



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, WA 99205-1295 • 509-329-3400

April 22, 2022

Travis Trent
Fulcrum Environmental Consulting, Inc.
207 West Boone Avenue
Spokane, WA 99205

Re: No Further Action at the following Site:

Site Name: Sundance Golf Course
Site Address: 8725 N Nine Mile Falls Rd, Spokane
Cleanup Site ID: 15358
Facility/Site ID: 78213
VCP Project ID: EA0357

Dear Travis Trent:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Sundance Golf Course facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70A.305 RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided as follows.

Description of the Site

This opinion applies to only the Site described as follows. The Site is defined by the nature and extent of contamination associated with the following releases:

- Petroleum hydrocarbons, heavy metals, and organochlorine pesticides into the soil.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

Ecology bases this opinion on information in the documents listed in **Enclosure B**. You can request these documents by filing a [records request](#).¹ For help making a request, contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or call (360) 407-6040. Before making a request, check whether the documents are available on the [Site webpage](#).²

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

Soil samples were collected throughout the Site from the surface to 18 inches below ground surface (bgs). Eight surface samples were collected near the former aboveground storage tanks (ASTs), covered storage area, and maintenance shed. These samples were analyzed for petroleum hydrocarbons, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), lead, organophosphorus herbicides, and chlorinated pesticides. Gasoline-range

¹ <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>

² <https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=15358>

petroleum hydrocarbons were detected in one sample exceeding the MTCA Method A cleanup level for unrestricted land use. All other analytes were non-detect or did not exceed the cleanup levels.

An additional 181 surface samples were collected from 73 locations throughout the golf course, including the fairways, putting greens, and teeboxes. These samples were analyzed for arsenic, cadmium, chromium, lead, mercury, organochlorine pesticides, and herbicides. Mercury was detected in 10 locations exceeding the MTCA Method A cleanup level for unrestricted land use, and chlorinated pesticides, including chlordane and alpha-BHC, were detected below the MTCA Method B non-cancer cleanup levels. All other analytes were non-detect or did not exceed the respective cleanup levels. Please refer to **Figure 2** in **Enclosure A** for soil sample locations.

Groundwater occurs at approximately 55 feet bgs and flows west-northwest toward the Spokane River. A review of regional groundwater data did not indicate that any contaminants of concern exceeded MTCA cleanup levels or any other regulatory action levels. Furthermore, the release to soil likely occurred prior to the 1970s before mercury-containing agricultural chemicals were prohibited, and all contaminants of concern are absent in the soil column greater than 18 inches bgs. Therefore, Ecology determined it is unlikely contaminants in soil reached groundwater.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

For soil, the cleanup levels were established using MTCA Method A and Method B and are based on protection of groundwater. The land use is classified as unrestricted. The point of compliance for soils is throughout the lateral and vertical extent of the Site. This is the standard point of compliance. The cleanup levels are as follows.

Contaminant	Cleanup Level (mg/kg)
Gasoline-range petroleum hydrocarbons	30
Diesel- and oil-range petroleum hydrocarbons	2000
Mercury	2
Chlordane	40
Alpha-BHC	640

mg/kg = milligrams per kilogram

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA:

- Removal and offsite disposal of all potential contaminant sources.
- Excavation and offsite disposal of all soil with contaminant concentrations exceeding MTCA Method A or B cleanup levels for unrestricted land use.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site.

- In September and October 2020, the petroleum ASTs, chemical AST, drums, and agricultural chemicals in the covered storage area and maintenance shed were removed and disposed offsite. An approximately 12 by 20 foot area of petroleum-contaminated soils was excavated to a maximum depth of 2 feet bgs at the covered storage area where the petroleum ASTs were located. A total of 16.3 tons of soil were removed. Please see **Figure 3** in **Enclosure A** for the locations of the ASTs, covered storage, and maintenance shed.
- Between April and August 2021, soils were excavated from the 10 putting green locations in approximately 20-by-20-foot zones to a maximum depth of 2 feet bgs. Approximately 327.3 tons of soil were removed. Please see **Figure 3** in **Enclosure A** for the putting green remedial locations.
- Confirmation soil samples were collected from all excavations to verify the effective removal of all contaminants exceeding MTCA cleanup levels. The toxicity characteristic leaching procedure (TCLP) was used on two composite samples to determine whether the mercury in soil was capable of leaching into groundwater. The results were either non-detect or below the leaching threshold. Along with the lack of soil contamination deeper than 18 inches bgs, the TCLP data indicate that the soil-to-groundwater pathway is incomplete.
- All excavated soils were disposed at the Graham Road Subtitle D Landfill in Airway Heights, WA.

