ECOLOGY-LED INVESTIGATION AND CLEANUP AGREEMENT

This Ecology-Led Investigation and Cleanup Agreement ("Agreement"), effective as of the latest date of signature below ("Effective Date"), is a binding agreement entered into by and between the Washington State Department of Ecology ("ECOLOGY") and Reata Ranches Ltd. Co. ("RECIPIENT").

BACKGROUND

RECIPIENT is the owner of real property located at 106 North 2nd Avenue, Walla Walla, Washington ("Property"). The Property is identified by Walla Walla County as Parcel No. 360720574720.

ECOLOGY desires to conduct remedial actions at the Property as described in the Remedial Action Work Plan: Stillwater Holdings Chevron Release, prepared by NWFF Environmental, dated February 24, 2025 ("NWFF Work Plan"), and the draft Stillwater Holdings Chevron Site - Vapor Sampling Plan prepared by GeoEngineers, Inc, dated February 19, 2025 ("GeoEngineers Work Plan"). The NWFF Work Plan and the GeoEngineers Work Plan are together referred to as the "Work Plans." The Work Plans are attached hereto as Exhibit A. ECOLOGY is working towards finalizing the GeoEngineers Work Plan on or before April 14, 2025, after which it will be provided to RECIPIENT for review and approval. Once the GeoEngineers Work Plan is in final form and approved by ECOLOGY and RECIPIENT, it shall replace and supersede the draft in Exhibit A and become one of the Work Plans. ECOLOGY anticipates completing the remedial actions at the Property described in the Work Plans by August 30, 2025.

RECIPIENT desires to grant ECOLOGY and its contractors and other authorized agents access to the Property to conduct the remedial actions described in the Work Plans.

This Agreement facilitates investigation and cleanup of a release or threatened release of a hazardous substance at or affecting the Property. As authorized by RCW 70A.305.030, it is anticipated that ECOLOGY will conduct remedial actions at the Property as detailed in the Work Plans. The remedial actions will be conducted pursuant to Washington's Model Toxics Control Act ("MTCA"), RCW 70A.305 and its implementing processes and standards, WAC 173-340.

COOPERATION AND PERFORMANCE OF WORK

RECIPIENT shall cooperate fully with ECOLOGY and shall not interfere with remedial actions performed by ECOLOGY at the Property.

RECIPIENT shall refrain from using the Property in any manner that ECOLOGY reasonably determines will (i) pose an unacceptable risk to human health or the environment due to exposure to the hazardous substances that ECOLOGY will be remediating pursuant to this Agreement or (ii) interfere with or adversely affect the implementation, integrity, or protectiveness of the remedial actions ECOLOGY performs at the Property.

Ecology will not reimburse RECIPIENT for business interruption or business loss due to work conducted by Ecology under the Work Plans. Whenever ECOLOGY enters the Property, is present at the Property, and/or conducts investigative or remedial work at the Property, ECOLOGY, consistent with its responsibilities under applicable law, shall use reasonable efforts to minimize interference with RECIPIENT'S operations at the Property. ECOLOGY will not file a lien against the Property for the work as described in the Work Plans and will remove, at its sole cost and expense, any lien filed by a contractor that performs the Work.

The employees, volunteers, or agents of each party who are engaged in the performance of this Agreement shall continue to be employees, volunteers, or agents of that party and shall not for any purpose be employees, volunteers, or agents of the other party.

RECIPIENT WORK

Within ten (10) days after ECOLOGY provides written notice to RECIPIENT to commence work, which notice may be given any time after the Effective Date, RECIPIENT shall, at its sole cost and expense, cut three holes in the side of the building on the Property to allow pipes to run directly from the building's sumps to the groundwater treatment and vapor removal systems that ECOLOGY will be installing on the adjoining property to the south as described in the NWFF Work Plan. RECIPIENT shall be responsible for repairing the holes, at its sole cost and expense, after ECOLOGY decommissions and removes the remediation equipment pursuant to the section below entitled Restoration and Indemnification.

ACCESS

For the duration of this Agreement, RECIPIENT shall allow ECOLOGY access to the Property at reasonable times for the purpose of conducting and overseeing the remedial actions described in the Work Plans (the "Work"). ECOLOGY and its authorized agents shall have access to enter and freely move about all areas at the Property that RECIPIENT either owns, controls, or has access rights to at all reasonable times for the purposes of conducting and overseeing the Work.

RECIPIENT shall secure access rights for ECOLOGY for areas or premises at the Property leased to third parties where Work will be performed pursuant to this Agreement. RECIPIENT has the responsibility to inform its lessees of the Work that ECOLOGY or its agents will be performing in those areas or premises and the time of those activities. RECIPIENT is responsible for ensuring that its lessees do not interfere with the Work being conducted by ECOLOGY or its agents under this Agreement. RECIPIENT shall provide ECOLOGY with contact information for any lessee on areas or premises at the Property where Work will be performed under this Agreement.

ECOLOGY shall give reasonable notice (at least 48 hours) before entering the Property unless an emergency prevents such notice. All persons who access the Property pursuant to this Agreement shall comply with all applicable health and safety plans prepared by or on behalf of ECOLOGY. ECOLOGY and its authorized agents shall not be required to sign any liability release or waiver as a condition of Property access.

