**Dave Bronson, Mayor**

# 2022 Pesticide Screening Report

## APDES Permit No. AKS-052558

## FINAL REPORT

NOVEMBER 2022

## MUNICIPALITY OF ANCHORAGE

## WATERSHED MANAGEMENT SERVICES


Prepared for: Municipality of Anchorage
Project Management and Engineering Department
Watershed Management Services

Prepared by: HDR Engineering, Inc.
582 E 36th Ave, Suite 500
Anchorage, AK 99503


WATERSHED MANAGEMENT

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# Introduction

The Alaska Department of Environmental Conservation (ADEC) reissued the joint Municipal Separate Storm Sewer System (MS4) permit in August 2020 to the Municipality of Anchorage (MOA) and the Alaska State Department of Transportation and Public Facilities (ADOT&PF; Permit number AKS-052558). Section 4.1.6 of the permit requires continued sampling of Lake Otis, Hideaway Lake, and Little Campbell Lake as a continuation of the previous permit's pesticide screening program. This report provides the results of the 2022 sampling event.

## Pesticide Definition

The term pesticide is defined by ADEC to be "a chemical or biological agent intended to prevent, destroy, repel, or mitigate plant or animal life, and any substance intended for use as a plant regulatory, defoliant, or desiccant, including insecticides, fungicides, rodenticides, herbicides, nematocides, and biocides." For the purposes of the MOA water quality program, the term pesticide includes herbicides, insecticides, and fungicides (MOA 2000).

## Background

Pesticides have received widespread attention because of their potential adverse effects on humans and aquatic life. Adverse impacts from exposure can include acute and chronic toxicity, carcinogenicity, reproductive and nervous system disorders, and endocrine disruption. For these reasons, pesticides have been studied in the Anchorage basin for years by the MOA and the U.S. Geological Survey (USGS).

The U.S. Environmental Protection Agency (EPA) issued the MOA and the ADOT&PF a MS4 permit under the National Pollutant Discharge Elimination System (NPDES) in 1999. To meet the requirements of the permit, the MOA conducted pesticide screening studies beginning in 2000 (MOA 2000). The EPA re-issued the permit in 2009 prior to the State of Alaska receiving primacy to operate the NPDES program. The re-issued permit became effective February 1, 2010, under the administration of the ADEC as an Alaska Pollutant Discharge Elimination System (APDES) MS4 permit. The permit was re-issued in August 2015 and again in August 2020 with the current permit expiring on July 31st, 2025. Pesticide sampling occurred for the 2009 permit cycle in 2011 and 2013, for the 2015 permit cycle in 2016 and 2018. For the 2020 permit renewal sampling occurred in 2022 with a second sampling scheduled for 2024.

The MOA does not contain a large amount of agricultural land; pesticide use is predominantly home application for lawn and garden care, golf course maintenance, industrial application within utility corridors, and municipal maintenance (landscape, right-of-way, and parks). All these areas tend to be close to local waterways. The pesticides used in the Anchorage area include broadcast pesticides applied by homeowners and localized pesticides applied along roads and trails by agencies.

Factors influencing the vulnerability of surface water to contamination by pesticides include the quantity and timing of pesticide application, type of soil, topography, and buffer area between the site of application and the water body. Pesticide application typically occurs in the spring and summer months. This coincides with the heaviest rainfall period and the greatest likelihood of chemicals being washed into local streams and lakes. Unless direct application to a water body is made, stormwater runoff serves as the conveyance mechanism. Water bodies that are located closer to a pesticide application site are more likely to receive direct runoff from a post-

application rain event than a more distant water body. Pesticides that are not washed off may be transported into groundwater through infiltration, and these may be subsequently discharged as base flow to streams. This conveyance mechanism likely results in lower concentrations of pesticides in the receiving water since pesticides are retained within the soil matrix (MOA 1999).

The MOA conducted a pesticide use survey in 1999 (MOA 1999) and found seven pesticides were used most prevalently, two of which were selected for screening (MOA 2000). These two pesticides are Sevin FL (Carbaryl), which is used in the summer for aphid and spruce beetle control, and 2,4-D, a broadcast herbicide used by homeowners for lawn care and aquatic vegetation control.

The pesticide screening program was originally designed to collect screening data within areas that are most likely to accumulate pesticides. The EPA and ADEC suggested that sampling the water column of closed-basin lakes (lakes without defined surface water outlets) would meet the criteria. Three closed-basin lakes, Lake Otis, Hideaway Lake, and Little Campbell Lake, were sampled in 2011, 2013, 2016, 2018, and 2022. Grab samples were collected from the water column at least 10 meters offshore of each lake. Samples were analyzed for 2,4-D and Carbaryl. The monitoring revealed detectable levels of 2,4-D in Hideaway Lake and Lake Otis in the 2013 water samples (MOA 2013). These samples were the first in the history of the sampling program to find detectable levels of pesticides, though much lower than the ADEC drinking water standard. Since detection of 2,4-D had never occurred in either lake before, a second sampling event was completed in August 2013. The repeated sampling confirmed that 2,4-D was present in concentrations over the method detection limit in both lakes. In 2016 and 2018, samples from all three lakes showed results of non-detect, bringing the levels of 2,4-D back down to the pre-2013 levels (MOA 2018).

# Screening Program

The goal of the pesticide screening program is to determine whether two pesticides commonly used in the Anchorage area persist in three closed-basin lakes selected for screening: Lake Otis, Hideaway Lake, and Little Campbell Lake (Figure 1). To meet this goal, MOA sampled for 2,4-D and Carbaryl, as representative pesticides, in each of the three lakes. Lake Otis and Hideaway Lake are surrounded by residential development while the area around Little Campbell Lake remains undeveloped. Little Campbell Lake is used as a control for this study.

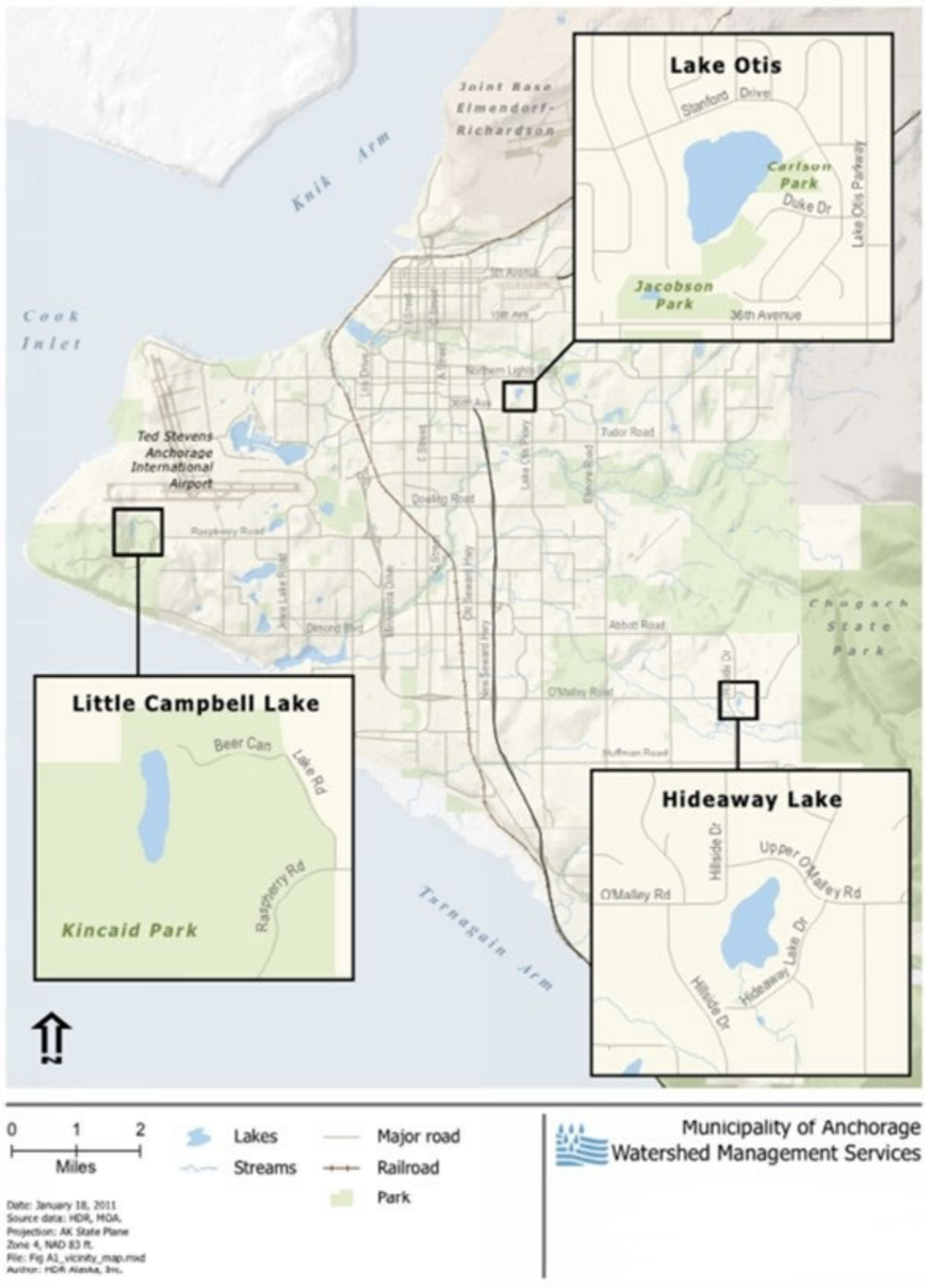
The 2009 APDES permit specified that pesticides are to be screened using a field immunoassay kit and any positive readings will be verified by a laboratory sample. However, immunoassay kits are no longer available for Carbaryl. Therefore, the sampling design was modified (in the updated Monitoring, Evaluation, and Quality Assurance Plan [QAP]; MOA 2021) to include laboratory sampling. In 2022, Eurofins Eaton Analytical (EEA) in South Bend, IN (subcontracted by SGS North America, Inc. [SGS] in Anchorage) provided sampling containers and performed the laboratory analysis.

