (surr)	2		70	2		62	(38-100)	11.20	
Fluoranthene-d10 (surr)	2		86	2		79	(30-111)	8.80	

Batch Information

Analytical Batch: XMS14000
 Analytical Method: EPA 625M SIM (PAH) LV
 Instrument: Agilent GC 7890B/5977A SWA
 Analyst: HMW

Prep Batch: XXX48798
 Prep Method: SW3535A
 Prep Date/Time: 10/07/2023 10:00
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 10/26/2023 7:46:01AM

Appendix C – Assessment of Controls, 2023

Port of Alaska

Area / Concern	Source Controls	Source Reduction & Elimination Measures	BMPs
<i>Roadways</i>	A	A	A
<i>Vehicle Wash Areas</i>	A	A	A
<i>Petroleum, Oils, Lubricants</i>	A	A	A
<i>Paints, Antifreeze, Batteries</i>	A	A	A
<i>Hazardous Chemicals and Wastes</i>	A	A	A
<i>Floatables</i>	A	A	A
<i>Illicit Discharges / Improper Disposal</i>	A	A	A
<i>Spill Prevention and Control</i>	A	A	A
<i>Public Education</i>	A	A	A

'A' = 'Adequate'

'I' = 'Inadequate'

'N/A' = 'Not Applicable'

Matson

Area / Concern	Source Controls	Source Reduction & Elimination Measures	BMPs
<i>Roadways</i>	A	A	A
<i>Vehicle Wash Areas</i>	A	A	A
<i>Petroleum, Oils, Lubricants</i>	A	A	A
<i>Paints, Antifreeze, Batteries</i>	A	A	A
<i>Hazardous Chemicals and Wastes</i>	A	A	A
<i>Floatables</i>	A	A	A
<i>Illicit Discharges / Improper Disposal</i>	A	A	A
<i>Spill Prevention and Control</i>	A	A	A
<i>Public Education</i>	A	A	A

Tote Maritime

Area / Concern	Source Controls	Source Reduction & Elimination Measures	BMPs
<i>Roadways</i>	A	A	A
<i>Vehicle Wash Areas</i>	A	A	A
<i>Petroleum, Oils, Lubricants</i>	A	A	A
<i>Paints, Antifreeze, Batteries</i>	A	A	A
<i>Hazardous Chemicals and Wastes</i>	A	A	A
<i>Floatables</i>	A	A	A
<i>Illicit Discharges / Improper Disposal</i>	A	A	A
<i>Spill Prevention and Control</i>	A	A	A
<i>Public Education</i>	A	A	A

Appendix C – Assessment of Controls, 2023

AFSC/Menzies Aviation

Area / Concern	Source Controls	Source Reduction & Elimination Measures	BMPs
<i>Roadways</i>	A	A	A
<i>Vehicle Wash Areas</i>	N/A	N/A	N/A
<i>Petroleum, Oils, Lubricants</i>	A	A	A
<i>Paints, Antifreeze, Batteries</i>	A	A	A
<i>Hazardous Chemicals and Wastes</i>	A	A	A
<i>Floatables</i>	A	A	A
<i>Illicit Discharges / Improper Disposal</i>	A	A	A
<i>Spill Prevention and Control</i>	A	A	A
<i>Public Education</i>	A	A	A

Marathon

Area / Concern	Source Controls	Source Reduction & Elimination Measures	BMPs
<i>Roadways</i>	A	A	A
<i>Vehicle Wash Areas</i>	N/A	N/A	N/A
<i>Petroleum, Oils, Lubricants</i>	A	A	A
<i>Paints, Antifreeze, Batteries</i>	A	A	A
<i>Hazardous Chemicals and Wastes</i>	A	A	A
<i>Floatables</i>	A	A	A
<i>Illicit Discharges / Improper Disposal</i>	A	A	A
<i>Spill Prevention and Control</i>	A	A	A
<i>Public Education</i>	A	A	A

Delta Western

Area / Concern	Source Controls	Source Reduction & Elimination Measures	BMPs
<i>Roadways</i>	A	A	A
<i>Vehicle Wash Areas</i>	N/A	N/A	N/A
<i>Petroleum, Oils, Lubricants</i>	A	A	A
<i>Paints, Antifreeze, Batteries</i>	A	A	A
<i>Hazardous Chemicals and Wastes</i>	A	A	A
<i>Floatables</i>	A	A	A
<i>Illicit Discharges / Improper Disposal</i>	A	A	A
<i>Spill Prevention and Control</i>	A	A	A
<i>Public Education</i>	A	A	A

Appendix C – Assessment of Controls, 2023

ABI/AS&G

Area / Concern	Source Controls	Source Reduction & Elimination Measures	BMPs
<i>Roadways</i>	A	A	A
<i>Vehicle Wash Areas</i>	N/A	N/A	N/A
<i>Petroleum, Oils, Lubricants</i>	A	A	A
<i>Paints, Antifreeze, Batteries</i>	A	A	A
<i>Hazardous Chemicals and Wastes</i>	A	A	A
<i>Floatables</i>	A	A	A
<i>Illicit Discharges / Improper Disposal</i>	A	A	A
<i>Spill Prevention and Control</i>	A	A	A
<i>Public Education</i>	A	A	A

Subject: POA, MS4 Permit / Port SWPPP Team Q1 Meeting **Time:** 2:30 pm – 3:10 pm