TERM OF AGREEMENT

The term of this Agreement shall expire on August 30, 2025. The term of this Agreement may be extended by written consent of both ECOLOGY and RECIPIENT.

CONVEYANCE OF ANY INTEREST

Throughout the term of this Agreement, RECIPIENT shall provide written notice to ECOLOGY of conveyance of any interest in any part of the Property, including but not limited to sale, easement, lease, bankruptcy, or foreclosure. The notice must be provided at least thirty (30) days in advance of the conveyance, when known, or as soon as reasonably known if that time is less than thirty days in advance.

COMPLIANCE WITH APPLICABLE LAWS

ECOLOGY and RECIPIENT shall comply fully with all applicable federal, state and local laws, orders, regulations, and permits relating to this Agreement. If any provision of this Agreement violates any statute or rule of law of the state of Washington, this Agreement is considered modified to conform to that statute or rule of law.

COST RECOVERY

ECOLOGY hereby fully and finally releases RECIPIENT from any and all costs, expenses, charges, and fees for Work that ECOLOGY conducts pursuant to this Agreement.

DISPUTE RESOLUTION

When there is a dispute with regard to the extent and character of the Work, or any other matter related to this Agreement, RECIPIENT shall have the right to enter a dispute resolution process as provided for below:

A. RECIPIENT notifies ECOLOGY (in accordance with the section below entitled Contact Information) of a dispute resolution request.

B. Dispute resolution request must be in writing and state the disputed issue(s).

C. RECIPIENT has the opportunity to be heard by ECOLOGY's Section Manager and offer evidence in support of its issue.

D. ECOLOGY's Section Manager reviews RECIPIENT's request.

E. After concluding the review, ECOLOGY's Section Manager provides RECIPIENT with a written decision.

The decision of ECOLOGY on the dispute shall be final and conclusive, unless within thirty (30) days after the date of such decision, RECIPIENT submits a written appeal to ECOLOGY's Cleanup Program Manager. The decision of the Cleanup Program Manager shall be final and conclusive. The parties agree that this dispute resolution process shall precede any action by RECIPIENT in a judicial or quasi-judicial tribunal.

Pending final decision of a dispute, RECIPIENT agrees to proceed diligently with the performance of this Agreement and in accordance with the decision rendered.

Nothing in this Agreement shall be construed to limit the parties' choice of another mutually acceptable method, in addition to the dispute resolution process outlined above.

EMERGENCY ACTION

In the event that RECIPIENT becomes aware of any action or occurrence unrelated to the Work or Work Plans during the term of this Agreement that causes or threatens a release of hazardous substances, pollutants, or contaminants at or from the Property that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, RECIPIENT shall immediately take all appropriate action. This immediate and appropriate action shall be to prevent, abate, or minimize such release or threat of release, and shall, in addition to complying with any applicable notification requirements under MTCA or any other law, immediately notify ECOLOGY of such release or threatened release.

RESTORATION AND INDEMNIFICATION

Any entry upon the Property shall be limited to the extent reasonably necessary for the performance of the Work. ECOLOGY and its contractors and authorized agents shall maintain work areas in a clean, organized, and safe condition and shall take reasonable precautions to avoid damage to the Property and all personal property on the Property. ECOLOGY shall, at its sole cost and expense, promptly repair any property damage caused by or arising from the Work conducted pursuant to the Work Plans and replace any personal property that is damaged beyond repair where the damage is caused by or arising from the Work. Upon completion of the Work or termination of this Agreement, whichever occurs first, ECOLOGY shall, at its sole cost and expense, lawfully decommission the remediation equipment at the Property and restore the Property to reasonably the same condition as it existed before the remediation equipment was installed pursuant to the NWFF Work Plan using materials of a comparable quality.

Each Party shall defend, protect, and hold harmless the other Party from and against all claims, suits, or actions arising from the negligent acts or omissions of its contractors, employees and/or authorized representatives while performing the Work and/or implementing the terms of this Agreement.

COMMUNICATIONS BETWEEN ECOLOGY AND RECIPIENT

ECOLOGY shall keep RECIPIENT informed about the status of the Work, including by submitting monthly progress reports to RECIPIENT that describe the Work performed during the previous month and the Work planned for the upcoming month, and meeting with RECIPIENT at the Property on a periodic basis. RECIPIENT may change the frequency of the progress reports and meetings upon written notice to ECOLOGY.

SUSPENSION OR TERMINATION OF AGREEMENT

A. Suspension of Agreement

When in the best interest of ECOLOGY, ECOLOGY may at any time, and without cause, suspend performance of the Work for a temporary period by providing written notice to RECIPIENT. The notice shall identify the reason for the suspension and the anticipated period of suspension.