## Sampling Locations

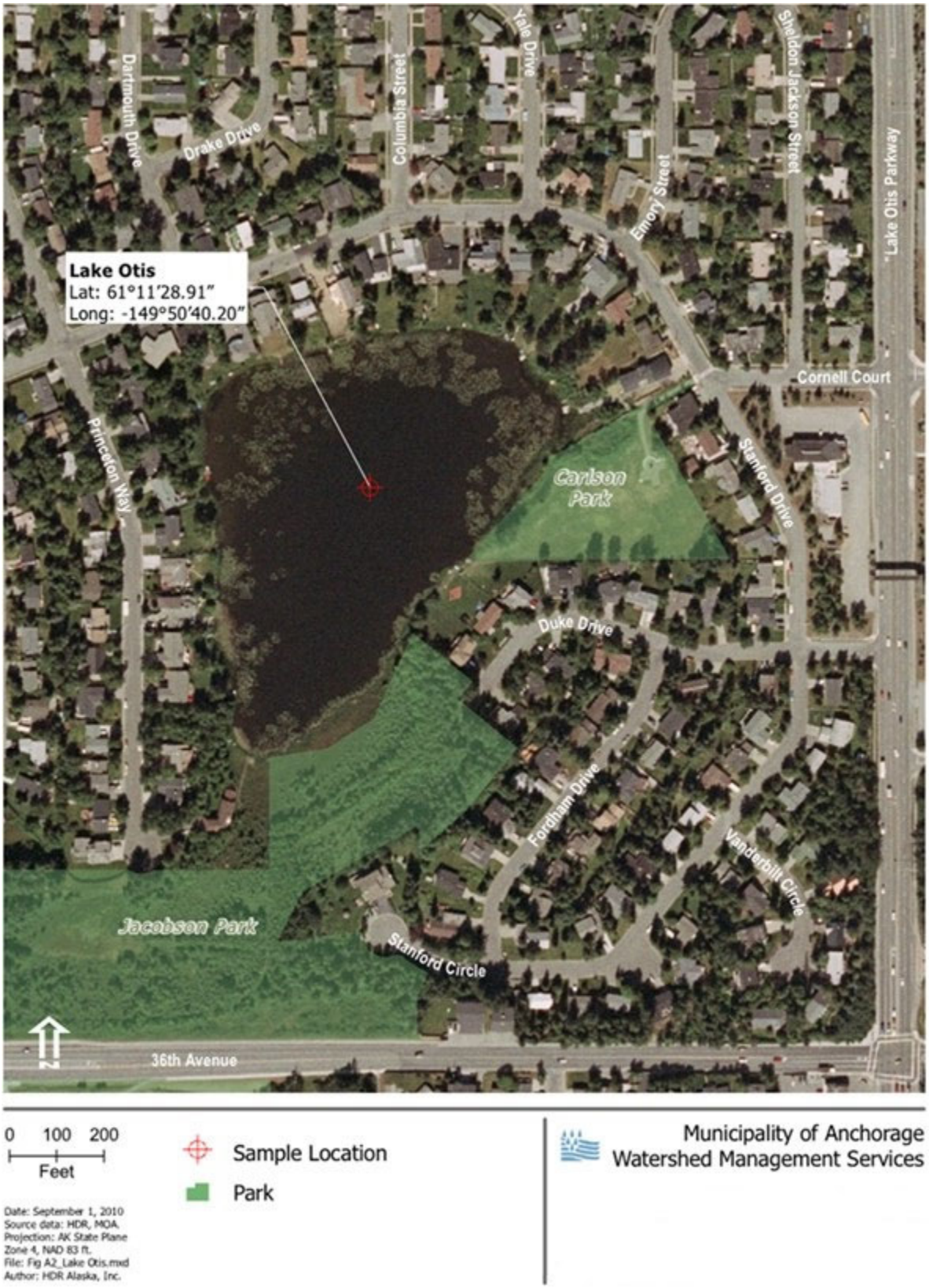
Pesticide sampling was conducted at Lake Otis, Hideaway Lake, and Little Campbell Lake on August 29, 2022. Water samples were collected from approximately the deepest portions of Lake Otis, Hideaway Lake, and Little Campbell Lake, at least 10 meters from the shore. The locations coincide with those sampled under the previous permit and provide a sample

representative of the overall water quality of the lake. An overview of the sample sites is provided in Figure 1, while specific sample locations are shown in Figures 2, 3 and 4. GPS coordinates are provided on the figures.