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Confirmed and Suspected Contaminated Sites List.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion does not:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70A.305.040(4).

2. Opinion does not constitute a determination of substantial equivalence

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you proposed will be substantially equivalent. Consult that determination. See RCW 70A.305.080 and WAC 173-340-545

3. Opinion is limited to proposed cleanup

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the Voluntary Cleanup Program (VCP)

4. State is immune from liability

The state, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature may arise from any act or omission providing this opinion. See RCW 70A.305.180

Contact Information

Thank you for choosing to clean up the Site under the VCP. As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our [webpage](https://www.ecy.wa.gov/vcp)³. If you have any questions about this opinion, please contact me by phone at 509-342-5564 or e-mail at ted.uecker@ecy.wa.gov.

³ <https://www.ecy.wa.gov/vcp>

Travis Trent
April 22, 2022
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Sincerely,

A handwritten signature in black ink, appearing to read "Ted Uecker", with a stylized, cursive script.

Ted M. Uecker
ERO Toxics Cleanup Program

tmu:hg

Enclosures (1): A – Site Description and Diagrams
 B – List of Site Documents

cc: Michael Kinney, Sundance Meadows, LLC
 Kathleen Falconer, Ecology **KLF**

Enclosure A

Description and Diagrams of the Site

Site Description

The Site is located at 9723 and 9725 North Nine Mile Road in Nine Mile Falls, WA, northeast of Spokane and east of the Spokane River and Riverside State Park. The Site consists of Spokane County tax parcels 26163.9025, 26163.9028, and 26163.9031. The Site was undeveloped until 1968, when an 18-hole golf course was constructed. The course was closed in October 2018.

The Site is comprised of the non-operational golf course, a clubhouse, parking lot, four storage warehouses, and three pumphouses.

Site geology consists of glacial outwash deposits of fine to medium-grained sands and silts atop Columbia River Basalt Group basement rock, which is estimated at greater than five feet below ground surface (bgs). Regional groundwater is located approximately 55 feet bgs, and flows west-northwest toward the Spokane River.

Site History

In May 2019, a Phase I environmental site assessment (ESA) was conducted, which did not identify any recognized environmental conditions. The assessment did identify several environmental risks, including petroleum above-ground storage tanks (ASTs) and drums, historic chemical use and storage, asbestos-containing materials, radon, lead, and lighting and electrical components. Chemicals used onsite include pesticides, herbicides, and fertilizers. All potentially hazardous substances were stored in an onsite maintenance shed.

In September 2019, a limited Phase II ESA was conducted to confirm removal of the ASTs and stored agricultural chemicals, and collect soil samples to identify any potential releases of agricultural chemicals or petroleum hydrocarbons. Fourteen soil samples were collected and analyzed for gasoline-range petroleum hydrocarbons (GRPH), diesel-range petroleum hydrocarbons (DRPH), oil-range petroleum hydrocarbons (ORPH), benzene, toluene, ethylbenzene, xylenes, lead, polycyclic aromatic hydrocarbons (PAHs), organophosphorus herbicides, and chlorinated pesticides. Petroleum-contaminated soil was identified at one foot bgs within the maintenance shed where the ASTs were located. In October 2020, additional remediation and confirmation sampling occurred as the maintenance shed was demolished. Approximately 16.3 tons of soil were excavated from the area and disposed at Graham Road regional landfill. Three confirmation soil samples were collected from the excavation; toluene and xylenes were detected in one sample, but all analytes were below MTCA Method A cleanup levels.

In December 2020, additional soil sampling was conducted to characterize the remainder of the Site, which consisted of 181 surficial samples collected from 73 representative locations throughout the golf course, including the fairways, putting greens, and tee boxes. Samples were collected from each location at depths of three, six, and 12 inches.

bgs, with a maximum clearance depth of 18 inches. All samples were analyzed for arsenic, lead, and mercury. Mercury was identified in 10 locations at concentrations up to 21 milligrams per kilogram (mg/kg), greater than 10 times the cleanup level of 2 mg/kg. The contamination appeared to be localized to the putting greens. Additional analyses for cadmium were conducted on the samples in January 2021; all results were below the MTCA Method A cleanup level.

Remedial excavations were conducted on four occasions in April, May, June, and August 2021 to remove the areas of known mercury, as well as confirm that no remaining soil contained mercury exceeding the MTCA Method A cleanup level. Each of the 10 locations were excavated approximately 2 feet deep in an area of approximately 20 by 20 feet.