Date: Thursday, February 16, 2023

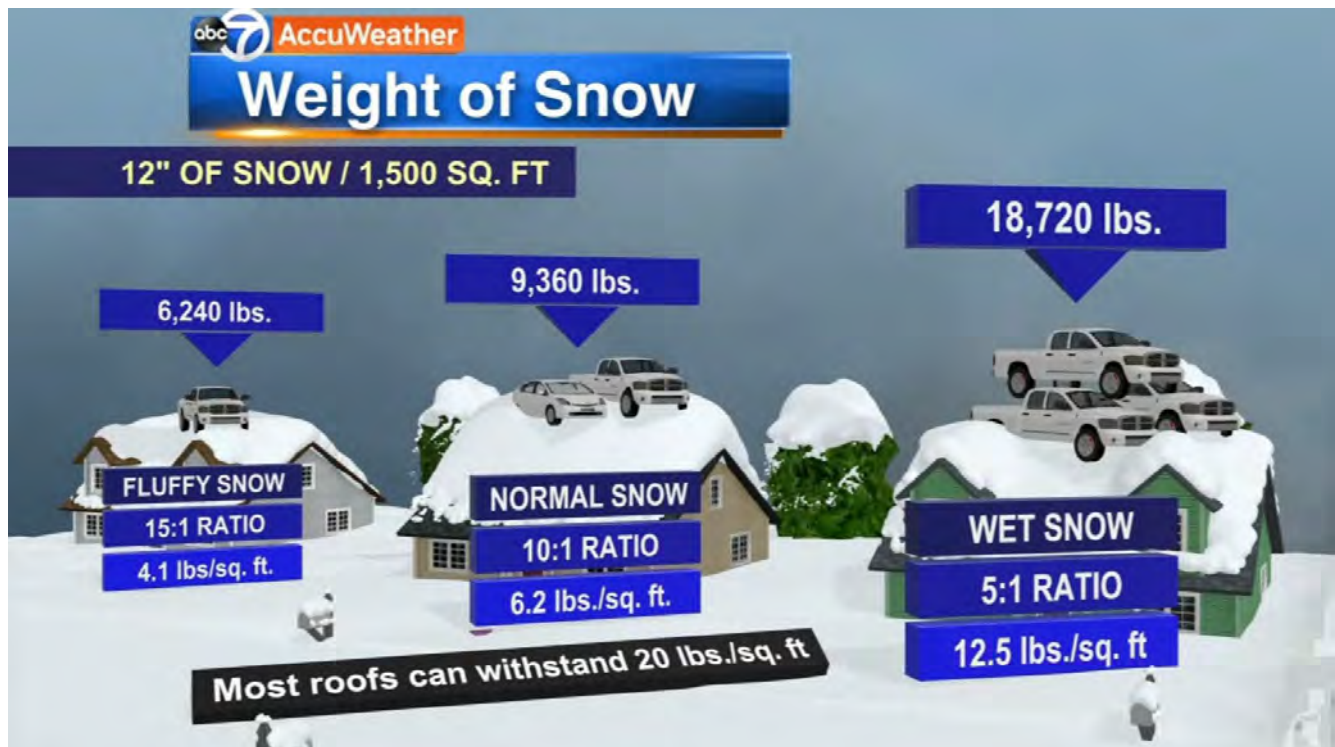
ATTENDEES

Brian Weigand, P.E.	POA	Ronnie Poole	POA
Paul Rotkis	POA	Theodore Frey	POA
Jim Rypkema	ADEC	Serena Lewellyn	Marathon
Laurie Butler	Menzies/AFC	Ryan Perrault	Marathon
Kris Shippen	ASG/ABI	Patrick Whitesell	MBI
Billy Godwin	Tote	Collin Dey, P.E.	MBI
Mike Thrasher	Tote	RaeAnne Hebnes, P.E.	MBI
?? Warner?	Tote	Nichole Rehm	PTS
Monique Cortez	Matson	Eric Hohmann	PTS

AGENDA

1. Introductions

- Safety minute: Snow! (Because no one is sick of talking about 'snow!' yet, right?)



2. Meeting Goals

1. Familiarize new team members
2. Testing out the 'hybrid' meeting format
 - a. General desire to keep as is or 'no strong feeling'
3. Identify ongoing and current operations, concerns or constraints on the MS4 permit / compliance process
 - a. POA
 - b. Lessees
 - i. No issues
 - c. ADEC
4. Discuss any recent issues
 - a. Illicit discharges
 - i. Summary of spills reported to date:
 - 1. None (as of Nov 2022)**
 - a. This is rather 'unusual' to have no reported spills on any POA areas (POA or lessees) to date; outstanding spill reports?
 2. Remnant cleanup / monitoring underway for 2021 spill?
 - a. Cleanup complete, waiting to be able to conduct water sampling (expected April-May 2023)
 - b. Anticipated conditions
 - i. Feb/Mar/Apr

3. Discussion Topics

1. MS4 permit
 - a. POA set up in new EPA online reporting system (NetDMR)
 - i. 2022 1st set of data uploaded
 1. Need to revise and resubmit
 - ii. Submit 2022 2nd set of data (PAW)
Storm drain inlet stenciling
 - iii. Ongoing? Still ongoing
 - iv. Let's talk (POA and MBI) methods to improve on stenciling (medallions, stamps, etc)
 - v. Does POA need its own MS4 permit?
 1. Set up meeting with Steve Ellis, Brian, Paul, Ronnie, etc
2. Storm drain system evaluations/upgrades
 - a. Planning – 5-year plan underway, nearly complete (done by May 2023)
 - b. System 1 – in design
 - i. Following earthquake repairs (SDS 1, 2, 4, 5, 7)
 - c. System 4 – also in design
3. Sand Tent/POA Admin
 - a. New sand tent location near PCT
 - i. Construction completed by...EOY 2023
 - b. POA Admin Bldg construction underway
 - i. New sand storage facility - 2023