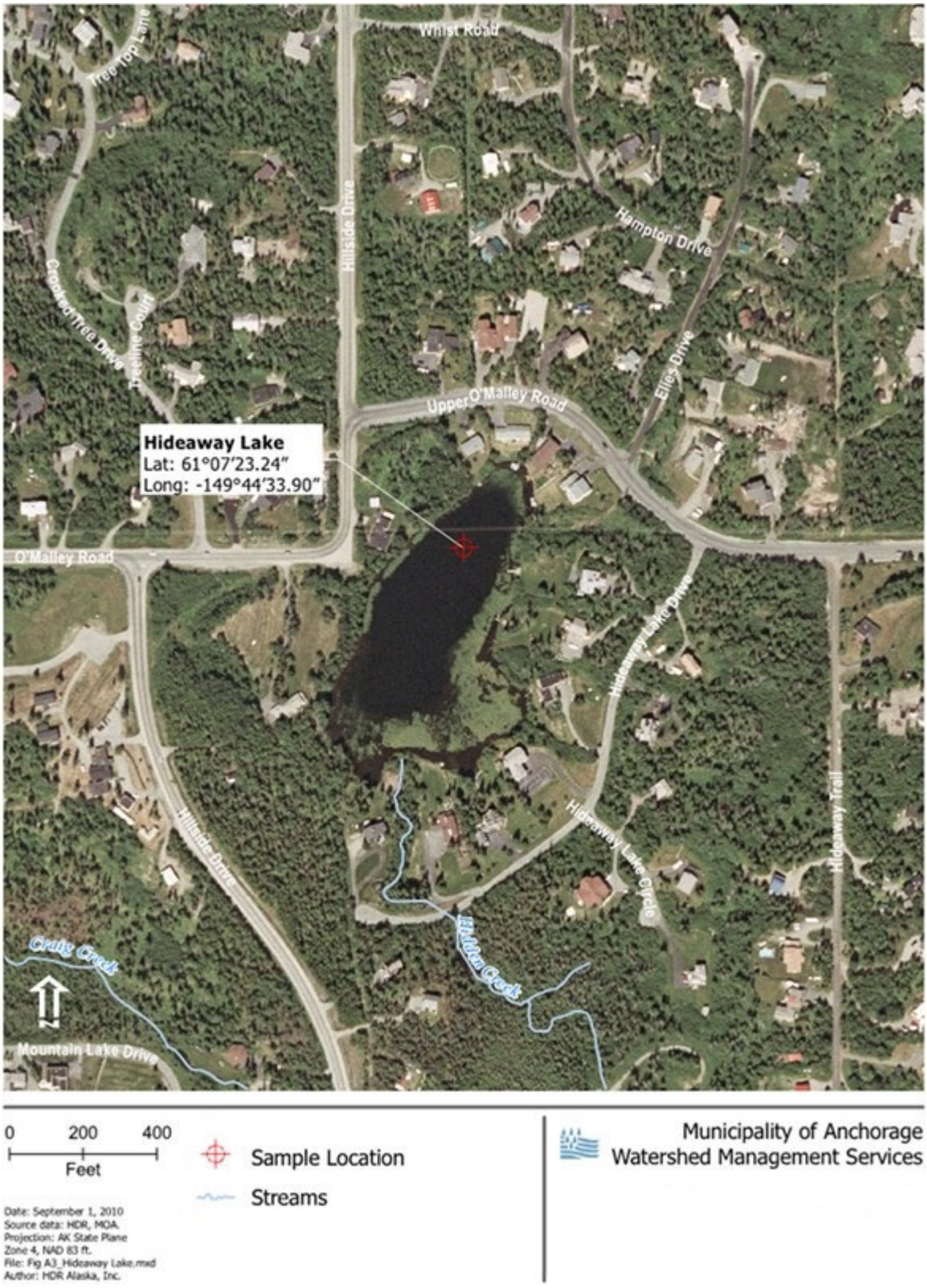
## Figure 1. Area Location Map



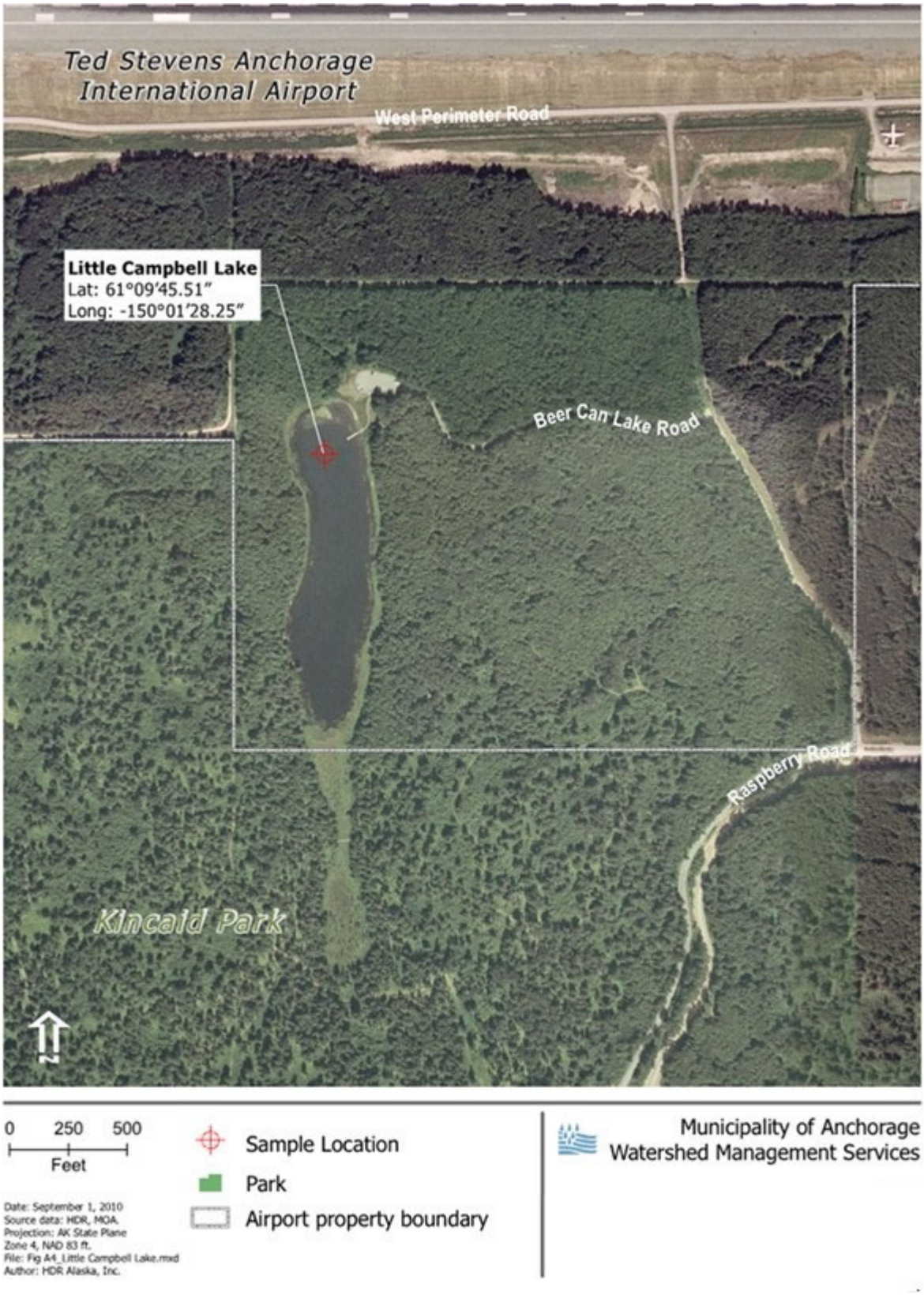
## Figure 2. Lake Otis



## Figure 3. Hideaway Lake



## Figure 4. Little Campbell Lake



## Measured Parameters

Table 1 lists the parameters and methods that were used to measure each parameter, as well as the associated ranges.

**Table 1. Parameters and Methods of Analysis**

| Parameter | Method | Analysis Location | Range |
|---|---|---|---|
| Temperature | SM 2550 B<br>YSI 556 hand-held probe or equivalent | Field | -5 °C – 45 °C |
| pH | EPA 150.2<br>YSI 556 hand-held probe or equivalent | Field | 0 – 14 STD |
| 2,4-D | EPA 515.4 | Laboratory | NA |
| Carbaryl | EPA 531.2 | Laboratory | NA |

°C = degrees Celsius; STD = standard units; NA = not applicable

# Methods

## Sample Collection Procedures

Table 2 shows the precipitation in the 6 days before the sampling event. The QAP states that "ideally, sampling should occur following a rain event that follows a period of at least 48 hours of dry weather" (MOA 2021).

**Table 2. Precipitation Data for Anchorage for the Days Prior to Sampling**

| Date (2022) | Precipitation (inches) | Date | Precipitation (inches) |
|---|---|---|---|
| **August 22** | **0.04** | **August 26** | **0.18** |
| **August 23** | **T** | **August 27** | **0.17** |
| **August 24** | **0.10** | **August 28** | **0.09** |
| **August 25** | **0.10** | **August 29** | **0.00** |

Source: NOAA 2022
T= Trace

The sampling equipment is calibrated in the morning of a sampling event. For the 2022 event the team used a YSI Professional Plus hand-held multimeter which was tested for accuracy using calibrations solutions before leaving the office on the morning of the sampling event. All sampling equipment went through a complete decontamination procedure at each site using Alconox followed by a triple rinse with deionized water.

The water column temperature and pH values were collected using the YSI Professional Plus hand-held multimeter. GPS waypoints were recorded using a hand-held GPS. A sample was collected from the water column from a depth of approximately1 to 2 meters below the water surface

using a 500mL Conbar Bomb Sampler (See Section 3.4 Deviations from the QAP). The collected sample was poured into laboratory-provided bottles with appropriate preservative on shore. Sample bottles were labeled with the project name, site and sample identification numbers, sample date and time, and name of sampler. The samples were preserved on ice and transported to the SGS laboratory in Anchorage. SGS prepared and shipped the samples to EEA.