At Ecology's recommendation, 30 representative areas of the Site were sampled for agricultural chemicals, including organochlorine pesticides, organochlorine compounds, and herbicides in April and June 2021. Chlordane was detected in several locations at a maximum of 0.71 mg/kg, below the MTCA Method B cleanup level of 40 mg/kg. Alpha-BHC was detected in one location at 0.45 mg/kg, below the MTCA Method B cleanup level of 640 mg/kg. No other agricultural chemicals were detected. Mercury was identified above the cleanup level in several additional areas, and these areas were excavated and confirmed below the cleanup level. A total of 327.33 tons of mercury-impacted soil were removed from the Site in addition to the November 2020 petroleum-contaminated soil removal.

Site Diagrams

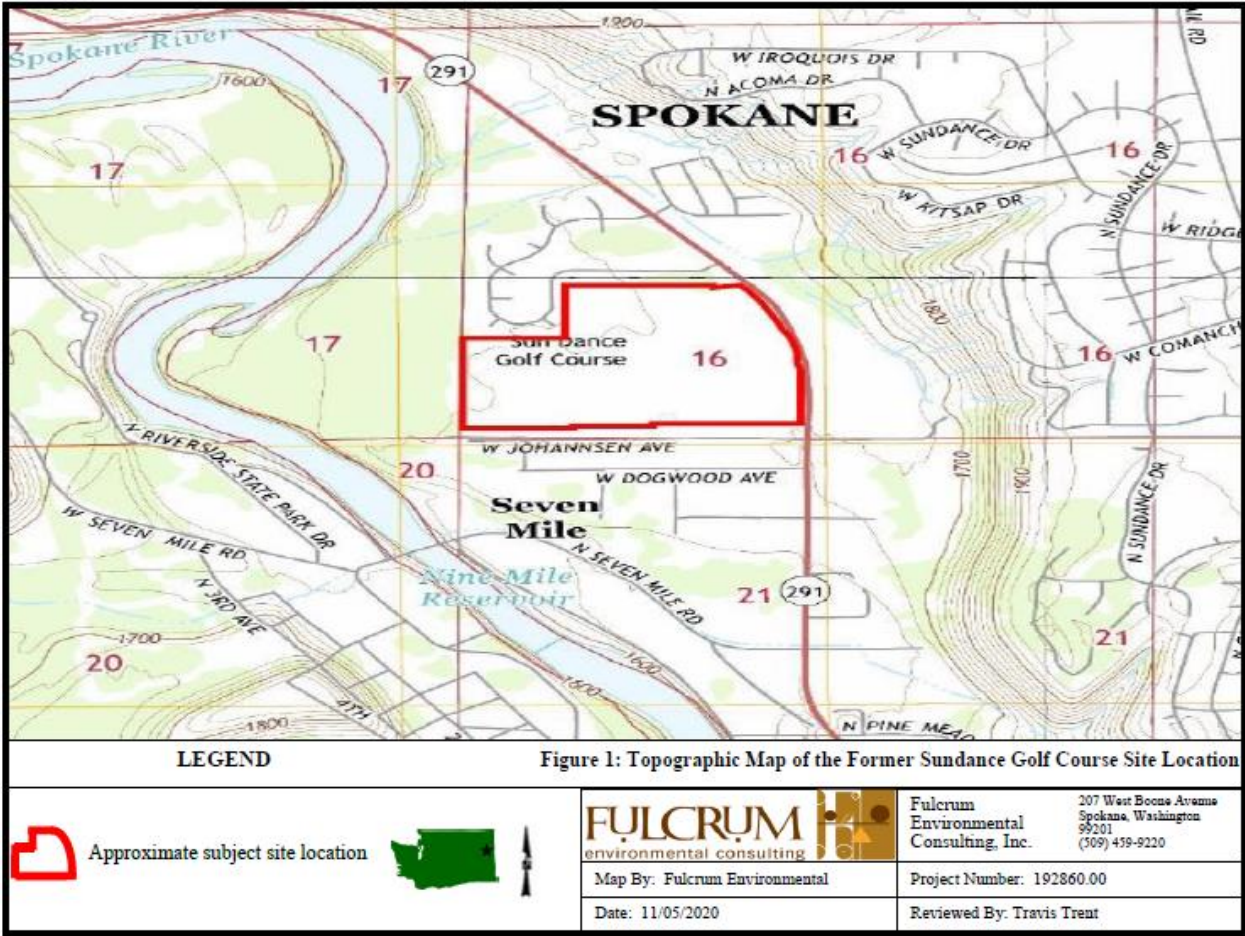


Figure 1. Vicinity map of Sundance Golf Course Site.