B. Termination of Agreement for Cause

ECOLOGY or RECIPIENT may terminate this Agreement for cause if the other party breaches a material term or condition of this Agreement and fails to cure the breach within ten (10) days after the non-breaching party delivers notice of such breach to the breaching party. The notice shall identify the breach. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

C. Termination of Agreement for Convenience

ECOLOGY may terminate this Agreement for convenience at any time for any reason when it is the best interest of ECOLOGY, by providing thirty (30) days' advance written notice to RECIPIENT. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

D. Suspension or Termination for Non-Allocation of Funds

ECOLOGY's ability to conduct the Work is contingent on availability of funding. In the event funding from state, federal or other sources is withdrawn, reduced, or limited in any way after the Effective Date and prior to the completion of the Work, ECOLOGY, at its sole discretion, may elect to terminate this Agreement, in whole or part, or renegotiate this Agreement, subject to new funding limitations or conditions. ECOLOGY may also elect to suspend performance of this Agreement until ECOLOGY determines the funding insufficiency is resolved. ECOLOGY may exercise any of these options upon no less than fourteen (14) days' written notice to RECIPIENT.

CONTACT INFORMATION

All notices regarding this Agreement shall be in writing, shall be directed to the persons and addresses set forth below, and shall be deemed duly given: (a) when personally delivered to the other party; (b) one (1) business day after being delivered by email; or (c) two (2) business days after being posted by certified or registered mail. Any party may change its authorized representatives and addresses upon written notice to the other party.

RECIPIENT:	Reata Ranches, Ltd. Co. Attn: Sam Rudnick 186 Vinehill Drive Walla Walla, WA 99362 samrudnick@gmail.com
copy to:	Veris Law Group PLLC Attn: Howard Jensen 1809 Seventh Avenue, Suite 1400 Seattle, WA 98101 howard@verislawgroup.com

ECOLOGY:	Beth Kercher Site Manager 4601 N Monroe Street Spokane, WA 99205 bker461@ecy.wa.gov
copy to:	Nick Acklam Section Manager 4601 N Monroe Street Spokane, WA 99205 nack461@ecy.wa.gov

Either party may change its contact information without the concurrence the other party by providing written notice of the change to the other party.

GENRAL TERMS

RECIPIENT acknowledges it has had the opportunity to review this entire Agreement, including all the terms and conditions of this Agreement. Furthermore, RECIPIENT has read, understood, and accepts all requirements contained within this Agreement.

This Agreement constitutes a license only and does not convey any interest in the Property to ECOLOGY or any of its contractors or authorized agents. All rights granted under this Agreement are subject to all encumbrances affecting the Property and all rights and privileges of third parties to the Property existing before execution of this Agreement.

This Agreement contains the entire understanding between the parties, and there are no other understandings or representations other than as set forth, or incorporated by reference, herein.

No subsequent modifications or amendments to this Agreement shall be of any force or effect unless in writing, signed by authorized representatives of RECIPIENT and ECOLOGY and made a part of this Agreement.

No party may assign its rights or obligations under this Agreement without the written consent of the other party, which consent shall not be unreasonably withheld, conditioned, or denied.

Except as provided in the section above entitled Cost Recovery, the parties do not waive and expressly reserve all rights, claims, and defenses they may have against each other relating to acts or omissions unrelated to the Work. This Agreement shall not be construed as a settlement of any such claims.

This Agreement is entered into pursuant to and under the authority granted by the laws of the state of Washington. The provisions of this Agreement shall be construed to conform to those laws. This Agreement shall be construed and interpreted in accordance with the laws of the state of Washington, and the venue of any action brought hereunder shall be in the Superior Court for Walla Walla County.

If any provision of this Agreement or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this Agreement which can be given effect without the invalid provision, and to this end, the provisions of this Agreement are declared to be severable.

This Agreement shall be subject to the written approval of ECOLOGY's authorized representative and shall not be binding until so approved.

The signatories to this Agreement represent that they have the authority to execute this Agreement and bind their respective organizations to this Agreement.

The parties may execute this Agreement in counterparts, and all such counterparts once so executed will together be deemed to constitute one final agreement, as if one document had been signed by all parties, and each such counterpart, upon execution and delivery, will be deemed a complete original, binding on the parties. An email copy of an original signature will be deemed to have the same force and effect as the original signature.

IN WITNESS WHEREOF: the parties hereto, having read this Agreement in its entirety, including all attachments, do agree in each and every particular and have thus set their hands hereunto.

REATA RANCHES LTD. CO.	**WASHINGTON STATE DEPARTMENT OF ECOLOGY**
Signature: _____	Signature: _____
Print Name: SAM RUDWICK	Print Name: _____
Title: MNG PARTNER	Title: _____
Date: 3-5-26	Date: _____

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REATA RANCHES LTD. CO.	**WASHINGTON STATE DEPARTMENT OF ECOLOGY**
Signature: _____	Signature: _____
Print Name: _____	Print Name: NICHOLAS M. ACKLAM
Title: _____	Title: TCP-ERO SECTION MANAGER
Date: _____	Date: MARCH 5, 2025

EXHIBIT A

Work Plans

[Attached]

Remedial Action Work Plan

Stillwater Holdings Chevron Release

Walla Walla, Washington

SWC# 09321

Prepared for:

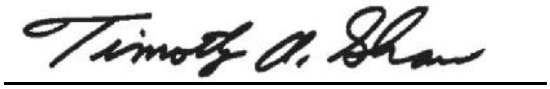
Washington State
Department of Ecology
Toxics Cleanup Program,
Eastern Regional Office
Spokane, WA 99201