Photographs of the sampling event are provided in Appendix A.

## Laboratory Sampling Parameters

All samples were analyzed by laboratory analysis using EPA method 515.3 for 2,4-D, and EPA method 531.2 for Carbaryl. EEA provided proper sample containers for 2,4-D and Carbaryl. SGS provided the chain of custody forms. Samples for all three sites were stored in a cooler with frozen gel ice from time of collection until they were signed over to SGS at 12:47 on the same day of collection. At SGS samples were refrigerated until shipment to EEA. Samples were taken into custody by EEA on 8/31/2022. EEA is certified by the EPA and has an approved Quality Assurance and Quality Control (QA/QC) program. Analytical methods and testing procedures were in adherence with EPA-approved protocols and guidelines.

## Chain of Custody

The chain of custody form was completed in the field by the field crew team leader for sample tracking. The original form remained with the samples and was delivered to SGS and transferred with the samples to EEA. Copies of the chains of custody are provided in Appendix B.

## Deviation from the QAP

The sample locations for Lake Otis, Hideaway Lake, and Little Campbell Lake were consistent with previous sampling events and as specified in the QAP (MOA 2021). ALS, the lab that had been used in 2018, no longer provides testing and a new lab, EEA was used instead. EEA provided 125mL amber glass sample bottles, smaller than the 1-2 L bottles ALS had sent in previous years and stated as the collection quantity in the QAP. As a result, the 2022 samples were collected from the lakes using a 500mL Conbar Bomb Sampler in place of the Niskin Sampler. The Bomb Sampler is less bulky than a Niskin Sampler, is more easily used by one person in a boat and is used for the shallow depth (one meter) collection required for this sampling program.

In the QAP the lab analysis method for 2,4-D was listed as EPA method 515.4. EEA listed the lab analysis method as EPA method 515.3 and the dechlorinating agent as sodium sulfite which is typical of the 515.4 method.

## QA/QC and Data Validation

QA/QC procedures were followed according to the QAP (MOA 2021). The procedures included analytical checks (field replicates, equipment blanks, matrix spike/matrix spike duplicate [MS/MSD]); instrument calibration; and procedures to assess data for precision, accuracy, representativeness, comparability, and completeness.

Verification analyses for both parameters were conducted by EEA. The data review was focused on criteria for the following QA and QC parameters and their overall effects on the data:

- Sample handling (chain of custody)
- Temperature blank
- Holding time compliance
- MS/MSD
- Field replicate comparison
- Data validation.

Sample custody was adequately maintained for the samples. The internal temperature of the cooler transporting the samples collected at Little Campbell Lake was recorded at the SGS lab at 8.7°C (above the allowable limit of 4°C). This exception is permitted if the samples were chilled after collection and collected within 8 hours before delivery to the lab. The Little Campbell Lake samples were collected at 9:45 in the morning and delivered to the lab at 12:47 the same day. The hold times of 14 days prior to extraction for 2,4-D, were met as samples were collected on August 29 and received by EAA in South Bend on August 31. 2,4-D was analyzed on September 17 and 18, and Carbaryl was analyzed on September 15, within the 28 day hold period.

Laboratory precision was determined using MS/MSD and was within the 30% relative percent difference (RPD) limits. The RPD for 2,4-D was 1%, and the RPD for Carbaryl was 16%. Laboratory accuracy was measured by adding a known quantity of the target analyte and measuring recovery. For Carbaryl, the recovery average was 99%, well within the limits of 70 to 130% specified by EPA method 531.2. For 2,4-D, the recovery rate was 128%, within the 70 to 130% range specified by EPA method 515.3.

Lake samples were taken from the water column one meter below the surface in the deepest portion of each lake representing general lake quality. Field replicates were taken at Lake Otis for the confirmation sampling to determine precision. Both the sample and the replicate were reported as non-detect for Carbaryl, yielding a RPD of 0% and meeting the precision requirements of 40 RPD specified in the QAP. The 2,4-D replicate samples had a RPD of 2%. The equipment blank sample identified no contamination from the field equipment. One hundred percent of the sample results are valid values.

# Results

The results of August 29, 2022 pesticide screening in the three lakes are provided in Table 3. Complete laboratory results are provided in Appendix C. None of the lakes had detections of Carbaryl or 2,4-D above the limit of detection (LOD).

**Table 3. Sample Results for Field Parameters and Laboratory Analyses**

| Site | Time of Sample | Temperature ℃ | pH | 2,4-D (ug/L)/MDL | Carbaryl (ug/L)/MDL |
|---|---|---|---|---|---|
| Little Campbell Lake | 9:45 | 15.1 | 5.7 | ND (0.055) | ND (0.045) |
| Hideaway Lake | 11:25 | 13.7 | 7.67 | ND (0.055) | ND (0.045) |
| Lake Otis | 12:10 | 15.9 | 6.36 | ND (0.055) | ND (0.045) |
| Lake Otis Duplicate | 12:20 | 15.9 | 6.36 | ND (0.055) | ND (0.045) |

# Discussion

The results of pesticide screening during the 2022 sampling season show no detection of the tested pesticides. Carbaryl has never been detected in any of the three lakes during the monitoring programs. However, in 2013, 2,4-D was detected in Lake Otis and Hideaway Lake. While the concentrations were low and below the maximum contaminant level established by the EPA for drinking water (70 µg/L), the detection of 2,4-D had not occurred during any previous sampling. However, in 2016, 2018, and 2022 2,4-D was not detected in any of the lakes.

It is likely that the non-detect results from 2016 to 2022 are the product of education programs established for property owners around the lakes on the use of pesticides and their effects within waterbodies, on wildlife, and humans. Therefore, it is recommended the pesticide screening program continues to monitor the three lakes and the education programs to remind property owners of the impacts of pesticide use on the waterbodies on which they live.

# References

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ADEC (Alaska Department of Environmental Conservation). 2007. Alaska Pesticide Management Plan to Protect and Restore Water Quality. Alaska Department of Environmental Conservation. October 31, 2007.

MOA (Municipality of Anchorage). 1999. Pesticide Screening at Anchorage Alaska, Conceptual Design. Prepared by CH2M Hill, Inc. Prepared for Watershed Management Section, Municipality of Anchorage. December 1999. Publication No. WMP App 99003

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--------. 2018. 2018 Pesticide Screening Report. Prepared by HDR Alaska, Inc.. Prepared for Watershed Management Section, Municipality of Anchorage. December 2018. Publication No. WMP APR 00006

--------. 2021. Monitoring, Evaluation, and Quality Assurance Plan, APDES Permit No. AKS-052558. Prepared for Alaska Department of Environmental Conservation, Division of Water. Prepared by HDR Alaska, Inc. and Municipality of Anchorage. January 2021

NOAA (National Oceanic and Atmospheric Administration). 2022. National Weather Service Forecast Office, Anchorage. Available online at https://www.weather.gov/afc/

U.S. Geological Survey (USGS). 1999. Circular 1225. Available online at https://pubs.usgs.gov/circ/circ1225/index.html