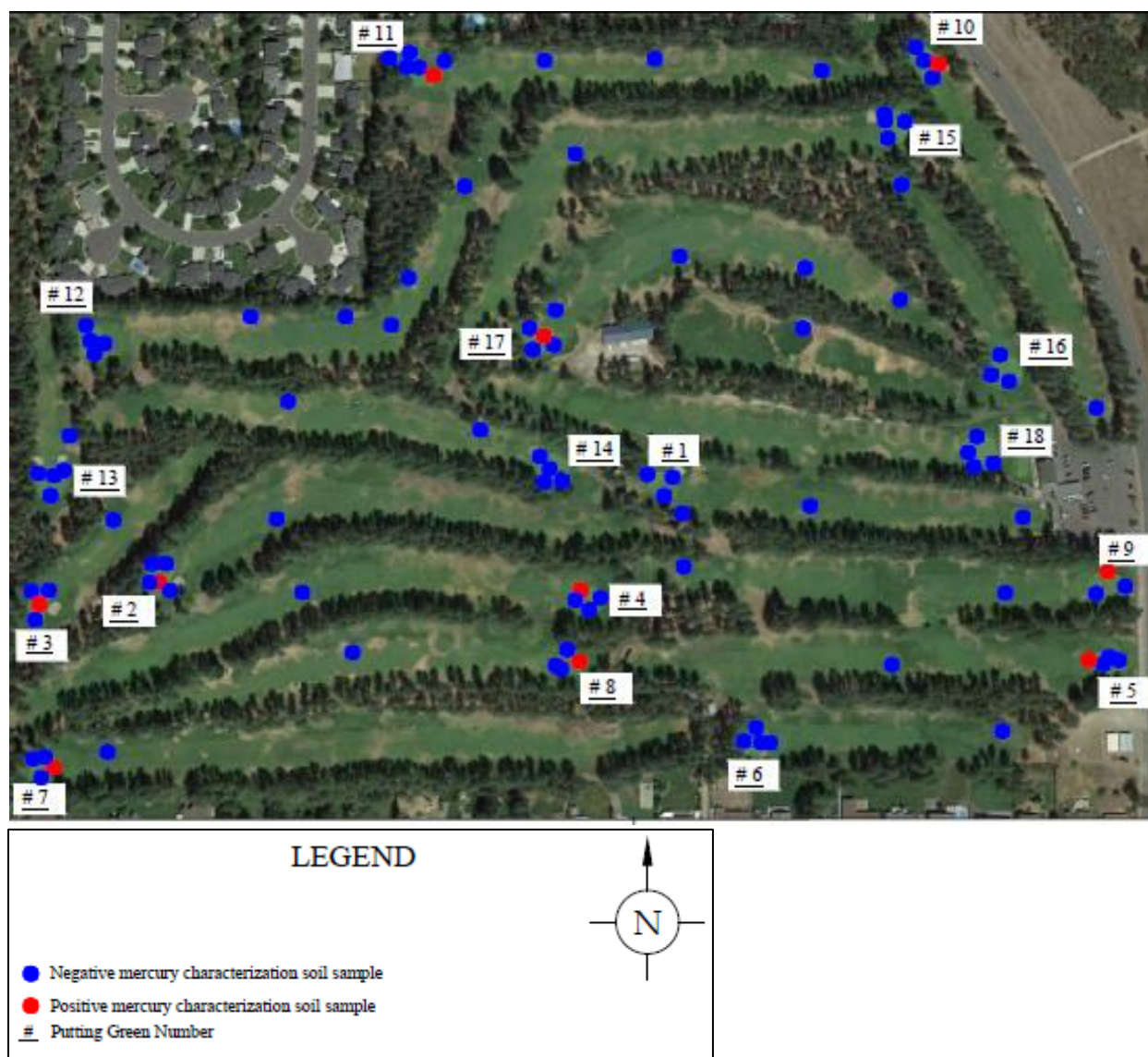


Figure 2. Soil sampling locations.