- ii. RFP for remainder – EOY 2023/2024
 - c. 35% design for new POA Admin
 - i. Initial construction (footers) underway
 - ii. GPR found ‘relics of a bygone era’ at POA
 - iii. Material removed, helix piles going in
 - iv. Construction complete by Winter 2023
- 4. Other projects
 - a. Heat trace repairs (T1,2)
 - i. Underway (on hold)
 - ii. Movement by March 2023
 - b. Northern Expansion Stabilization, Phase I
 - i. Full Summer 2023
 - c. Tote – asphalt cut/replace (sidewalks, front/read of Admin)
 - ~~i. Complete for 2022~~
 - ii. Bow ramp hydraulics revamp underway (infrastructure replacement, no construction)
 - iii. Unlikely to affect stormwater / MS4
 - d. Matson – Drilling for GW monitoring wells; complete
 - i. Dockside drilling? Complete
 - e. Others?
- 5. Schedule
 - a. Inspections
 - i. 1st inspections in 2023 to be conducted following breakup
 - ii. Fingers crossed, precipitation in late May or June (Sample 1 supposed to be conducted prior to July; but also supposed to be conducted ‘following a precipitation event’)
 - b. Monitoring
 - c. IDDE Training – video is available on youtube
 - 1. Self-taught is fine (send attendee roster to Pat W)
 - 2. Pat W can also provide IDDE training
- 6. Activities
 - a. Regular/ongoing
 - i. Reminder; if doing any excavation at POA, get a dig permit (Paul R)
 - ii. Keep in mind that utility locates can take some time to process/validate (esp. in winter conditions)
 - b. Projects/new
 - i. Earthquake repairs
 - ii. ABI cement line complete (PCT)
 - iii. Geotech borings on Tract J (related to Tract J road up to bluff)
 - iv. Roger Graves Road and PCT Access rd will have Geotech borings completed late Nov 2022
 - v. Vertical Bridge cell tower (2023; paused for contaminant analysis)
 - vi. POA Microgrid
- 7. Next meeting
 - a. May 18, 2023

4. Action Items

Action Item Log

Action	Assigned	Due Date
Complete annual IDDE training	Leaseholders & POA	December 2022
Identify discharge issues	Leaseholders & POA	Ongoing
Provide IDDE training materials for reporting!	Leaseholders & POA	ASAP, Feb 2023
Provide list of spills/cleanup activity	Leaseholders & POA	ASAP, Feb 2023

5. General Discussion

ROSTER! With contact details

Name	Organization	Contact #	Email
Brian Weigand, P.E.	POA	343-6209 (w) / 717-6619 (m)	Brian.weigand@anchorageak.gov
Paul Rotkis	POA		Paul.rotkis@anchorageak.gov
Ronnie Poole	POA		Ronnie.poole@anchorageak.gov
Theodore Frey	POA		Theodore.frey@anchorageak.gov
Jim Rypkema	ADEC		James.rypkema@alaska.gov
Laurie Butler	Menzies/ AFC		Laurie.butler@menziesaviation.com
Kris Shippen	ASG/ ABI		Kris.shippen@anchsand.com
Scott DeWandel	ASG/ ABI		Scott.dewandel@anchsand.com
Billy Godwin	Tote		bgodwin@totemaritime.com
Mike Thrasher	Tote		mthrasher@totemaritime.com
???	Tote		iwarner@totemaritime.com
Monique Cortez	Matson		mcortez@matson.com
Serena Lewellyn	Marathon		slewellyn@marathonpetroleum.com
Ryan Perrault	Marathon		riperrault@marathonpetroleum.com
Patrick Whitesell	MBI	273-1603 (w) / 602-5352 (m)	Patrick.whitesell@mbakerintl.com
Collin Dey, P.E.	MBI		Collin.dey@mbakerintl.com
RaeAnne Hebnes, P.E.	MBI		rhebnes@mbakerintl.com
Nichole Rehm	PTS	561-6237 (w) / 360-7835 (m)	nicholerehm@ptsincalaska.com
Eric Hohmann	PTS		erichohmann@ptsincalaska.com



2000 Anchorage Port Road
Anchorage, Alaska 99501
907-343-6200
PortOfAlaska@Muni.org
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Subject: POA, MS4 Permit / Port SWPPP Team Q2 Meeting **Time:** 2:30 pm – 3:30 pm

Date: Thursday, May 18, 2023

ATTENDEES

Brian Weigand, P.E.	POA	Ronnie Poole	POA
Paul Rotkis	POA	Theodore Frey	POA
Jim Rypkema	ADEC	Serena Lewellyn	Marathon
Laurie Butler	Menzies/AFC	Ryan Perrault	Marathon
Kris Shippen	ASG/ABI	Patrick Whitesell	MBI
Billy Godwin	Tote	Collin Dey, P.E.	MBI
Mike Thrasher	Tote	RaeAnne Hebnes, P.E.	MBI
Jessica Warner	Tote	Nichole Rehm	PTS
Monique Cortez	Matson	Eric Hohmann	PTS

AGENDA

1. Introductions

- Safety minute: head protection!