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# Appendix A

# Photographs

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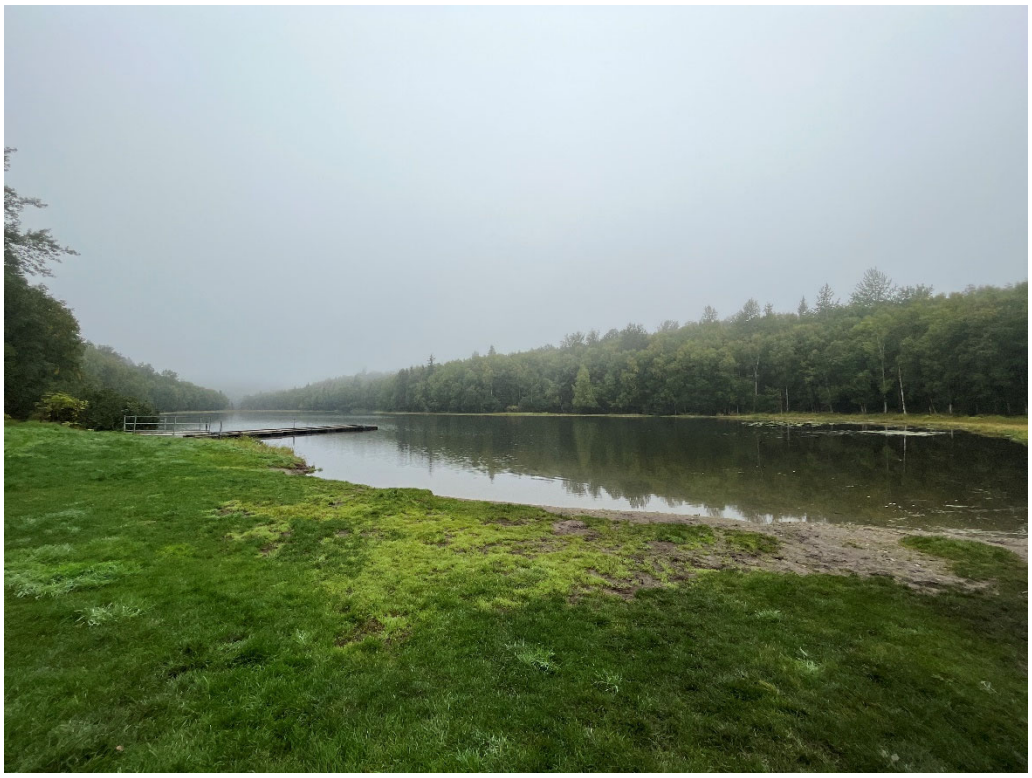
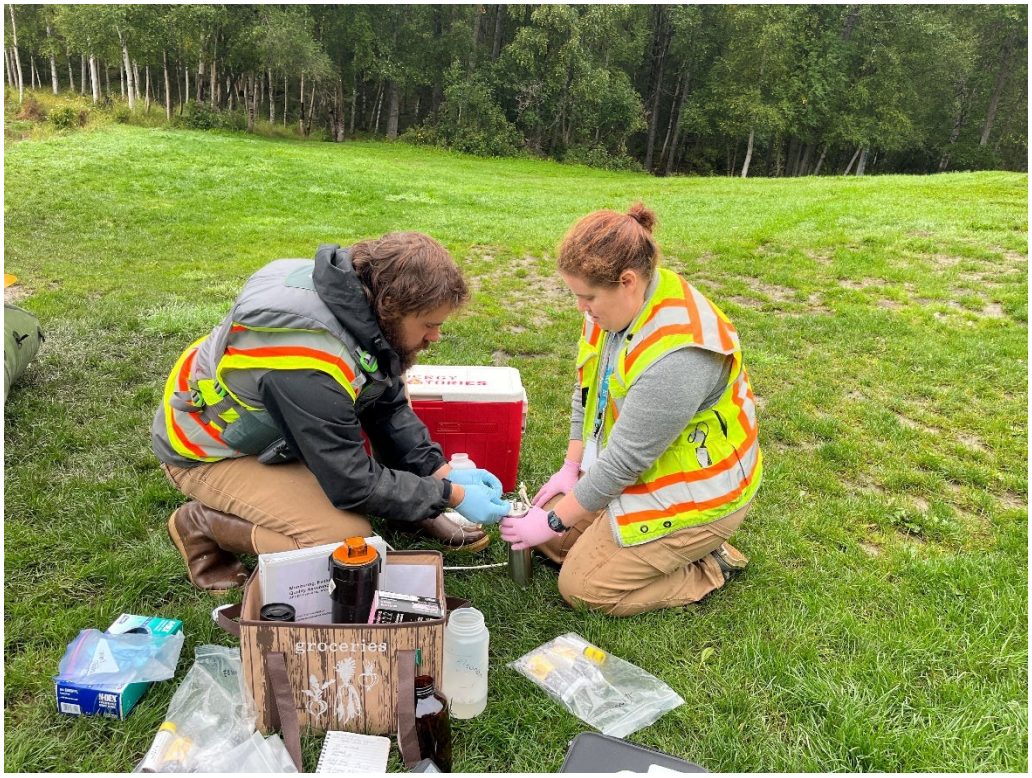
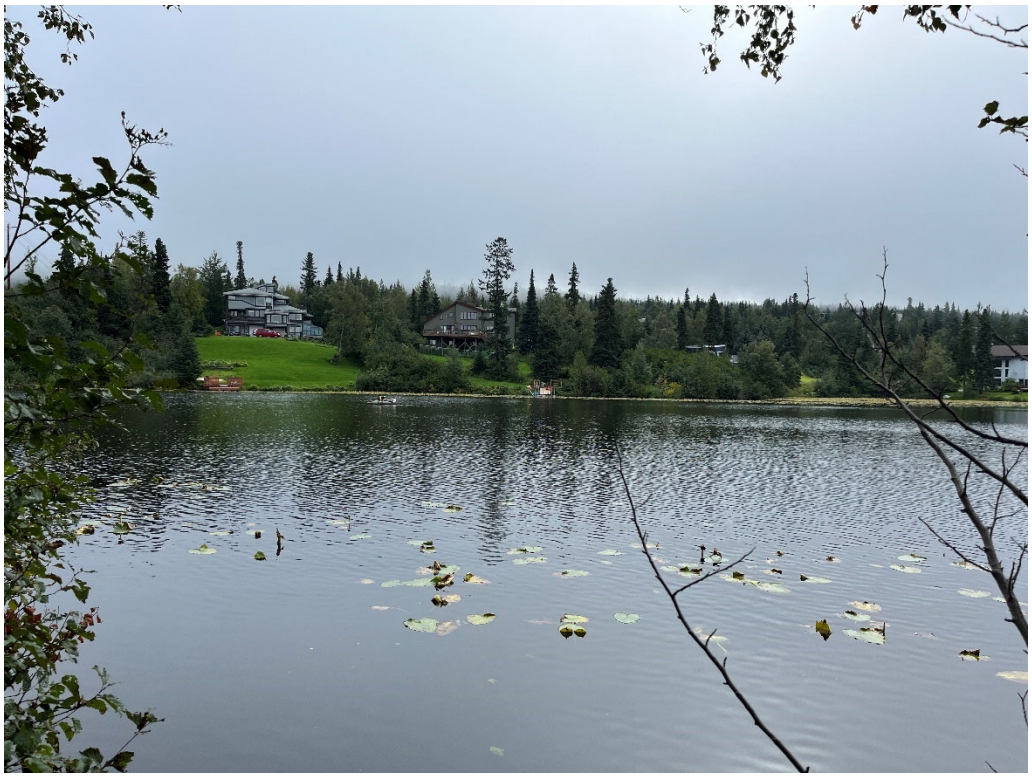


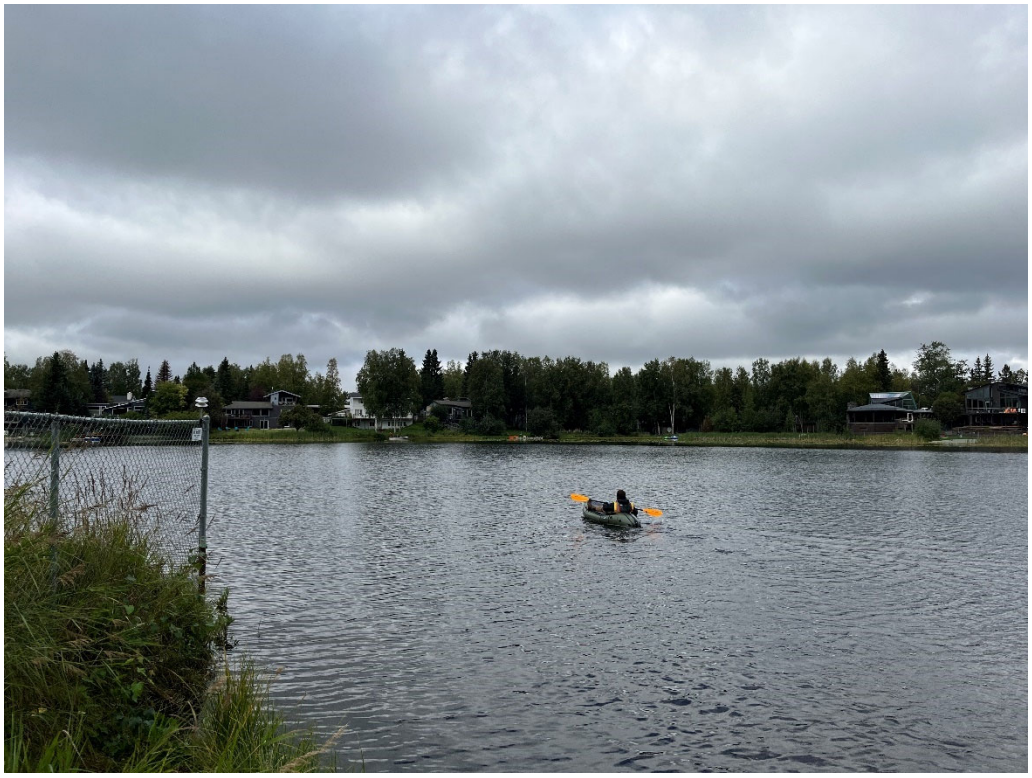
Photograph 1. Little Campbell Lake, looking southwest




