

**SUNDANCE GOLF COURSE
SITE-SPECIFIC
HEALTH AND SAFETY PLAN
FOR MERCURY
CONTAMINATED SOILS**

**Sundance Golf Course
9725 North Nine Mile Road
Nine Mile Falls, Washington**

Project Number: 192860.03

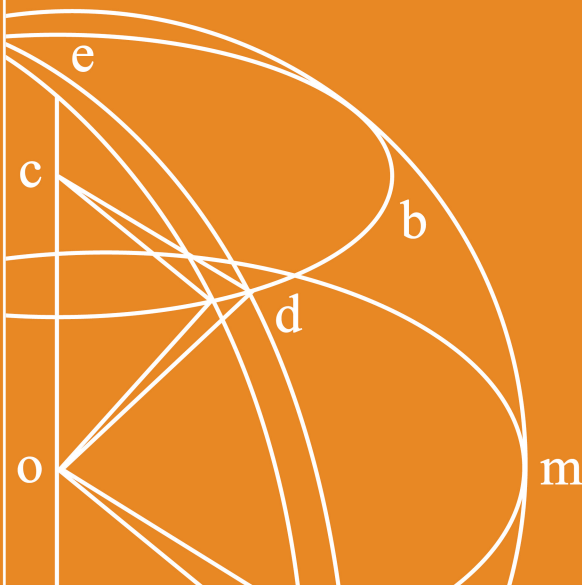
April 2, 2021

Prepared for:

Mike Kinney
Sundance Meadows LLC
PO Box 935
Otis Orchards, Washington 99027

Prepared by:

Travis Trent, CIH, CSP, PG
Fulcrum Environmental Consulting, Inc.
207 West Boone Avenue
Spokane, Washington 99201





Report Title: Sundance Golf Course Site-Specific HSP for Mercury Contaminated Soils

Project Number: 192860.03

Date: March 31, 2021

Site: 9725 North Nine Mile Road
Nine Mile Falls, Washington, 99206

Prepared by: Fulcrum Environmental Consulting, Inc.
207 West Boone Avenue
Spokane, Washington 99201

The professionals who completed site services, prepared, and reviewed this report include but are not limited to:

Authored by:  _____

Date: April 2, 2021

Travis Trent, CIH, CSP, PG Principal
Fulcrum Environmental Consulting, Inc.





Report Integrity:

Fulcrum Environmental Consulting, Inc.'s scope of service for this project was limited to those services as established in the proposal, contract, verbal direction, and/or agreement. This report is subject to applicable federal, state, and local regulations governing project-specific conditions and was performed using recognized procedures and standards of the industry. Scientific data collected in situ may document conditions that may be specific to the time and day of service, and subject to change as a result of conditions beyond Fulcrum's control or knowledge. Fulcrum makes no warranties, expressed or implied as to the accuracy or completeness of other's work included herein. Fulcrum has performed these services in accordance with generally accepted environmental science standards of care at the time of the inspection. No warranty, expressed or implied, is made



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1.0 APPLICABILITY OF THIS HEALTH AND SAFETY PLAN

Site activities at the former Sundance Golf Course (Sundance) project will include disturbance of select areas of site soils that are impacted with mercury. Contractors engaging in site activities will operate their own site health and safety plan (HSP) to address general construction activities. This plan has been prepared as a supplement to other site specific HSPs to address the specific health risks associated with disturbance of the mercury-impacted soils. The purpose of this site-specific Health and Safety Plan is to guide proposed site activities involving mercury-impacted soils in a safe manner intended to prevent exposure to site workers or nearby/auxiliary personnel.

This HSP should not be considered for use on other sites or contaminants and is not warranted for use other than work impacting the identified and characterized mercury-impacted soils associated with the Sundance site.

This Contaminated Soils HSP has been prepared by Travis Trent, a Certified Industrial Hygienist (CIH), Certified Safety Professional (CSP), and Professional Geologist (PG) with over 25-years of experience in the management and safe handling of contaminated soils. Relevant professional certifications are presented as Appendix A.

2.0 BACKGROUND

The site is located at the 9725 North Nine Mile Road in Nine Mile Falls, Washington. The site is bounded by residential housing to the north and south, by Highway 291 to the east, and by a forest preserve to the west. The site was recently clear-cut and harvested for timber with the majority of the site consisting of grass fairways and greens. The site was formerly a forested golf course with clubhouse located at the east of the site adjacent to Highway 291.