<https://www.adn.com/alaska-news/2023/05/14/alaska-has-the-nations-highest-rate-of-deaths-by-traumatic-brain-injury/>

2. Meeting Goals

1. Familiarize new team members (update table below)
2. Identify ongoing and current operations, concerns or constraints on the MS4 permit / compliance process
 - a. POA
 - b. Lessees
 - i. No issues
 - c. ADEC
3. Discuss any recent issues
 - a. Illicit discharges
 - i. Summary of spills reported to date (May 2023):
 1. PCT Terminal - ABI hose, April 4
 - a. Appears from images to be <1 gallon
 2. **Any other spills/cleanups? Lease lots?**
 3. Status check for 2021 spill 'complete May 2023'?
 - a. Water sampling underway – May 2023

3. Discussion Topics

1. MS4 permit
 - a. 2022 Annual Report submitted – March 6, 2023
 - b. 1st Iteration of 2023 Sampling – May 19
 - i. To include dissolved metals (Outfalls 1, 2)
 - c. Storm drain inlet stenciling
 - i. Status for 2023? None thus far, also short-staffed. Will need to restencil
 1. 'Need to come up with other means than stenciling'
 - ii. Other options to repeated (paint) stenciling
 1. Depressed medallions, stamps on SD lids
 - d. Does POA needs its own MS4 permit?
 1. Set up meeting with Steve Ellis, Brian, Paul, Ronnie, Jim (ADEC), etc
2. Storm drain system evaluations/upgrades
 - a. Planning – 5-year plan underway, nearly complete (done by May 2023)
 - b. System 1 – in design
 - c. System 2 – to come next
 - d. ~~System 7 – in N expansion, might remove from list for now~~
3. Earthquake Repairs (2023; currently bidding)
 - a. SDS4 – replace vault outside fence
 - b. SDS1
 - c. SDS2
 - d. SDS5
 - e. SDS8
4. Sand Tent/POA Admin
 - a. New sand tent location near PCT
 - i. Construction 'substantially completed' by...EOY 2023
 - b. POA Admin Bldg construction underway
 - i. New sand storage facility - 2023
 - ii. RFP for remainder – EOY 2023/2024
 - c. 35% design for new POA Admin
 - i. Initial construction (footers) underway
 - ii. GPR found 'relics of a bygone era' at POA
 - iii. Material removed, helix piles going in
 - iv. Construction complete by Winter 2023
5. Other projects
 - a. ~~Heat trace repairs (T1,2)~~
 - i. ~~Finished April 2023~~
 - b. Northern Expansion Stabilization, Phase I
 - i. Underway as of May 2023
 - c. Tote – asphalt cut/replace (sidewalks, front/read of Admin)
 - i. 2023 program
 - ii. Replace building skirt
 - iii. Any other construction/GD efforts?

- d. Matson – anything on tap for 2023?
 - i. Some asphalt replacement (no program available)
- e. Others?
 - i. J-box in front of Tote ‘in dire need of repair’ (POA effort)
 - ii. Catch basin adjacent to this
- 6. Schedule
 - a. Inspections
 - i. 1st inspections in 2023 to be conducted following breakup
 - b. Monitoring
 - i. May 8 drive-thru; most yards looked pretty good
 - ii. Some remnant grit in yards/parking lots; sweep it clear
 - iii. A few SD inlet issues
 - 1. Check your BMPS/protection
 - c. IDDE Training – video is available on youtube
 - 1. Self-taught is fine (send attendee roster to Pat W)
 - 2. Paul R has materials at POA
 - 3. Pat W can also provide IDDE training
- 7. Activities
 - a. Regular/ongoing
 - i. Reminder; if doing any excavation at POA, get a dig permit (Paul R)
 - ii. Keep in mind that utility locates can take some time to process/validate (esp. in winter conditions)
 - b. Projects/new
 - i. New SDS inlet on SDS9, near outfall; includes OGS (T-baffle system)
 - ii. Earthquake repairs
 - iii. ~~ABI cement line complete (PCT)~~
 - iv. Geotech borings on Tract J (related to Tract J road up to bluff) – S&W to conduct, summer 2023
 - v. Roger Graves Road and PCT Access rd will have Geotech borings completed July 2023
 - vi. Cell tower (2023; paused for contaminant solution, change in Contractor)
 - vii. POA Microgrid (2023) – construction underway July 2023
- 8. Next meeting
 - a. August 17, 2023

4. Action Items

Action Item Log

Action	Assigned	Due Date
Complete annual IDDE training	Leaseholders & POA	December 2023
Identify discharge issues	Leaseholders & POA	Ongoing
Conduct outfall / wet weather monitoring	POA	May, (Sep?)
Set up meeting – MS4 ‘combine’ with MOA	PAW	June 2023
Provide IDDE training materials for reporting!	Leaseholders & POA	Jan 2024
Provide list of spills/cleanup activity	Leaseholders & POA	Jan 2024