Photograph 2. Little Campbell Lake, collecting samples



Photograph 3. Hideaway Lake, looking east



Photograph 4. Lake Otis, looking southwest

# Appendix B

# Completed Chains of Custody

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SGS

# SGS North America Inc.
# CHAIN OF CUSTODY RECORD

1225188

Profile # 384773 DBR

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



**Section 1**

CLIENT: HDR Inc.

CONTACT: Cindy Helmericks — PHONE #: 907.644.2017

PROJECT NAME: Pesticides Screening — PROJECT/ PWSID/ PERMIT#:

REPORTS TO: Cindy Helmericks — E-MAIL: cindy.helmericks Profile #: @hdrinc.com

INVOICE TO: Cindy Helmericks — QUOTE #: P.O. #:

**Section 3** — Preservative

**Section 2**

| RESERVED for lab use | SAMPLE IDENTIFICATION | DATE mm/dd/yy | TIME HH:MM | MATRIX/ MATRIX CODE | # CONTAINERS | Comp Grab MI (Multi-incremental) | Analysis* 2,4-D | Analysis* Carbaryl | | | | | | | | REMARKS/LOC ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1)ABD | LCL 100 | 08/29/22 | 9:45 | WOS | 12 | G | ✓ | ✓ | | | | | | 2AB D | 3AB D | MS/MSD |
| 4AD | HPL 100 | | 11:30 | | 4 | | ✓ | ✓ | | | | | | | | |
| 5AD | LO 100 | | 12:10 | | 4 | | ✓ | ✓ | | | | | | | | |
| 6AD | LO 200 | | 12:20 | | 4 | | ✓ | ✓ | | | | | | | | |
| 7AD | EB 100 | | 9:35 | | 4 | | ✓ | ✓ | | | | | | | | |

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

**Section 5**

| | Date | Time | |
|---|---|---|---|
| Relinquished By: (1) | 8/29/22 | 1247 | Received By: |
| Relinquished By: (2) | Date | Time | Received By: |
| Relinquished By: (3) | Date | Time | Received By: |
| Relinquished By: (4) | Date 8/29/22 | Time 12:47 | Received For Laboratory By: |

**Section 4** — DOD Project? Yes No — Data Deliverable Requirements:

Cooler ID:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 8.7 D65 or Ambient [ ]

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Delivery Method: Hand Delivery [ ] Commerical Delivery [X]

## Sample Containers and Preservatives

| Container Id | Preservative | Container Condition | Container Id | Preservative | Container Condition |
|---|---|---|---|---|---|
| 1225188001-A | No Preservative Required | OK | | | |
| 1225188001-B | No Preservative Required | OK | | | |
| 1225188001-C | No Preservative Required | OK | | | |
| 1225188001-D | No Preservative Required | OK | | | |
| 1225188002-A | No Preservative Required | OK | | | |
| 1225188002-B | No Preservative Required | OK | | | |
| 1225188002-C | No Preservative Required | OK | | | |
| 1225188002-D | No Preservative Required | OK | | | |
| 1225188003-A | No Preservative Required | OK | | | |
| 1225188003-B | No Preservative Required | OK | | | |
| 1225188003-C | No Preservative Required | OK | | | |
| 1225188003-D | No Preservative Required | OK | | | |
| 1225188004-A | No Preservative Required | OK | | | |
| 1225188004-B | No Preservative Required | OK | | | |
| 1225188004-C | No Preservative Required | OK | | | |
| 1225188004-D | No Preservative Required | OK | | | |
| 1225188005-A | No Preservative Required | OK | | | |
| 1225188005-B | No Preservative Required | OK | | | |
| 1225188005-C | No Preservative Required | OK | | | |
| 1225188005-D | No Preservative Required | OK | | | |
| 1225188006-A | No Preservative Required | OK | | | |
| 1225188006-B | No Preservative Required | OK | | | |
| 1225188006-C | No Preservative Required | OK | | | |
| 1225188006-D | No Preservative Required | OK | | | |
| 1225188007-A | No Preservative Required | OK | | | |
| 1225188007-B | No Preservative Required | OK | | | |
| 1225188007-C | No Preservative Required | OK | | | |
| 1225188007-D | No Preservative Required | 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.

# Appendix C

# Data Package

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eurofins | Environment Testing America

# ANALYTICAL REPORT

Eurofins Eaton South Bend
110 S Hill Street
South Bend, IN 46617
Tel: (574)233-4777

Laboratory Job ID: 810-35914-1
Client Project/Site: Non Compliance

For:
SGS North America Inc
200 West Potter Drive
Anchorage, Alaska 99518

Attn: Julie Shumway

*Authorized for release by:*
*9/21/2022 1:05:56 PM*

Traci Chlebowski, Project Manager
(574)233-4777
Traci.Chlebowski@et.eurofinsus.com

# Table of Contents

# Definitions/Glossary

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# Detection Summary

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

## Client Sample ID: LCL 100 — Lab Sample ID: 810-35914-1

No Detections.

## Client Sample ID: HL 100 — Lab Sample ID: 810-35914-2

No Detections.

## Client Sample ID: LO 100 — Lab Sample ID: 810-35914-3

No Detections.

## Client Sample ID: LO 200 — Lab Sample ID: 810-35914-4

No Detections.

## Client Sample ID: EB 100 — Lab Sample ID: 810-35914-5

No Detections.

This Detection Summary does not include radiochemical test results.

## Client Sample ID: LCL 100

**Lab Sample ID: 810-35914-1**

**Date Collected: 08/29/22 09:45**

**Matrix: Drinking Water**

**Date Received: 08/31/22 09:15**

### Method: 515.3 - Herbicides (GC)

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | <0.10 | | 0.10 | | ug/L | | 09/12/22 09:58 | 09/17/22 23:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *123* | | *70 - 130* | *09/12/22 09:58* | *09/17/22 23:29* | *1* |

### Method: 531.2 - Carbamate Pesticides (HPLC) - Dissolved

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 0.50 | | ug/L | | | 09/15/22 14:07 | 1 |

## Client Sample ID: HL 100

**Lab Sample ID: 810-35914-2**

**Date Collected: 08/29/22 11:30**

**Matrix: Drinking Water**

**Date Received: 08/31/22 09:15**

### Method: 515.3 - Herbicides (GC)

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | <0.10 | | 0.10 | | ug/L | | 09/12/22 09:58 | 09/18/22 01:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *126* | | *70 - 130* | *09/12/22 09:58* | *09/18/22 01:53* | *1* |

### Method: 531.2 - Carbamate Pesticides (HPLC) - Dissolved

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 0.50 | | ug/L | | | 09/15/22 12:34 | 1 |

## Client Sample ID: LO 100

**Lab Sample ID: 810-35914-3**

**Date Collected: 08/29/22 12:10**

**Matrix: Drinking Water**

**Date Received: 08/31/22 09:15**

### Method: 515.3 - Herbicides (GC)

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | <0.10 | | 0.10 | | ug/L | | 09/12/22 09:58 | 09/18/22 02:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *118* | | *70 - 130* | *09/12/22 09:58* | *09/18/22 02:41* | *1* |

### Method: 531.2 - Carbamate Pesticides (HPLC) - Dissolved

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 0.50 | | ug/L | | | 09/15/22 13:05 | 1 |