A May 2019 Phase I Environmental Site Assessment by Fulcrum identified the risk of agricultural chemical impact associated with golf course maintenance activities. In October of 2020, Fulcrum collected 19 representative soil samples from greens, tees, and fairways to evaluate for potential residual heavy metal impact associated with historic agricultural chemical use. An additional 162 samples were collected in December of 2020. Samples were analyzed for arsenic, cadmium, lead, and mercury. Results showed elevated concentrations of mercury associated with the upper three inches of soil on six (6) putting greens (holes 4, 5, 7, 8, 9, and 11).

The site was entered into the Voluntary Cleanup Program (VCP) through the Washington State Department of Ecology (Ecology). Ecology review confirmed that the level of investigation was sufficient. Following review of remedial alternatives, it was determined that removal for offsite disposal as mercury-impacted soil was the best remedial option.

Fulcrum recommended that an excavation contractor familiar with handling of contaminated soils utilizing staff with 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training be retained to conduct the excavation, transport, and disposal services.



Able Cleanup Services was retained to provide excavation services in accordance with these recommendations.

Soil analytical results were provided to Waste Management for approval to dispose of the soil as mercury-impacted soil at the Graham Road Landfill in Airway Heights, Washington.

3.0 GENERAL DESCRIPTION OF PROJECT ACTIVITIES

Site activities addressed under this HSP will include excavation, transport, and disposal of mercury-impacted soils to be followed by confirmation soil sampling.

3.1 Contact List

Implementation of this plan will be the responsibility of Able’s onsite Project Superintendent and Corporate Safety Officer. Travis Trent will act as the project’s Certified Industrial Hygienist (CIH) and will be available on an on-call basis as needed. Additional Able employees, sub-contractors, and/or Fulcrum staff may be involved in select tasks under the direction and oversight of the Site Safety Officer and/or Project CIH.

The parties involved in this project, their respective organization, and their roles are presented in the following table.

Table 1: Organization of Project Staff and Responsibilities

Person/Agency or Firm	Role/Responsibility
Kipp Silver, Able Cleanup Technologies 509.466.5255	Able Project Manager
Scott Groat, GIT Fulcrum Environmental Consulting, Inc. 509.466.5255	Fulcrum On-Site Safety Officer
Travis Trent, CIH, LHG, Principal Fulcrum Environmental Consulting, Inc. 509.993-4739	Project CIH/CSP

3.2 Proposed Start Date

Activities disturbing general site soils are scheduled to start April 7, 2021, and expected to take one (1) day. An additional day of site activity may occur later in the month depending on results of confirmation sampling.



3.3 Description of Contaminated Soil Handling Activities

Select locations of mercury-impacted soil will be excavated and disposed of offsite. Work activities will include excavation, loading, and off site transport to be followed by confirmation sampling.

3.3.1 Contaminated Soil Handling

The Contaminated Soil HSP anticipates excavation will be conducted by heavy equipment (front-end loader or similar) with excavated soil loaded directly into transport vehicles. Hand excavation is not anticipated. A total of six (6) locations will be excavated. In each work area access will be restricted to 40-hour HAZWOPER trained workers.

3.3.2 Dust suppression

Dust suppression activities potentially impacting contaminated soils shall be conducted sufficient to prevent visible dust that extends more than one vehicle length from any disturbing vehicle and not closer than within 10-feet of the property boundary or any adjacent occupied or public areas. Work involving contaminated soils will not be conducted if wind conditions are identified with potential to create dust or to move otherwise-created dust beyond the property boundary. In the event that high winds are noted, that visible dust is approaching identified boundaries, or that other conditions of elevated airborne contaminant concern are noted, work will be stopped and corrective actions taken. Fulcrum also recommends a decontamination area be established for any vehicles whose wheels potentially come into contact with contaminated soils to ensure that said soils are not mechanically transported offsite.

4.0 CONTAMINATED SOIL SPECIFIC SAFETY AND HEALTH HAZARDS

Elevated concentrations of mercury have been identified in site soils in six (6) specific areas on the site. Exposure risk is through inhalation of airborne dust. Dermal contact and ingestion are not exposure risks based on the limited scope of work (a single day of excavation and transport for offsite disposal).

Health Hazards

The identified mercury is intermixed with site soils. As such, inhalation of metal particles is the primary concern. Inhalation of solid particulates of metals can deposit within lung tissue similar to dust and other airborne particulate. Metals fumes, commonly associated with metal fume fever are not considered a risk for this remedial action.

Metal particulates can also irritate skin and eyes. Protection of skin surfaces with long-sleeve shirts, long pants, and gloves are generally effective in minimizing the skin irritation caused by



some metals. Mucus membranes, including those of the eyes, nose, and throat can react adversely to metal particulates.