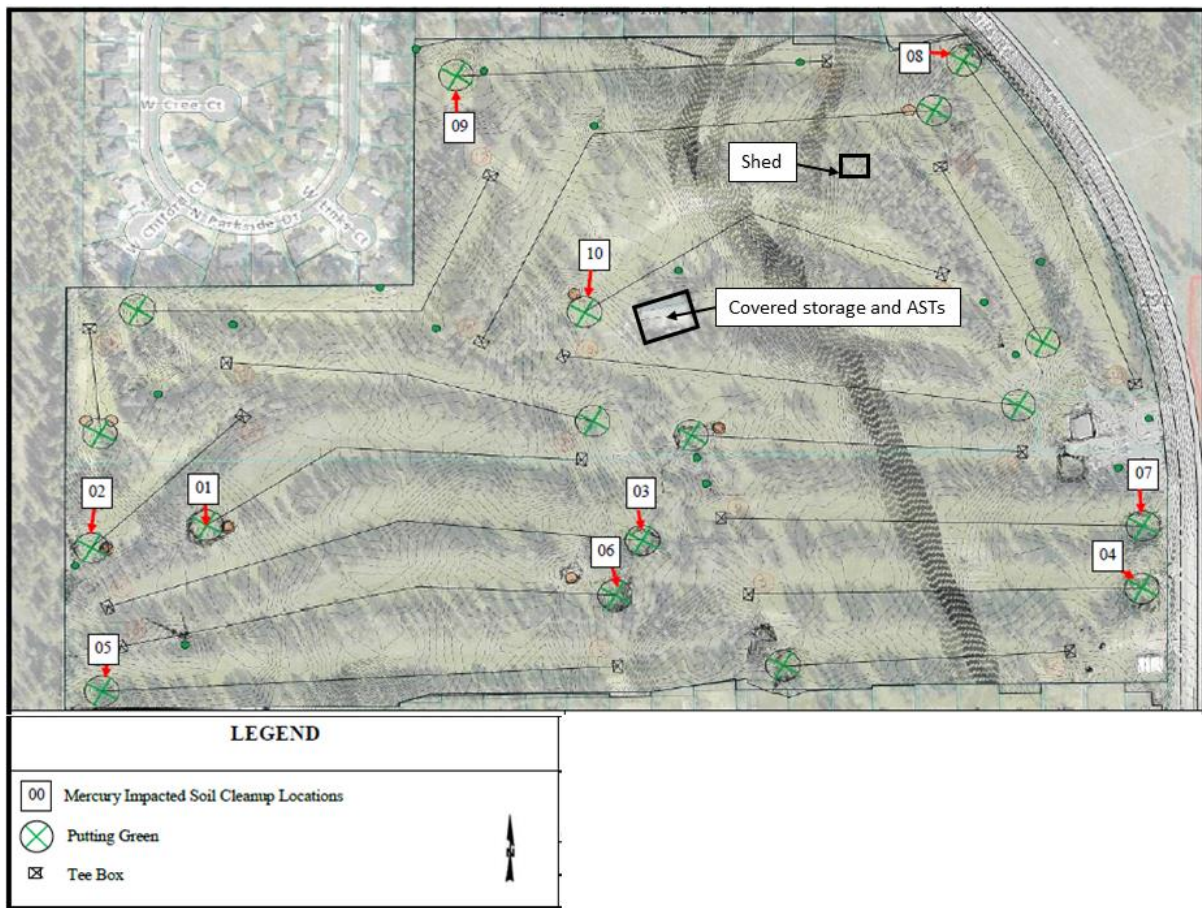


Figure 3. Map of remediated areas.

Enclosure B

List of Site Documents

1. Fulcrum Environmental Consulting, Sundance Golf Course Phase I Environmental Site Assessment, May 2, 2019.
2. Fulcrum Environmental Consulting, Sundance Golf Course Limited Phase II Environmental Site Assessment, November 10, 2020.
3. Fulcrum Environmental Consulting, Sundance Golf Course Revised December 2020 Soil Sampling Summary, February 3, 2021.
4. Fulcrum Environmental Consulting, Sundance Golf Course Site-specific Health and Safety Plan for Mercury Contaminated Soils, April 2, 2021.
5. Fulcrum Environmental Consulting, Sundance Golf Course May 2021 Agricultural Chemicals Soil Sampling Plan, May 6, 2021.
6. Fulcrum Environmental Consulting, Sundance Golf Course Agricultural Chemicals Soil Sampling, June 9, 2021.
7. Fulcrum Environmental Consulting, Sundance Golf Course Updated Agricultural Chemicals Soil Sampling Plan, June 30, 2021.
8. Fulcrum Environmental Consulting, Sundance Golf Course Supplemental Soil Sampling Results, August 3, 2021.
9. Fulcrum Environmental Consulting, Sundance Golf Course VCP Update, September 14, 2021.
10. Fulcrum Environmental Consulting, Sundance Golf Course Mercury Impacted Soil Removal Oversight Summary, September 29, 2021.
11. Fulcrum Environmental Consulting, Sundance Golf Course Mercury Soil Remediation Summary Report, January 3, 2022.