## Client Sample ID: LO 200

**Lab Sample ID: 810-35914-4**

**Date Collected: 08/29/22 12:20**

**Matrix: Drinking Water**

**Date Received: 08/31/22 09:15**

### Method: 515.3 - Herbicides (GC)

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | <0.10 | | 0.10 | | ug/L | | 09/12/22 09:58 | 09/17/22 12:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *116* | | *70 - 130* | *09/12/22 09:58* | *09/17/22 12:16* | *1* |

### Method: 531.2 - Carbamate Pesticides (HPLC) - Dissolved

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 0.50 | | ug/L | | | 09/15/22 13:36 | 1 |

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

**Client Sample ID: EB 100**
**Date Collected: 08/29/22 09:35**
**Date Received: 08/31/22 09:15**

**Lab Sample ID: 810-35914-5**
**Matrix: Drinking Water**

### Method: 515.3 - Herbicides (GC)

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | <0.10 | | 0.10 | | ug/L | | 09/12/22 09:58 | 09/17/22 13:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *109* | | *70 - 130* | *09/12/22 09:58* | *09/17/22 13:04* | *1* |

### Method: 531.2 - Carbamate Pesticides (HPLC) - Dissolved

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 0.50 | | ug/L | | | 09/15/22 20:32 | 1 |

# Surrogate Summary

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

## Method: 515.3 - Herbicides (GC)

**Matrix: Drinking Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DCPAA1 | | | | | | | |
| Lab Sample ID | Client Sample ID | (70-130) | | | | | | | |
| 810-35914-1 | LCL 100 | 123 | | | | | | | |
| 810-35914-1 MS | LCL 100 MS | 121 | | | | | | | |
| 810-35914-1 MSD | LCL 100 MSD | 114 | | | | | | | |
| 810-35914-2 | HL 100 | 126 | | | | | | | |
| 810-35914-3 | LO 100 | 118 | | | | | | | |
| 810-35914-4 | LO 200 | 116 | | | | | | | |
| 810-35914-5 | EB 100 | 109 | | | | | | | |
| LLCS 810-31317/2-B | Lab Control Sample | 109 | | | | | | | |
| MB 810-31317/1-B | Method Blank | 112 | | | | | | | |

**Surrogate Legend**

DCPAA = 2,4-Dichlorophenylacetic acid

## Method: 515.3 - Herbicides (GC)

**Lab Sample ID: MB 810-31317/1-B**
**Matrix: Drinking Water**
**Analysis Batch: 31995**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 31317**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | <0.10 | | 0.10 | | ug/L | | 09/12/22 09:58 | 09/17/22 05:04 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *112* | | *70 - 130* | *09/12/22 09:58* | *09/17/22 05:04* | *1* |

**Lab Sample ID: LLCS 810-31317/2-B**
**Matrix: Drinking Water**
**Analysis Batch: 31995**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 31317**

| Analyte | | | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | | | 0.200 | 0.155 | | ug/L | | 78 | 24 - 138 | | |

| *Surrogate* | *LLCS %Recovery* | *LLCS Qualifier* | *Limits* |
|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *109* | | *70 - 130* |

**Lab Sample ID: 810-35914-1 MS**
**Matrix: Drinking Water**
**Analysis Batch: 31995**

**Client Sample ID: LCL 100 MS**
**Prep Type: Total/NA**
**Prep Batch: 31317**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | <0.10 | | 3.00 | 3.85 | | ug/L | | 128 | 70 - 130 | | |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *121* | | *70 - 130* |

**Lab Sample ID: 810-35914-1 MSD**
**Matrix: Drinking Water**
**Analysis Batch: 31995**

**Client Sample ID: LCL 100 MSD**
**Prep Type: Total/NA**
**Prep Batch: 31317**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | <0.10 | | 3.00 | 3.83 | | ug/L | | 128 | 70 - 130 | 1 | 41 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *2,4-Dichlorophenylacetic acid* | *114* | | *70 - 130* |

## Method: 531.2 - Carbamate Pesticides (HPLC)

**Lab Sample ID: MBL 810-31310/1-A**
**Matrix: Drinking Water**
**Analysis Batch: 31702**

**Client Sample ID: Method Blank**
**Prep Type: Dissolved**

| Analyte | MBL Result | MBL Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.20 | | 0.50 | | ug/L | | | 09/15/22 03:14 | 1 |

## Method: 531.2 - Carbamate Pesticides (HPLC) (Continued)

**Lab Sample ID: 810-35914-1 MS**
**Matrix: Drinking Water**
**Analysis Batch: 31702**

**Client Sample ID: LCL 100 MS**
**Prep Type: Dissolved**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 2.06 | 2.20 | | ug/L | | 107 | 70 - 130 | | |

**Lab Sample ID: 810-35914-1 MSD**
**Matrix: Drinking Water**
**Analysis Batch: 31702**

**Client Sample ID: LCL 100 MSD**
**Prep Type: Dissolved**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 2.06 | 1.87 | | ug/L | | 91 | 70 - 130 | 16 | 30 |

**Lab Sample ID: MBL 810-31311/1-A**
**Matrix: Drinking Water**
**Analysis Batch: 31909**

**Client Sample ID: Method Blank**
**Prep Type: Dissolved**

| Analyte | MBL Result | MBL Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.20 | | 0.50 | | ug/L | | | 09/15/22 20:00 | 1 |

**Lab Sample ID: 810-35914-5 MS**
**Matrix: Drinking Water**
**Analysis Batch: 31909**

**Client Sample ID: EB 100**
**Prep Type: Dissolved**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 2.06 | 1.95 | | ug/L | | 95 | 70 - 130 | | |

**Lab Sample ID: 810-35914-5 MSD**
**Matrix: Drinking Water**
**Analysis Batch: 31909**

**Client Sample ID: EB 100**
**Prep Type: Dissolved**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carbaryl | <0.50 | | 2.06 | 1.90 | | ug/L | | 92 | 70 - 130 | 2 | 30 |

# QC Association Summary

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

## GC Semi VOA

### Prep Batch: 31317

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 810-35914-1 | LCL 100 | Total/NA | Drinking Water | 515.3 | |
| 810-35914-2 | HL 100 | Total/NA | Drinking Water | 515.3 | |
| 810-35914-3 | LO 100 | Total/NA | Drinking Water | 515.3 | |
| 810-35914-4 | LO 200 | Total/NA | Drinking Water | 515.3 | |
| 810-35914-5 | EB 100 | Total/NA | Drinking Water | 515.3 | |
| MB 810-31317/1-B | Method Blank | Total/NA | Drinking Water | 515.3 | |
| LLCS 810-31317/2-B | Lab Control Sample | Total/NA | Drinking Water | 515.3 | |
| 810-35914-1 MS | LCL 100 MS | Total/NA | Drinking Water | 515.3 | |
| 810-35914-1 MSD | LCL 100 MSD | Total/NA | Drinking Water | 515.3 | |

### Cleanup Batch: 31379

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 810-35914-1 | LCL 100 | Total/NA | Drinking Water | Aliquot | 31317 |
| 810-35914-2 | HL 100 | Total/NA | Drinking Water | Aliquot | 31317 |
| 810-35914-3 | LO 100 | Total/NA | Drinking Water | Aliquot | 31317 |
| 810-35914-4 | LO 200 | Total/NA | Drinking Water | Aliquot | 31317 |
| 810-35914-5 | EB 100 | Total/NA | Drinking Water | Aliquot | 31317 |
| MB 810-31317/1-B | Method Blank | Total/NA | Drinking Water | Aliquot | 31317 |
| LLCS 810-31317/2-B | Lab Control Sample | Total/NA | Drinking Water | Aliquot | 31317 |
| 810-35914-1 MS | LCL 100 MS | Total/NA | Drinking Water | Aliquot | 31317 |
| 810-35914-1 MSD | LCL 100 MSD | Total/NA | Drinking Water | Aliquot | 31317 |