Prepared and submitted by:

NWFF Environmental

2135 Henderson Loop
Richland, WA 99352

Timothy A Shaw, *Sr. Environmental Scientist*



February 24, 2025

NWFF ENVIRONMENTAL

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Appendices

Appendix A – Site Specific Health and Safety Plan (HASP)

Appendix B – Water Treatment System (WTS)

Appendix C – Vapor Removal Systems (VRS)

ACRONYMS

APEX	-	APEX Laboratory, Portland, Oregon
AST	-	Above ground Storage Tank
B106	-	Building 106
BTEX	-	Benzene, Toluene, Ethylbenzene, Xylenes
COC	-	Chain of Custody
COPC	-	Contaminates of Potential Concern
CSM	-	Conceptual Site Model
cy	-	cubic yard
DNR	-	Department of Natural Resources
DQO	-	Data Quality Objectives
DRO	-	Diesel Range Organics
ECS	-	Environmental Contracting Solutions, Inc.
fbgs	-	Feet Below Ground Surface
FD	-	Field Duplicate
GAC	-	Granulated Activated Carbon
GRO	-	Gasoline Range Organics
GW	-	Groundwater
HCl	-	Hydrochloric Acid
ID	-	Identification
kg	-	Kilograms
L	-	Liter
lbs	-	Pounds
LOD	-	Limits of Detection
LOQ	-	Limits of Quantification
m^3	-	Cubic Meters
MDL	-	Method Detection Limit
ml	-	Milliliters
mg	-	Milligrams
MFOGAC	-	Mesh Filter, Organo-clay, Granulated Activated Carbon system
MGW	-	Migration to Ground Water
MW	-	Monitoring Well
MWH	-	Marcus Whitman Hotel

ACRONYMS

NELAP	-	National Environmental Laboratory Accreditation Program
NWFF	-	NWFF Environmental
oz	-	Ounce
PAH	-	Polycyclic Aromatic Hydrocarbons
PID	-	Photo-Ionizing Detector
PM	-	Regulatory Agency Project Manger
ppb	-	Parts Per Billion
ppm	-	Parts Per Million
QA	-	Quality Assurance
QC	-	Quality Control
QEP	-	Qualified Environmental Professional
qty	-	Quantity
RRO	-	Residual Range Organics
SF	-	Square feet
SGS	-	SGS Laboratories, Inc.
SGSG	-	SGS - Galson Laboratories, Inc.
SHC	-	Stillwater Holdings Corporation
SI	-	Site Investigation
TBM	-	Temporary Benchmark
TOC	-	Top of Casing
µg	-	Micrograms
USCG	-	United States Coast Guard
UST	-	Underground Storage Tank
VES	-	Vapor Extraction System
VIG	-	Vapor Intrusion Guidance for Contaminated Sites
VOA	-	Volatile Organic Analysis
VOC	-	Volatile Organic Compound
VRS	-	Vapor Removal System
WA	-	Washington
WTS	-	Water Treatment System

1.0. SUMMARY

In September of 2023 the Washington State Department of Ecology (Ecology) responded to gasoline odors in the basement of the Marcus Whitman Hotel (MWH). Odors were also reporting in Building 106 (B106). Vapor ventilation systems were installed into both buildings to address the gasoline vapor intrusion. Further investigation identified the Stillwater Holdings Chevron station (SHC), on the northeast corner of N. 2nd Avenue and E. Rose Street, as the source of the spill. Early in 2024 a water treatment system was set up in the B106 parking lot. This system is currently operational. It is a pump and treat granulated activated carbon (GAC) system. Water is pumped from the sump in the basement of B106 into a baffled holding tank. Water is also being trucked from two sumps in the basement of the MWH into the same holding tank. Contained water is then treated through the GAC system and contained into a discharge holding tank pending analysis. If the treated water meets the City of Walla Walla sanitary sewer water discharge permit, then the water is released to the sewer system. Ecology is continuing water monitoring in the monitoring well network around SHC.

Due to the open sumps and vapor intrusion, both B106 and MWH have reported gasoline vapors in their buildings. Vapor removal systems (VRS) are currently operating in both buildings. Recent air sampling indicates that gasoline vapors remain in B106.

1.1. Project Objectives

The primary objective is to replace the current water treatment and VRS systems, that were put in place as an emergency response with a similar temporary system to be maintained and operated by the Department of Ecology through contract with NWFF. The replacement systems are to be replaced as quickly as possible with similar systems that address treatment system footprints and logistical challenges and that remain temporary in nature. These systems will serve as temporary mitigation activities until Department of Ecology is able to contract and build a permanent vapor mitigation system and water treatment system to replace the temporary systems. Permanent systems will be designed and installed in a separate agreement with another contractor.

1.2. Site Location and Description

The Site are located in Walla Walla, Washington at the northeast corner of E. Rose Street and North 2nd Street. The release site address is: 7 East Rose Street. The impacted property directly adjacent to the release site is at 106 N. 2nd Ave. The impacted Marcus Whitman Hotel and Conference Center is located directly across 2nd Ave from the release site and the 106 building.