Physical Hazards

Metals encountered during environmental investigations are typically in a solid form. Physical hazards associated with metal contamination are more likely to be associated with the volatility or flammability associated with other products co-located with the contaminant.

Methods Used to Determine Their Respective Airborne Contaminants

Evaluation for airborne concentration of metals is a commonly completed industrial hygiene exposure assessment. Sampling is completed of workers exposed to the airborne hazard during a work shift. Analysis is completed by standard methods developed by the Occupational Safety and Health Administration (OSHA) and/or the National Institute of Occupational Safety and Health (NIOSH). Laboratory data is directly comparable to acceptable exposure limits established by the Washington State Department of Labor and Industries, Division of Occupational Safety and Health (DOSH), OSHA, or the American Conference of Governmental Industrial Hygienists (ACGIH).

The OSHA Permissible Exposure Limit (PEL) for mercury is 0.1 milligrams of arsenic per cubic meter (mg/m^3) calculated as an 8-hour time weighted average (TWA). The ACGIH Threshold Limit Value (TLV) for mercury is $0.025 \text{ mg}/\text{m}^3$ TWA.

Procedures to Lessen or Prevent Exposure

Management of the hazards associated with solid metals is similar to the management for dust or other airborne particulates. Use of water sprays to mist dry soils and prevent dust generation is generally effective in mitigating airborne metal particulate hazards. Where dust cannot be managed through administrative or engineering controls, personal protective equipment, including respirators with P100 high efficiency particulate air (HEPA) filter cartridges, can be used to reduce potential exposure.

Emergency and First-Aid Procedures

Generally emergency medical and first-aid procedures are not necessary with exposure to airborne particulates. However, if eye irritation or irritation of the respiratory tract occurs, get out of the exposure area and into fresh air. Seek medical attention if irritation persists.

4.1 Evaluating Potential Risks

The nature of the impacting activity is a significant influencing factor in the potential exposure to the above contaminants. Table 2 on the next page, summarizes the potential exposure risk based on various potential construction tasks.



Table 2: Potential Risk of Various Remediation Tasks

Type of Task	Potential Exposure Risk
Conducting site activities that contact contaminated site soils (walking, driving, etc.) but do not otherwise disturb said soils with no windy or adverse environmental conditions or other potential dust generating activities. Operation of a transport vehicle with a load of tarped or covered contaminated soil and operation of a wetting hose during excavation would also typically be characterized as a low potential exposure risk activity.	Low
Excavation of wetted contaminated soils with no visible dust other than at the point of excavation and extending not more than 3 to 5 feet from the point of disturbance. Hand excavation of contaminated site soils. Other site activities that disturb contaminated soils but generate no or very little dust.	Moderate
Activities that disturb contaminated soils and result in visible dust generation 10 feet or more beyond the point of disturbance or for which workers would be present within the area of dust generation. Contaminated soil disturbance conducted during windy conditions resulting in dust generation.	High

The length of work task will also impact the potential for worker exposure. Table 3 below, provides a breakdown of risk based on task length.

Table 3: Potential Exposure Risk of Remediation Task Time Length

Length of Time	Potential Exposure Risk
Short duration activity: usually less than 1 hour total during a standard shift	Low
Moderate duration activity: occurs intermittently throughout the day (usually less than 4 hours total throughout the day)	Moderate
Long duration activity: occurs steady throughout the day (full 8 or 10 hour shift)	High

Table 4 below provides a summary of work practices and engineering controls for planned contaminated soil impacting activities based on an evaluation of the risk issues outlined in Tables 2 to 3 above.

Table 4: Exposure Assessment Frequency and Engineering Controls by Risk Level

Concentration & Condition	Construction Task and Duration	Exposure Assessment and Air Monitoring Frequency	Required Administrative and Engineering Controls
Low Risk Tasks	Short to moderate duration	Exposure assessment for each task recommended but not required.	Awareness level training for all workers engaged in task. Restricted access to general work area , dust suppression, and stormwater control in keeping with general site requirements. Respiratory protection should be made available to staff upon request but not required. 40-hour hazmat trained person on-site acting as a competent person is recommended but not requires as the hazard has been identified and controls established.
Low Risk Tasks	Moderate to long duration	Exposure assessment for each task recommended but not required.	Per above with respiratory protection recommended but not required unless necessitated by a positive exposure assessment.