5. General Discussion

ROSTER! With contact details

Name	Organization	Contact #	Email
Brian Weigand, P.E.	POA	343-6209 (w) / 717-6619 (m)	Brian.weigand@anchorageak.gov
Paul Rotkis	POA		Paul.rotkis@anchorageak.gov
Ronnie Poole	POA	343-6202 (w) / 802-8289 (m)	Ronnie.poole@anchorageak.gov
Theodore Frey	POA		Theodore.frey@anchorageak.gov
Jim Rypkema	ADEC		James.rypkema@alaska.gov
Laurie Butler	Menzies/ AFC		Laurie.butler@menziesaviation.com
Kris Shippen	ASG/ ABI		Kris.shippen@anchsand.com
Scott DeWandel	ASG/ ABI		Scott.dewandel@anchsand.com
Billy Godwin	Tote		bgodwin@totemaritime.com
Mike Thrasher	Tote		mthrasher@totemaritime.com
Jessica Warner	Tote		jwarner@totemaritime.com
Monique Cortez	Matson	263-5045 (w) / 223-6286 (m)	mcortez@matson.com
Serena Lewellyn	Marathon	322-5168 (m)	slewellyn@marathonpetroleum.com
Ryan Perrault	Marathon		rjperrault@marathonpetroleum.com
Patrick Whitesell	MBI	273-1603 (w) / 602-5352 (m)	Patrick.whitesell@mbakerintl.com
Collin Dey, P.E.	MBI	273-1634 (w) / 242-0118 (m)	Collin.dey@mbakerintl.com
RaeAnne Hebnes, P.E.	MBI	273-1618 (w) /	rhebnes@mbakerintl.com
Nichole Rehm	PTS	360-7835 (m)	nicholerehm@ptsincalaska.com
Eric Hohmann	PTS		erichohmann@ptsincalaska.com

Eric H (PTS): 'Comm lines along riprap wall near SDS outfall 3 (new comm line)'; whose is this? Temporary line?

Cathodic protection identified at NES (abandoned?); will the same cathodic protection be found around SDS2?

- Yes, identified on locates



2000 Anchorage Port Road
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907-343-6200
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PortOfAlaska.com

Subject: POA, MS4 Permit / Port SWPPP Team Q3 Meeting **Time:** 2:30 pm – 3:30 pm

Date: Thursday, August 17, 2023

ATTENDEES

Brian Weigand, P.E. ??	POA	<i>Ronnie Poole</i>	<i>POA</i>
<i>Paul Rotkis</i>	<i>POA</i>	<i>Theodore Frey</i>	<i>POA</i>
Jim Rypkema	ADEC	<i>Serena Lewellyn</i>	<i>Marathon</i>
<i>Laurie Butler</i>	<i>Menzies/AFC</i>	Ryan Perrault	Marathon
<i>Kris Shippen</i>	<i>ASG/ABI</i>	<i>Patrick Whitesell</i>	<i>MBI</i>
<i>Billy Godwin</i>	<i>Tote</i>	Mike Thrasher	Tote
<i>Jessica Warner</i>	<i>Tote</i>	<i>Nichole Rehm</i>	<i>PTS</i>
<i>Monique Cortez</i>	<i>Matson</i>	<i>Eric Hohmann</i>	<i>PTS</i>

AGENDA

1. Introductions

- Safety minute: back to school / driver safety

2. Meeting Goals

1. Familiarize new team members (update table below)
2. Identify ongoing and current operations, concerns or constraints on the MS4 permit / compliance process
 - a. POA
 - b. Lessees
 - c. ADEC
3. Discuss any recent issues
 - a. Illicit discharges
 - i. Summary of spills reported to date (May 2023):
 1. PCT Terminal - ABI hose, April 4
 - a. Appears from images to be <1 gallon
 2. Tote Gatehouse (Carlisle tractor) – June 27
 - a. Reportedly ~1 gallon hydraulic or other lubricant/oil
 3. Matson Administration area (semi tractor) – July 15
 - a. Approximately 5-10 gallons diesel
 4. **Any other spills/cleanups? Lease lots?**
 - a. June 20, 14:30, AFSC fuel facility

- i. Within 2dy containment yard; pressure washer leaked ~1 gal diesel
 - ii. US Ecology received all contaminated soil
 - b. Aug. 16, small transmission fluid leak out near longshoreman shack (behind Row 1)
 - i. NRC came in and vacuumed up, took for disposal
- 5. Status check for 2021 spill 'complete May 2023'?
 - a. Water sampling underway – May 2023
 - b. Per ADEC, ongoing water sampling for the foreseeable
- b. Issues with BMPs / Construction complications
 - i. POA Stormwater site form; does this need to be reported/tracked?
 - 1. PAW to check/verify**
- c. Issues with compliance
 - i. POA – vacant PM/compliance role (Brian Weigand)

3. Discussion Topics

- 1. MS4 permit
 - a. 2022 Annual Report submitted – March 6, 2023
 - b. 1st Iteration of 2023 Sampling – conducted May 19
 - c. Storm drain inlet stenciling
 - i. Status for 2023? None thus far, also short-staffed. Will need to restencil
 - 1. 'Need to come up with other means than stenciling'
 - ii. Other options to repeated (paint) stenciling
 - 1. Depressed medallions, stamps on SD lids
 - d. Does POA needs its own MS4 permit?
 - 1. Set up meeting with Steve Ellis, Paul, Ronnie, Jim (ADEC), etc
- 2. Storm drain system evaluations/upgrades
 - a. Planning – ongoing (grant applications and funding continuously sought)
 - b. System 1 – in design
 - c. System 2 – to come next
- 3. Earthquake Repairs (2023; SC Construction awarded, under construction)
 - a. SDS4 – starting construction Aug 2023
 - b. SDS1 – to be completed by Q1 2024
 - c. SDS2 – under construction
 - d. SDS5 – to be completed by EOY 2023
 - e. SDS8 – to be completed by EOY 2023
- 4. Sand Tent/POA Admin
 - a. New sand tent location near PCT
 - i. To be rebid (or renegotiated) Q3 2023
 - ii. Construction 'substantially completed' by...(2024?)
 - b. POA Admin Bldg construction underway
 - i. RFP for remainder – EOY 2023/2024
 - c. 35% design for new POA Admin
 - i. Initial construction (footers) underway