Other Site data:

- *Site Coordinates:* Latitude 46.067830˚ by Longitude -118.339911˚
- *Site Address:* 6 East Rose Street, Walla Walla, Washington

1.3. Geology

The Site is in an area near the Columbia River and the Snake River join. The general geology near the surface consists of reworked sandy silts, gravels, and cobbles, consistent with fluvial and alluvial deposits. These deposits sit upon the Columbia River Basalts. The area was likely inundated by the Missoula Floods which occurred during the last ice age lending layers of sediment from above this area to the southern end of the Willamette Valley in Oregon.

1.4. Surface & Groundwater

The site is very near Mill Creek which flows through downtown Walla Walla. Near the site the creek flows completely underground. Monitoring wells associated with the Site indicate that there is a local groundwater table at 12 to 14-feet below ground surface (fbgs). A number of the monitoring well logs are on file with Ecology.

1.5. Climate

The climate is considered to be Warm Temperate, Csa on the Koppen Climate Classification with dry summers and mild, wet winters. Walla Walla tends to have short, dry, hot summers and a 3-to-4-month cold season between November and February. Summer temperatures tend to range from the 80's to 100 degrees. Winters can dip down into the 20's, with the coldest temperatures typically in the December. Heaviest rainfall is typically from November to February with an average of 3-inches per month with a total yearly average precipitation of 26.4 inches. Environmental Protections

1.6. Scope of Work

The scope of work for this project is to replace the current water treatment and VRS systems with systems configured to the allowable footprint while reducing or eliminating contamination impacts to the MWH, B106, and SHC properties. This workplan identifies a method to meet the project objectives and contractual scope of work.

2.0. GROUNDWATER TREATMENT

Current Water Treatment System: water is pumped from the sump in B106 through a hose that runs from the basement sump through the hallway, up the stairs, and out the back door to a 20,000-gallon baffled influent tank. The baffling in the tank allows for some separation of free product, if encountered, from the water. When treatment is initiated, water from the influent tank is pumped through a hydrocarbon mesh filter, then to an organo-clay filter, and then through two 2,000-lb GAC filters (collectively the MFOGAC system). After being processed through the first GAC filter the water is tested before being sent through the second stage filtration and subsequently pumped into a holding tank pending laboratory analysis for volatile organic compounds (VOCs). If the water tested meets water discharge permit parameters, the water is discharged into the sanitary sewer. If the water fails discharge cleanup levels the water that has already been run through a second filtration systems is tested out of the holding tank prior to discharge. Currently there is no specific data on the influent contamination levels or flow rate. For the design of the water treatment system, we are assuming that gasoline range organics are below 185-parts per million (ppm), the average water temperature is 50° Fahrenheit (F),

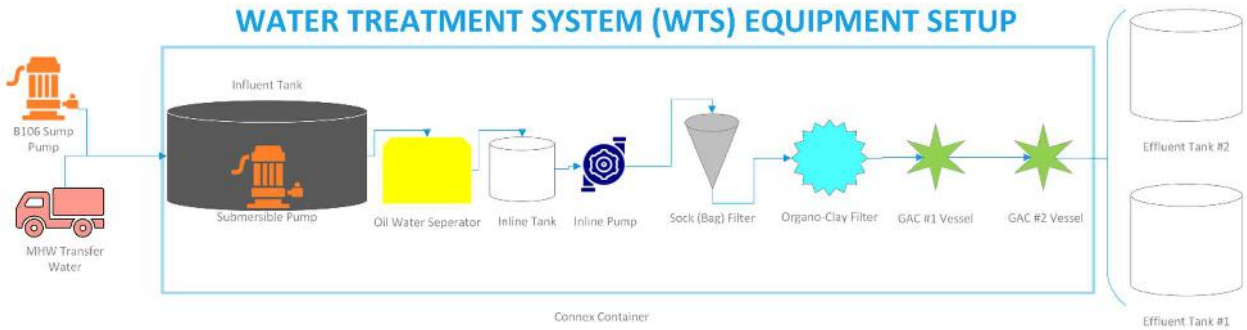
and that the flow rate from B106 is less than 4-gallons per minute (gpm). In recent months, no free product has been encountered in the MWH or B106 sumps.

Discussion during NWFF's site visit in August indicated that the current system location and operational footprint (approximately 4,500-square feet (sf)) will not be available and an area of less than 1,000-sf will need to be utilized. Given that parameter of square footage change, significant modifications to the current water treatment system will be required. The area discussed is bound to the north by the south side of B106, to the east by the west side of the SHC building, to the west by N. 2nd Avenue, and to the south by the SHC west pump island. This new location will be on the west, opposite side of the SHC building from where the current influent pumping line is located which is at the east end of B106.

The placement of the new temporary water treatment system (WTS) will require a short term, traffic control plan while the effluent tanks are offloaded and positioned. The activity will be planned to occur in a single day. NWFF will submit a Traffic Control Plan, written by a WA certified Traffic Control Supervisor, and will have a Traffic Control Supervisor onsite during placement of the tanks.