Moderate Risk Tasks	Short to moderate duration	Exposure assessment for each task strongly recommended but not required so long as no potential employee exposure to contaminated soil dust occurs.	Per above. Dust suppression and storm water runoff controls extended to specifically address potentially contaminated soils. On-site hygiene facilities recommended. Respiratory protection and Tyvek-type suites required unless a task specific negative exposure assessment is established in which case it should be made available upon worker request. Periodic third party observations and airborne particulate testing recommended on a task specific basis but not required.
Moderate Risk Tasks	Moderate to long duration	Exposure assessment for each task is required. If positive, additional monitoring and/or controls may be recommended.	Per requirements for short to moderate duration moderate risk tasks. Respiratory protection recommended even if a negative exposure assessment is established but not required. Third party observations and airborne particulate testing recommended on a weekly basis but not required.
High Risk Tasks	Short to moderate duration	Exposure assessment for each task is required. If positive, additional monitoring and/or controls may be recommended.	40 hour hazmat training recommended but not required for workers engaging in high risk tasks. Third party observations and airborne particulate testing recommended daily but not required.
High Risk Tasks:	Moderate to long duration	Exposure assessment for each task is required. If negative weekly exposure monitoring is recommended. If positive, additional monitoring and/or controls may be recommended.	Per requirements for moderate to long duration moderate risk tasks. Respiratory protection and Tyvek-type suites recommended regardless of results of exposure monitoring. Full time third party observations and airborne particulate testing recommended but not required.

5.0 EXPOSURE MONITORING AND CONTROLS

The following subsections provide detail associated with recommended exposure monitoring and administrative and engineering controls.

5.1 Personnel and Environmental Monitoring

Personal exposure and/or area air monitoring for mercury will be conducted by Industrial Hygiene staff during the soil impacting activities. Necessity of for additional employee exposure monitoring shall be evaluated based on the following relevant considerations and documentation:

1. Information, observations, or calculations which would indicate potential exposure to action levels as outlined in Section 4 of this plan.
2. Change in work task or practice that might result in a change in exposure.
3. Change in site conditions that might not be adequately characterized by previous monitoring.



For the purposes of this exposure monitoring, employee exposure is potential exposure which would occur if the employee were not using a respirator. Exposure assessment monitoring shall represent full shift work and shall be at least eight (8) working hours in duration. Monitoring shall be conducted for each task and each work area. Exposure assessment analysis should be conveyed to monitored employees within five (5) days of receipt.

Area airborne particulate sampling, if conducted, should be completed at intervals throughout the work shift and shall include testing points within each zone of work and in background areas. Particular focus shall be made on testing at zone boundaries, in downwind directions, and between the work area and any proximal occupied areas. Results shall be documented and made available for review upon request.

5.2 Personal Protection

All activities impacting or proximal to contaminated soils, regardless of personal and environmental monitoring results, should be conducted in not less than Level D personnel protective equipment (PPE). Level D PPE is defined as sun-shading hard hats, safety glasses, gloves, reflective vests, leather work boots, and coveralls or work clothes. All personnel will take those precautions necessary to prevent injury when near equipment and machinery.

Additional PPE, consisting of a personal respirator, may be recommended or required as outlined in Table 4 above. Respiratory protection should be selected and utilized in conformance with the contractors written respiratory protection plan.

At any time, any site personnel under this health and safety plan, or any other health and safety plan for the proposed work, may utilize a higher level of PPE as needed to meet applicable regulatory requirements and/or desired level of personal protection.

5.3 Environmental Delineation

A restricted work area shall be established when worker exposure exceeds the action level for any constituent listed above. In some instances, nuisance dust concentration may be used as a threshold indicator. The restricted work area shall be segregated from the rest of the workplace in a manner that minimizes the number of persons who will be exposed. Access to the restricted work area shall be limited to authorized persons as determined by the Owner or Owner's Representative in compliance with all pertinent regulations. Any person entering the regulated work area shall refrain from consumption of food or beverage; use of smoking products or chewing tobacco; and application of cosmetics.

5.4 Worker Training Requirements

All site workers with the potential to be exposed to the contaminants outlined in this Health and Safety Plan shall be provided adequate site-specific awareness training tailored to the specific contaminants of concern. Training content, at a minimum, shall include awareness training for



each contaminant, an outline of engineering, administrative, and hygiene controls that will be utilized for worker protection, a summary of PPE requirements for pre- and post-exposure assessment, and the details of exposure monitoring. Details of training personnel attendance, company, and date shall be documented on the signature sheet provided within this Health and Safety Plan. Initial training shall be conducted by the Project CIH or Site Safety Officer. The onsite competent person shall have not less than current (initial 40-hour class and/or older class with 8-hour refresher within the last 12 months) 40-hour hazmat training.