- ii. Material removed, helix piles going in
- iii. Tying in utilities Aug. 2023
- iv. Construction complete by Spring 2024

5. Other projects

- a. Northern Expansion Stabilization, Phase I
 - i. Underway as of May 2023
- b. Tote – asphalt cut/replace (sidewalks, front/read of Admin)
 - i. 2023 program (multiple rain delays)
 - ii. Replace building skirt (started Aug 2023)
 - iii. Any other construction/GD efforts?
- c. Matson – anything on tap for 2023?
 - i. Some asphalt replacement (no program available)
- d. Others?
 - i. J-box in front of Tote ‘in dire need of repair’ (POA effort); not yet complete
 - ii. Catch basin adjacent to this
 - iii. ACS going to work on utility cables @ ABI
 - iv. AFSC; anode (cathodic) protection going to drill on Aug29 within 2dy containment, approx. 14 days total (1 inside contain, 1 outside)
 - v. Potholing project from Terminal 2 S to near POAVY, starting late Aug 2023
 - 1. Any contaminates soils to be removed from site

6. Schedule

- a. Inspections
 - i. 2nd inspections in 2023 to be conducted within next 2 weeks (August)
- b. Monitoring
 - i. May 8 drive-thru; most yards looked pretty good
 - 1. Some remnant grit in yards/parking lots; sweep it clear
 - 2. A few SD inlet issues
 - 3. Check your BMPS/protection
- c. IDDE Training – video is available on youtube
 - 1. Self-taught is fine (send attendee roster to Pat W)
 - 2. Paul R has materials at POA
 - 3. Pat W can also provide IDDE training
 - 4. 4 months left in 2023!

7. Activities

- a. Regular/ongoing
 - i. Reminder; if doing any excavation at POA, get a dig permit (Paul R)
 - ii. Keep in mind that utility locates can take some time to process/validate (esp. in winter conditions)
- b. Projects/new
 - i. ~~New SDS inlet on SDS9, near outfall; includes OGS (T-baffle system)~~
 - ii. Earthquake repairs
 - iii. Geotech borings on Tract J (related to Tract J road up to bluff) – S&W to conduct, summer 2023 (waiting for \$)
 - iv. Roger Graves Road will have Geotech borings completed; 55-gal drum of soil sitting on Tract J for disposal

- v. Cell tower (2023; paused for contaminant solution, change in Contractor)
 - vi. POA Microgrid (2023) – construction underway Aug 2023
8. Next meeting
- a. November 16, 2023

4. Action Items

Action Item Log

Action	Assigned	Due Date
Complete annual IDDE training	Leaseholders & POA	December 2023
Identify discharge issues	Leaseholders & POA	Ongoing
Conduct outfall / wet weather monitoring	POA	May, (Aug?)
Set up meeting – MS4 ‘combine’ with MOA	PAW	On hold
Provide IDDE training materials for reporting!	Leaseholders & POA	Jan 2024
Provide list of spills/cleanup activity	Leaseholders & POA	Jan 2024

5. General Discussion

ROSTER! With contact details

Name	Organization	Contact #	Email
Brian Weigand, P.E.	POA	343-6209 (w) / 717-6619 (m)	Brian.weigand@anchorageak.gov
Paul Rotkis	POA		Paul.rotkis@anchorageak.gov
Ronnie Poole	POA	343-6202 (w) / 802-8289 (m)	Ronnie.poole@anchorageak.gov
Theodore Frey	POA		Theodore.frey@anchorageak.gov
Jim Rypkema	ADEC		james.rypkema@alaska.gov
Laurie Butler	AFSC (oper. Menzies_	(907) 231-4043 (m)	Laurie.butler@menziesaviation.com
Kris Shippen	ASG/ ABI		Kris.shippen@anchsand.com
Scott DeWandel	ASG/ ABI		Scott.dewandel@anchsand.com
Billy Godwin	Tote		bgodwin@totemaritime.com
Mike Thrasher	Tote		mthrasher@totemaritime.com
Jessica Warner	Tote		jwarner@totemaritime.com
Monique Cortez	Matson	263-5045 (w) / 223-6286 (m)	mcortez@matson.com
Serena Lewellyn	Marathon	322-5168 (m)	slewellyn@marathonpetroleum.com
Ryan Perrault	Marathon		riperrault@marathonpetroleum.com
Patrick Whitesell	MBI	273-1603 (w) / 602-5352 (m)	Patrick.whitesell@mbakerintl.com
Collin Dey, P.E.	MBI	273-1634 (w) / 242-0118 (m)	Collin.dey@mbakerintl.com
RaeAnne Hebnes, P.E.	MBI	273-1618 (w) /	rhebnes@mbakerintl.com
Nichole Rehm	PTS	360-7835 (m)	nicholerehm@ptsincalaska.com
Eric Hohmann	PTS		erichohmann@ptsincalaska.com

Subject: POA, MS4 Permit / Port SWPPP Team Q4 Meeting **Time:** 2:30 pm – 3:30 pm