The WTS will be entirely located on SHC property, but further investigation will be made into right-of-way and temporary building permitting. The new location will also require SHC to relocate the handicap parking space. SHC may also wish to build a façade around the WTS to increase the aesthetics of site. With approval from Ecology, NWFF will support any solutions derived between Ecology and SHC to implement a functional façade. Due to site constraints the WTS is housed within a heavy-duty vinyl tarp shelter that is 40-ft long, 8-ft wide, and 8-ft tall. It will be placed along the west wall of the SHC building. SHC will provide electricity for the pumps, sensors, lighting, and heating in the WTS.

WTS equipment parts will be placed on the existing walkway on that side of the building. The influent tank is a bladder tank and will require a support cage to support it on the bottom and sides. This cage will be a wood structure with smooth plywood siding inside the cage. A discharge pipe modification to the bottom of the cage will be necessary to allow access and connection to the sanitary sewer cleanout so the tank does not crush the pipe. The cleanout is located in the walkway approximately 5.5-feet south of B106 and 1.3-feet west of the SHC building west wall. The influent bladder tank is 7-ft wide by 12-ft long by 6-ft tall and will be set over the cleanout location. As such, before installing the influent tank, a pipe extension will be added to the sewer connection and a protective, wood, utilidor framed around and over the connection and pipe extension past the south end of the tank. No concrete or excavation work will be required. Appendix B contains diagrams of how the system will be set up on site. The flow chart below depicts the general process and parts of the water treatment system.



The owner of B106 has agreed to three access ports, two 4-inch diameter ports and one 3-inch diameter port, through the south wall of their building, see figures in Appendix B. The location of these ports on the southern wall will be where the B106 owner deems the least intrusive to his building and provides the necessary access needed for the WTS and VRS. These access ports will eliminate the need for running the WTS and VRS system lines through the B106 hallways and stairwells and out the back door.

The final design and construction of the ports will be completed by the property owner and will not be included as part of this work plan. A suggested size and configuration are presented in Appendix B. Note: It is the responsibility of the property owner to ensure these suggestions and the design for the port does not negatively impact the building (i.e. safety, access, structural integrity, etc.). The ports must be able to accommodate, at a minimum, a cam-locked, 1.5-inch inside diameter suction hose and a flexible duct work of the vapor extraction system to exit the building. This can be accomplished with one sufficiently large port or two individual ports. Ideally, access will be located approximately 2-ft above the outside ground level. The actual location and size will be determined by the structure of the building.

Following the completion of the ports, the property owner will notify NWFF of the final specifications of the ports prior to installing the temporary system. After the water hose and the VRS ducting is passed through their perspective ports NWFF will install stainless steel wool in the interstitial space for rodent control and fill the void area with expanding insulation spray foam.

After the water is treated, the water will be impounded into two interconnected 12,000-gallon poly tanks, 12-feet in diameter and 18-feet tall, to provide up to 24,000-gallons of effluent water storage. Upon laboratory results that meet discharge permit requirements, a temporary, 4-inch diameter effluent discharge line will be connected to the western most effluent tank and run into the sanitary sewer cleanout connection. It is anticipated that discharges will occur once a week, at a maximum rate of 25-gallons per minute (GPM), and will take 16-hours to discharge the effluent tanks (calculations based on the City of Walla Walla's discharge requirements, 02/07/2024). The entire discharge process will be overseen by on-site personnel.

Groundwater from the MWH sump will still require to be pumped and trucked from MWH to the SHC system for treatment. The truck is expected to offload the MWH water into the influent holding tank in less than ½-hour. The truck will not block traffic on the road and may, temporarily impede access to the west pump island. The truck will be brought to the site only when needed and otherwise will be parked offsite.

2.1. Sump Water Treatment System

The revised sump water treatment system (WTS) will be set up in and alongside the west wall of the SHC building with a footprint of 40-ft long by 8-ft wide and 8-ft tall. The two 12-ft diameter effluent tanks will be placed as far east as possible and next to the southern wall of B106. The footprint of the WTS will encroach heavily on the current handicap parking area on the west side of SHC, however, we believe this configuration will allow some if not full usage of the western SHC pump island. The WTS shelter will be heated and contain the WTS which consists of a 4,000-gallon influent water tank which will be pumped into an oil/water separator (OWS), gravity fed into a 60-gallon influent water holding tank that feeds an inline pump that will push the water through a sock filter vessel, followed by a 1,000-lb organo-clay vessel(OCV), then two, daisy-chained, in-line 1,000-lb granular activated carbon (GAC) filters. After the aforementioned filtration process the water will continue into the two, 12,000-gallon effluent

holding tanks. If inclement weather creates freezing issues, submersible water heaters may need to be placed into the effluent tanks.

Influent water will be pumped from the B106 sump directly into the WTS using an automated and remote-controlled system. When the influent tank is at 70% capacity the water will be pumped through the WTS. The WTS is a reduced size system and designed for easy change of the filter media. The organoclay and GAC filter vessels are half the size of the current vessels. Depending on actual influent contamination levels, the smaller system may require more frequent change outs, possibly twice as many as stated in the original scope of work. Changeouts, however, will require a smaller level of effort, so the net change is minimal.

The positioning of the new WTS will allow business access to SHC and B106, however, hoses will still be required through the building unless the property owners are able to provide access to through the exterior wall on the southwest side of the building. The new WTS location also allows clear access for vac truck deliveries from MWH with minimal disruption to SHC activities.