### Analysis Batch: 31995

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 810-35914-1 | LCL 100 | Total/NA | Drinking Water | 515.3 | 31379 |
| 810-35914-2 | HL 100 | Total/NA | Drinking Water | 515.3 | 31379 |
| 810-35914-3 | LO 100 | Total/NA | Drinking Water | 515.3 | 31379 |
| 810-35914-4 | LO 200 | Total/NA | Drinking Water | 515.3 | 31379 |
| 810-35914-5 | EB 100 | Total/NA | Drinking Water | 515.3 | 31379 |
| MB 810-31317/1-B | Method Blank | Total/NA | Drinking Water | 515.3 | 31379 |
| LLCS 810-31317/2-B | Lab Control Sample | Total/NA | Drinking Water | 515.3 | 31379 |
| 810-35914-1 MS | LCL 100 MS | Total/NA | Drinking Water | 515.3 | 31379 |
| 810-35914-1 MSD | LCL 100 MSD | Total/NA | Drinking Water | 515.3 | 31379 |

## HPLC/IC

### Filtration Batch: 31310

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 810-35914-1 | LCL 100 | Dissolved | Drinking Water | Filtration | |
| 810-35914-2 | HL 100 | Dissolved | Drinking Water | Filtration | |
| 810-35914-3 | LO 100 | Dissolved | Drinking Water | Filtration | |
| 810-35914-4 | LO 200 | Dissolved | Drinking Water | Filtration | |
| MBL 810-31310/1-A | Method Blank | Dissolved | Drinking Water | Filtration | |
| 810-35914-1 MS | LCL 100 MS | Dissolved | Drinking Water | Filtration | |
| 810-35914-1 MSD | LCL 100 MSD | Dissolved | Drinking Water | Filtration | |

### Filtration Batch: 31311

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 810-35914-5 | EB 100 | Dissolved | Drinking Water | Filtration | |
| MBL 810-31311/1-A | Method Blank | Dissolved | Drinking Water | Filtration | |
| 810-35914-5 MS | EB 100 | Dissolved | Drinking Water | Filtration | |

## HPLC/IC (Continued)

### Filtration Batch: 31311 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 810-35914-5 MSD | EB 100 | Dissolved | Drinking Water | Filtration | |

### Analysis Batch: 31702

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 810-35914-1 | LCL 100 | Dissolved | Drinking Water | 531.2 | 31310 |
| 810-35914-2 | HL 100 | Dissolved | Drinking Water | 531.2 | 31310 |
| 810-35914-3 | LO 100 | Dissolved | Drinking Water | 531.2 | 31310 |
| 810-35914-4 | LO 200 | Dissolved | Drinking Water | 531.2 | 31310 |
| MBL 810-31310/1-A | Method Blank | Dissolved | Drinking Water | 531.2 | 31310 |
| 810-35914-1 MS | LCL 100 MS | Dissolved | Drinking Water | 531.2 | 31310 |
| 810-35914-1 MSD | LCL 100 MSD | Dissolved | Drinking Water | 531.2 | 31310 |

### Analysis Batch: 31909

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 810-35914-5 | EB 100 | Dissolved | Drinking Water | 531.2 | 31311 |
| MBL 810-31311/1-A | Method Blank | Dissolved | Drinking Water | 531.2 | 31311 |
| 810-35914-5 MS | EB 100 | Dissolved | Drinking Water | 531.2 | 31311 |
| 810-35914-5 MSD | EB 100 | Dissolved | Drinking Water | 531.2 | 31311 |

# Lab Chronicle

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

## Client Sample ID: LCL 100

**Lab Sample ID: 810-35914-1**

**Date Collected: 08/29/22 09:45**

**Matrix: Drinking Water**

**Date Received: 08/31/22 09:15**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 515.3 | | | 31317 | ER | EA SB | 09/12/22 09:58 |
| Total/NA | Cleanup | Aliquot | | | 31379 | ER | EA SB | 09/12/22 16:23 |
| Total/NA | Analysis | 515.3 | | 1 | 31995 | TL | EA SB | 09/17/22 23:29 |
| Dissolved | Filtration | Filtration | | | 31310 | HB | EA SB | 09/12/22 08:57 |
| Dissolved | Analysis | 531.2 | | 1 | 31702 | TL | EA SB | 09/15/22 14:07 |

## Client Sample ID: HL 100

**Lab Sample ID: 810-35914-2**

**Date Collected: 08/29/22 11:30**

**Matrix: Drinking Water**

**Date Received: 08/31/22 09:15**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 515.3 | | | 31317 | ER | EA SB | 09/12/22 09:58 |
| Total/NA | Cleanup | Aliquot | | | 31379 | ER | EA SB | 09/12/22 16:23 |
| Total/NA | Analysis | 515.3 | | 1 | 31995 | TL | EA SB | 09/18/22 01:53 |
| Dissolved | Filtration | Filtration | | | 31310 | HB | EA SB | 09/12/22 08:57 |
| Dissolved | Analysis | 531.2 | | 1 | 31702 | TL | EA SB | 09/15/22 12:34 |

## Client Sample ID: LO 100

**Lab Sample ID: 810-35914-3**

**Date Collected: 08/29/22 12:10**

**Matrix: Drinking Water**

**Date Received: 08/31/22 09:15**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 515.3 | | | 31317 | ER | EA SB | 09/12/22 09:58 |
| Total/NA | Cleanup | Aliquot | | | 31379 | ER | EA SB | 09/12/22 16:23 |
| Total/NA | Analysis | 515.3 | | 1 | 31995 | TL | EA SB | 09/18/22 02:41 |
| Dissolved | Filtration | Filtration | | | 31310 | HB | EA SB | 09/12/22 08:57 |
| Dissolved | Analysis | 531.2 | | 1 | 31702 | TL | EA SB | 09/15/22 13:05 |

## Client Sample ID: LO 200

**Lab Sample ID: 810-35914-4**

**Date Collected: 08/29/22 12:20**

**Matrix: Drinking Water**

**Date Received: 08/31/22 09:15**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 515.3 | | | 31317 | ER | EA SB | 09/12/22 09:58 |
| Total/NA | Cleanup | Aliquot | | | 31379 | ER | EA SB | 09/12/22 16:23 |
| Total/NA | Analysis | 515.3 | | 1 | 31995 | TL | EA SB | 09/17/22 12:16 |
| Dissolved | Filtration | Filtration | | | 31310 | HB | EA SB | 09/12/22 08:57 |
| Dissolved | Analysis | 531.2 | | 1 | 31702 | TL | EA SB | 09/15/22 13:36 |

# Lab Chronicle

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

## Client Sample ID: EB 100

**Date Collected: 08/29/22 09:35**
**Date Received: 08/31/22 09:15**

## Lab Sample ID: 810-35914-5

**Matrix: Drinking Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 515.3 | | | 31317 | ER | EA SB | 09/12/22 09:58 |
| Total/NA | Cleanup | Aliquot | | | 31379 | ER | EA SB | 09/12/22 16:23 |
| Total/NA | Analysis | 515.3 | | 1 | 31995 | TL | EA SB | 09/17/22 13:04 |
| Dissolved | Filtration | Filtration | | | 31311 | HB | EA SB | 09/12/22 09:00 |
| Dissolved | Analysis | 531.2 | | 1 | 31909 | TL | EA SB | 09/15/22 20:32 |

**Laboratory References:**

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

# Accreditation/Certification Summary

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

## Laboratory: Eurofins Eaton South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alaska | State | IN00035 | 06-30-23 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 531.2 | | Drinking Water | Carbaryl |

# Method Summary

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 515.3 | Herbicides (GC) | EPA | EA SB |
| 531.2 | Carbamate Pesticides (HPLC) | EPA | EA SB |
| 515.3 | Extraction of Chlorinated Acids | EPA-DW | EA SB |
| Aliquot | Preparation, Extract aliquot | None | EA SB |
| Filtration | Sample Filtration | None | EA SB |

**Protocol References:**

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

None = None

**Laboratory References:**

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

# Sample Summary

Client: SGS North America Inc
Project/Site: Non Compliance

Job ID: 810-35914-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 810-35914-1 | LCL 100 | Drinking Water | 08/29/22 09:45 | 08/31/22 09:15 |
| 810-35914-2 | HL 100 | Drinking Water | 08/29/22 11:30 | 08/31/22 09:15 |
| 810-35914-3 | LO 100 | Drinking Water | 08/29/22 12:10 | 08/31/22 09:15 |
| 810-35914-4 | LO 200 | Drinking Water | 08/29/22 12:20 | 08/31/22 09:15 |
| 810-35914-5 | EB 100 | Drinking Water | 08/29/22 09:35 | 08/31/22 09:15 |

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