Date: Thursday, November 16, 2023

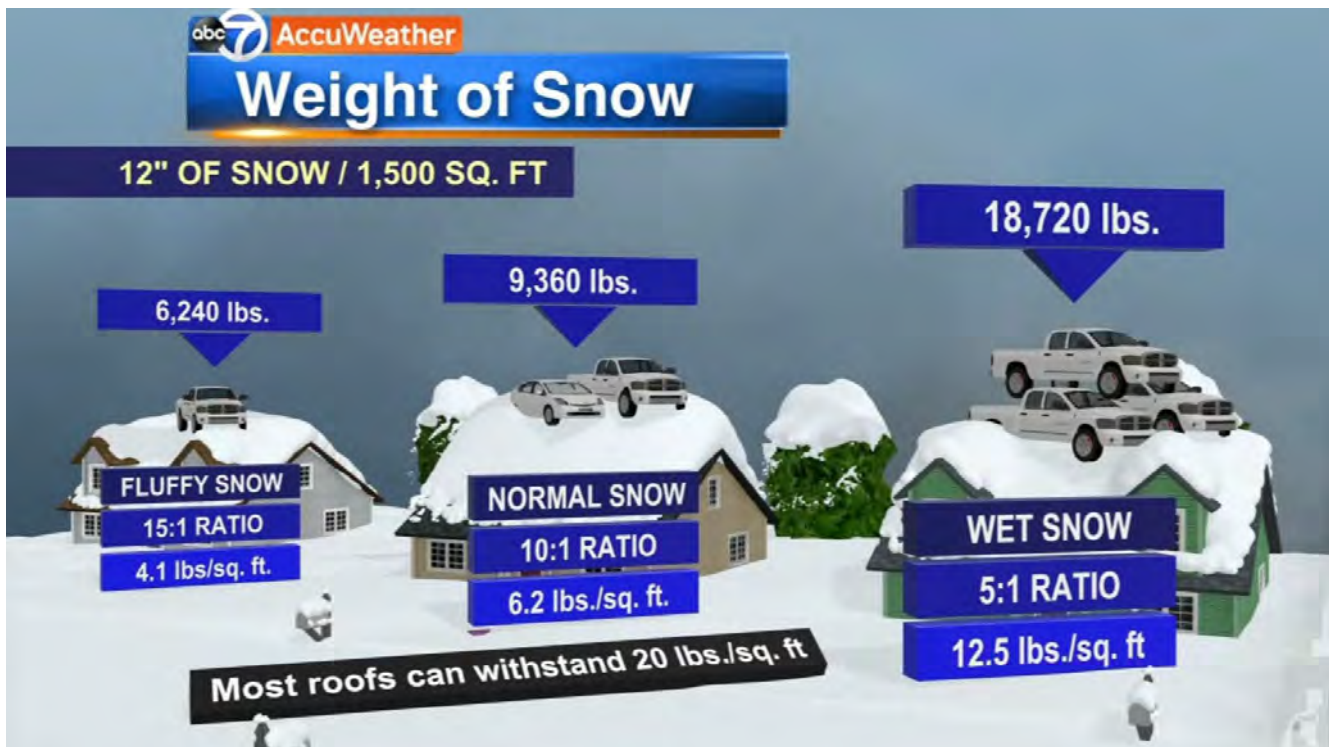
ATTENDEES

Michael Rhodes	POA	Ronnie Poole	POA
Paul Rotkis	POA	Theodore Frey	POA
Jim Rypkema	ADEC	Serena Lewellyn	Marathon
Laurie Butler	Menzies/AFC	Ryan Perrault	Marathon
Kris Shippin	ASG/ABI	Patrick Whitesell	MBI
Billy Godwin	Tote	Mike Thrasher	Tote
Jessica Warner	Tote	Nichole Rehm	PTS
Monique Cortez	Matson	Eric Hohmann	PTS

AGENDA

1. Introductions

- Safety minute (recycled for good reason): **Snow!**



If you live in an older abode and/or have a shallow roof incline, get that load off!

2. Meeting Goals

1. Familiarize new team members (update table below)
2. Identify ongoing and current operations, concerns or constraints on the MS4 permit / compliance process
 - a. POA
 - b. Lessees
 - c. ADEC
3. Discuss any recent issues
 - a. Illicit discharges
 - i. Summary of spills reported to date (Nov 2023):
 1. PCT Terminal - ABI hose, April 4
 - a. Appears from images to be <1 gallon
 2. Tote Gatehouse (Carlisle tractor) – June 27
 - a. Reportedly ~1 gallon hydraulic or other lubricant/oil
 3. Matson Administration area (semi tractor) – July 15
 - a. Approximately 5-10 gallons diesel
 4. AFSC fuel facility June 20, 14:30
 - a. Within 2dy containment yard; pressure washer leaked ~1 gal diesel
 - b. US Ecology received all contaminated soil
 5. Aug. 16, small transmission fluid leak out near longshoreman shack (behind Row 1)
 - a. NRC came in and vacuumed up, took for disposal
 6. **Any other spills/cleanups? Lease lots?**
 - a. TOTE – trestle 3a, hydraulic line blew Sunday Nov. 12 (?)
 - i. About 1 qt hydraulic fluid
 - ii. ADEC notified
 - iii. Cleanup complete
 7. Status check for 2021 spill ‘complete May 2023’?
 - a. Per ADEC, ongoing water sampling for the foreseeable
 - b. Issues with BMPs / Construction complications
 - i. POA Stormwater site form; does this need to be reported/tracked?
 1. If you’re not sure, please document/report and track
 - c. Issues with compliance
 - d. **Overall, are there any items, issues concerns or constraints that leaseholders would like to see revised in the Port’s 2025 MS4 Permit Renewal?**
 - i. No painting/stenciling for storm drain inlets (Paul R)