The functional working area of the current system is estimated to be 4,500-sf. The footprint of the current equipment only is estimated to be 2,200-square feet. This option moves and reduces the footprint of the water treatment system equipment only to approximately 800-sf. See Appendix B for diagrams of the placement and framework of the new water treatment system.

2.2. Remote Monitoring System

A sump pump with remote monitoring capabilities and customizable alarms will be installed to replace the current sump pump. The pump will automatically operate when water levels reach pre-set thresholds assigned to water level indicators. Flow rate monitors will be installed and monitored via a remote computer. Alarm thresholds will be programmed to send alerts via text message during times when technicians are not physically at the site. A remote vapor monitor will monitor for the presence of VOC's and flammability. In the B106 building, the vapor monitor will be placed in the basement hallway. The monitor is discrete and looks similar to other building system monitors. It can also be moved to the first and second floors if necessary for periodic monitoring of other areas.

In the MWH, the monitor will be stationed in the basement at the doorway. A wireless/cellular remote sensing system will monitor and control the system. It is desirable to set up the wireless communications system with access to the building Wi-Fi. NWFF included cellular service as a backup system should internet services be interrupted. If the building Wi-Fi is unavailable cellular service can be used as the primary, but there would not be a backup in case of weather-related cellular coverage failures. NWFF personnel will monitor systems in real time during business hours as part of daily maintenance operations and alarm thresholds will be sent to on-call response technicians after hours who will provide emergency response in under two hours if required.

3.0. VAPOR REMOVAL SYSTEM

Currently there are vapor removal systems (VRS) active in B106 and MWH. Vapors from B106 are being pumped with a ram fan with light weight ducting to the outside near the current water holding tanks. Two large negative air machines remove air from the MWH basement into an air duct that leads to and exhaust vent above the canopy on the southside, Rose Street side, of the MWH building, see picture in Appendix C. The elevator shaft of MWH has exhibited VOC vapors and a VRS consisting of a ram fan attached to duct work in the mechanical room on the roof of the building removes air from the elevator shaft. The ram fan pulls air from the elevator shaft and the exhaust is ducted to a west window in the mechanic room. These systems will be replaced with similar fans attached to the existing ducting and augmented with additional temporary ducting as necessary.

3.1. B106 Vapor Removal System

Benzene vapors in the 106 Building remain above the accepted levels for unrestricted use based on method B but are below acceptable levels using Method C calculations. While vapors are present on the 1st and 2nd floors that slightly exceed the Method B threshold, the levels are only slightly elevated. The direction from the Department of Ecology is to continue vapor intrusion mitigation measures until levels are below the unrestricted use threshold using Method B calculations. The mitigation system currently is a simple design consisting of an intrinsically safe pneumatic fan, and associated ducting. The limitation of the current system is the need for ducting run throughout the building. The objective with this system is the removal of VOCs and to eliminate the current VRS ducting running through the hallways and steps of the building. Two options are presented to meet both portions of the objective.

A negative pressure containment barrier will be installed over the ground penetrations in the basement to increase the effectiveness of vapor mitigation measures currently in place while reducing the ducting requirements throughout the building. The containment will be assembled in the smallest possible footprint to contain the openings in the floor that provide preferential pathways for vapors into the building. Containment will be constructed using 6 mil polyethylene walls using the existing concrete containment berm as a foundation. To ensure that containment is successful, some of the wood shelving around the berm will need to be moved. We will construct the cell such that the existing furnace will be outside of containment and accessible. A detailed diagram of the containment concept can be found in Appendix C. The containment area atmosphere will be evacuated through the use of a negative air machine, or similar such air handling unit. The exhaust from the air handling unit will be ducted through two 4-inch access ports to the outside. Outside the two 4-inch ports will be co-joined and routed to a safe exhaust position between the effluent tanks. VOC levels will be monitored and should the VOC levels become of concern a carbon filter will be installed on the air handling unit or at the exhaust point.

Alternatively, Due to the low levels of residual vapors the use of a localized air scrubber in identified hot spots outside of the containment area is a viable option to minimize the need for ducting throughout the building. Localized air scrubbers are the size and appearance of small dehumidifiers and run very quietly. If there are other points of intrusion, then additional VRS components maybe required. Air monitoring to ensure effectiveness will be done with a combination of a fixed remote monitor and routine facility checks during maintenance activities, an example is in Section 4.

Air monitoring with remote alarms will be installed to monitor potential vapor buildup inside of the containment area. Daily monitoring with a PPB meter will be done throughout the building until sufficient data exists to determine effectiveness. Subsequent weekly monitoring will be done to ensure filtration is efficient and vapor levels remain consistent. Continuous remote air monitoring will be conducted at the basement level outside the containment area to ensure efficacy of the containment barrier.

Setup up of containment can be done in a single day. Monitoring throughout the building will be done to establish baselines and compare those with the PPB readings from the most recent TO-15 results. This will be done prior to the setup of containment. Monitoring of areas in the building that showed elevated benzene levels will be conducted 24 – 48 hours after setup of containment to determine if hot spots exist that could benefit from the setup of localized air scrubbers.