6.0 EMERGENCY RESPONSE

- FIRE: 911
- POLICE: 911
- HOSPITAL: Providence Holy Family Hospital
5633 North Lidgerwood Street
Spokane, Washington 99208
1.509.482.0111
- POISON CONTROL CENTER: Washington Poison Center (WAPC)
1.800.222.1222
- EXPLOSIVE UNIT: 911
- DIRECTIONS TO HOSPITAL (estimated time is approximately 15 minutes):
 - From Site
 - Head east on WA-291 (Nine Mile Road) to East Francis Avenue, turn left (east) Turn Right (south) on North Lidgerwood street, follow signs to Hospital



APPENDIX A

Professional Certifications



STATE OF WASHINGTON

DEPARTMENT OF LICENSING – BUSINESS AND PROFESSIONS DIVISION

THIS CERTIFIES THAT THE PERSON OR BUSINESS NAMED BELOW IS AUTHORIZED AS A



GEOLOGIST
Hydrogeologist

Travis L Trent
1127 W 8th Ave
Spokane WA 99204-3107

364
License Number

2002-01-08
Issue Date

2021-06-06
Expiration Date

Teresa Berntsen

Teresa Berntsen, Director

The Board for Global EHS Credentialing (BGC)

through its vested authority, hereby confirms that

Travis L. Trent

has met all requirements of education, experience, and examination, and on-going maintenance set forth through the BGC's American Board of Industrial Hygiene®'s (ABIH®) credentialing division for re-certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.

Credential Number: 9850 CP

Award Date: November 19, 2010

Expiration Date: June 1, 2026

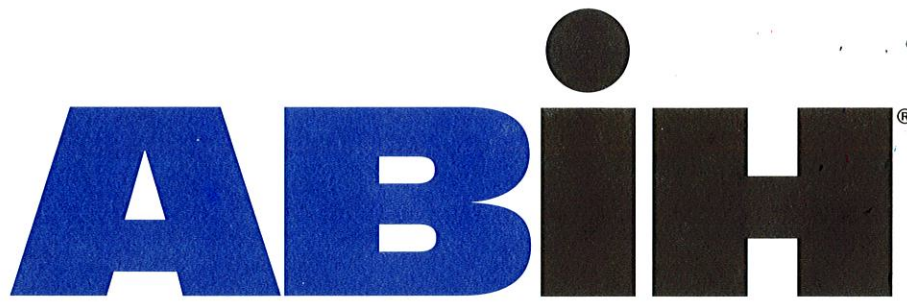


Cynthia Hanko, CIH
Chair of the Board of Directors



Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary





american board of industrial hygiene®

organized to improve the practice of industrial hygiene
proclaims that

Travis L. Trent

having met all requirements of
education, experience and examination, and
ongoing maintenance,
is hereby certified in the

**COMPREHENSIVE PRACTICE
of
INDUSTRIAL HYGIENE**

and has the right to use the designations

CERTIFIED INDUSTRIAL HYGIENIST

CIH

Certificate Number	9850 CP
Awarded:	November 19, 2010
Expiration Date:	June 1, 2021



Susan Ripple

Chair, ABIH

Alvin K. Oliver

Chief Executive Officer, ABIH



THIS CERTIFIES THAT

TRAVIS LYLE TRENT

HAS SUCCESSFULLY MET ALL THE REQUIREMENTS OF EDUCATION, EXPERIENCE AND EXAMINATION, AND IS HEREBY DESIGNATED A

CERTIFIED HAZARDOUS MATERIALS MANAGER® CHMM®

January 30, 2014

DATE OF CERTIFICATION

16533

CREDENTIAL NUMBER

June 30, 2024

CERTIFICATION EXPIRES

EUGENE A. GUILFORD, JR.
EXECUTIVE DIRECTOR



VALID SO LONG AS THIS CREDENTIAL IS RENEWED ACCORDING TO SCHEDULE AND IS NOT OTHERWISE REVOKED.



Accredited by the American National Standards Institute and the Council of Engineering and Scientific Specialty Boards



Board of Certified Safety Professionals

Upon the recommendation of the
Board of Certified Safety Professionals,
by virtue of the authority vested in it,
has conferred on

Travis L Trent

the credential of

Certified Safety Professional

and has granted the title as evidence of meeting the qualifications and passing
the required examination so long as this credential is not suspended or
revoked and is renewed annually and meets all recertification requirements.



April 03, 2012

DATE ISSUED

CSP-22968

CERTIFICATION NUMBER

Janice F. Martin

BOARD PRESIDENT SIGNATURE

Treasa M. Turnbeough

BOARD SECRETARY SIGNATURE

Duplicate Issued March 20, 2018