3. Discussion Topics

1. MS4 Permit
 - a. 2ndst Iteration of 2023 Sampling – conducted October 2
 - b. Storm drain inlet stenciling

- i. Status for 2023? Hasn't occurred, due to lack of people-power, rain, now freeze
 1. 'Need to come up with other means than stenciling'
 - ii. Other options to repeated (paint) stenciling
 1. Depressed medallions, stamps on SD lids
 2. Storm drain system evaluations/upgrades
 - a. Planning – ongoing (grant applications and funding continuously sought)
 - b. System 1 – in design
 - c. System 2 – to come next, along with SDS005; advertised RFP by 1/2024
 3. Earthquake Repairs (2023; SC Construction awarded, under construction)
 - a. All surface disturbances complete
 - b. Pipe lining on SDS001 in 2024
 4. Sand Tent/POA Admin
 - a. New sand tent location on Tract J near Security
 - i. Construction 'substantially completed' by 2024
 - ii. Roger Graves Rd improvements at the same time
 - iii. Expect Roger Graves are to be 'busy'
 - b. POA Admin Bldg construction underway
 - i. Area paved (asphalt), BMPs removed, ground disturbance largely complete
 - ii. Construction complete by Spring 2024
 - iii. PAW to check on status of CS stockpile (overwinter on location?)
 1. Also, CS stockpile over east of checkpoint 3 (E of Roger Graves)
 5. Other projects
 - a. Any ongoing 2023?
 - i. Northern Expansion Stabilization, Phase I
 1. Buttoned up (at least for winter)
 - ii. Tote – asphalt cut/replace (sidewalks, front/read of Admin)
 - iii. Matson
 - iv. Others?
 1. ~~J-box in front of Tote 'in dire need of repair' (POA effort); not yet complete~~
 2. ~~Catch basin adjacent to this~~
 3. ACS going to work on utility cables @ ABI
 4. ~~AFSC; anode (cathodic) protection going to drill on Aug29 within 2dy containment, approx. 14 days total (1 inside contain, 1 outside)~~
 5. ~~Potholing project from Terminal 2 S to near POAVY, starting late Aug 2023~~
 6. Schedule
 - a. Inspections
 - i. Sampling complete for 2023
 - ii. Lot inspections ongoing
 - b. Monitoring
 - i. A few SD inlet issues
 - ii. Check your BMPS/protection
 - iii. Outfall project has changed storm system a bit (structures, pipe alignments, some valves)
 1. As-builts should start becoming available in 2024
 - c. IDDE Training

- i. Video is available on youtube
 - ii. Self-taught is fine (send attendee roster to Pat W)
 - iii. Paul R has materials at POA
 - iv. Pat W can also provide IDDE training
 - v. 1.5 months left in 2023!
- d. 2023 Annual Report due February 15, 2024
- 7. Activities
 - a. Regular/ongoing
 - i. Reminder; if doing any excavation at POA, get a dig permit (Paul R)
 - 1. Locates to be contracted out, permit still held by POA
 - ii. Keep in mind that utility locates can take some time to process/validate (esp. in winter conditions)
 - b. 2024 Projects?
 - i. Cell tower (2023; paused for contaminant solution, change in Contractor)
 - ii. POA Microgrid (2023) – construction underway Aug 2023
 - iii. PCT access rd construction – may occur in 2024
 - c. 'Area to store tailings to triage (for POA projects)'
- 8. Next meeting
 - a. February 15, 2024
 - b. Will send out 2024 Meeting series invites shortly

4. Action Items

Action Item Log

Action	Assigned	Due Date
Complete annual IDDE training	Leaseholders & POA	Dec 31, 2023
Identify discharge issues	Leaseholders & POA	Ongoing
Conduct outfall / wet weather monitoring	POA	May, Oct
Set up invite for 2024 SWPP quarterly meetings	PAW	Nov 2023
Provide IDDE training materials for reporting!	Leaseholders & POA	Jan 15, 2024
Provide list of spills/cleanup activity on lots	Leaseholders & POA	Jan 15, 2024

5. General Discussion

ROSTER! With contact details

Name	Organization	Contact #	Email
Michael Rhodes	POA	343-6209 (w) /	Michael.Rhodes2@anchorageak.gov
Paul Rotkis	POA		Paul.rotkis@anchorageak.gov
Ronnie Poole	POA	343-6202 (w) / 802-8289 (m)	Ronnie.poole@anchorageak.gov
Theodore Frey	POA		Theodore.frey@anchorageak.gov
Jim Rypkema	ADEC		james.rypkema@alaska.gov
Laurie Butler	AFSC (oper. Menzies_	(907) 231-4043 (m)	Laurie.butler@menziesaviation.com
Kris Shippen	ASG/ ABI		Kris.shippen@anchsand.com
Scott DeWandel	ASG/ ABI		Scott.dewandel@anchsand.com

Billy Godwin	Tote		bgodwin@totemaritime.com
Mike Thrasher	Tote		mthrasher@totemaritime.com
Jessica Warner	Tote		jwarner@totemaritime.com
Monique Cortez	Matson	263-5045 (w) / 223-6286 (m)	mcortez@matson.com
Serena Lewellyn	Marathon	322-5168 (m)	slewellyn@marathonpetroleum.com
Ryan Perrault	Marathon		rjperrault@marathonpetroleum.com
Patrick Whitesell	MBI	273-1603 (w) / 602-5352 (m)	Patrick.whitesell@mbakerintl.com
RaeAnne Hebnes, P.E.	MBI	273-1618 (w) /	rhebnes@mbakerintl.com
Nichole Rehm	PTS	360-7835 (m)	nicholerehm@ptsincalaska.com
Eric Hohmann	PTS		erichohmann@ptsincalaska.com