3.2. MWH Vapor Removal System

The vapors in the MWH appear to be from an open sump and possibly the bare soil areas within the large basement area. To address these issues, we will encapsulate the bare soil areas with a bituthene or similar style membrane. This will provide a temporary vapor barrier that can either easily be removed or used as a bottom layer for a later permanent system. Further, we will erect a containment barrier around both floor openings that currently collect contaminated water. Negative air machine(s) will be used to remove air from the containment area and pump the air into the currently used exhaust duct which terminates over the canopy on Rose Street. A stand alone, constant read, volatile organic compound remote sensor will be installed within the containment area.

The aforementioned steps are expected to control VOC vapors in the basement and not allow them to enter the elevator shaft. NWFF will be monitoring the ambient air in the basement and will have a ram fan available should vapors once again permeate the elevator shaft. A diagram series depicting this system for MWH is attached in Appendix C.

4.0. DAILY SITE ACTIVITIES

There are two groundwater sources and two vapor reduction systems to monitor, inspect, and conduct periodic testing. Key system controls will be monitored and regulated through remote sensors and controls. Regular on-site inspections will be conducted to ensure the systems are functioning correctly and within parameters. Site inspections will utilize a specialized checklist, presented as Exhibit A, for documenting system data that may serve a usefulness to adjusting the remedial action systems to be more effective. This section outlines detailed daily site activities for each location as well as activities that will be conducted weekly and as needed based on findings from daily site activities and inspections. Site activities and inspections will be coordinated with the property owners and Ecology.

Exhibit A – Draft Visual Site Assessment Sheet

Stillwater
Visual Site Assessment Sheet Assessor:_____ Date:_____

	Assessment Item	Condition			Comments, Descriptions, Readings, Notes
		Good	Fair	Poor	
Building 106	Blower/Ventilation System				
	Sump Pump Condition				
	Flowmeter Condition				Flowmeter Reading:
	Water Transfer Hoses Condition				
	Petroleum Odors				PID Readings:
	Outside				
	Area 1				
	Area 2				
	Area 4				
	Area 5				
	Additional Assessment Item				

	Assessment Item	Condition			Comments, Descriptions, Readings, Notes
		Good	Fair	Poor	
MWH	Blower/Ventilation System				
	Sump Pump Condition				
	Petroleum Odors:				PID Reading Log:
	Outside				
	Area 1				
	Area 2				
	Area 4				
	Area 5				
	Additional Assessment Item				

	Assessment Item	Condition			Comments, Descriptions, Readings, Notes
		Good	Fair	Poor	
SHC	System Filter Functionality				Pressure Gauge Readings:
	Flowmeter Condition				Flowmeter Reading:
	Frac Tank 1 Condition				Fluid Level:
	Frac Tank 2 Condition				Fluid Level:
	Frac Tank 3 Condition				Fluid Level:
	Oil/Water Separator Condition				
	GAC Vessel 1 Condition				Pressure Guage Reading:
	GAC Vessel 2 Condition				Pressure Guage Reading:
	Organoclay Vessel Condition				Pressure Guage Reading:

Additional Notes:

Contact the Project Manager as soon as possible with poor rated, immediate failures, or observed maintenance issues are present.

4.1. Building 106/Stillwater Holdings Chevron

4.1.1. Daily Site Assessments

NWFF will conduct daily site assessments to ensure equipment is functioning properly, there are no leaks, and that no environmental or human factors such as vandalism have occurred that could affect the functionality or integrity of the system.

Visual inspections on the SHC property will include:

- Inspection the WTS shelter,
- Exterior condition of the shelter,
- Temperature inside the shelter,
- Structural integrity of the shelter and all vessels inside,
- Structural integrity and functionality of oil water separator
- All hoses and pumps running from the building into and out of the shelter
- All connections from hoses to vessels.
- Flow meters.
- VOC meter operations and reading.

Visual inspections inside the 106 building will include:

- Sump and sump area.
- Hoses and connections running to the sump.
- Containment area.
- Water level meter.
- VOC meter operations and reading.

During the daily visual inspection, NWFF technicians will conduct air monitoring of the containment and surrounding areas. If no VOC readings are detected at the basement level, technicians will not do daily readings on the first and second floors. Once weekly, NWFF will conduct air monitoring of all floors. This can be coordinated for early in the morning before tenants arrive. Minor repairs such as tears in ducting or temporary patching of hoses will be done during daily inspections. Any repairs requiring additional equipment or replacement of parts will be communicated to Ecology and coordination will be done with the property manager for a convenient time to make repairs. VOC readings that warrant additional mitigation measures will be reported to Ecology immediately and additional measures will be discussed prior to implementation.

4.1.2. Weekly Sampling

NWFF will collect samples twice per week and will courier samples under proper chain of custody to a laboratory certified by the Department of Ecology for Method 8260D or EPA Method 624.1. Samples will be collected following the first stage filtration. Samples will be analyzed on a 24-hour turnaround time basis. Results will be compiled and sent to Ecology and the City of Walla Walla Public Works for their records. Water testing within parameters consistent with the issued discharge permit will be discharged directly to the city sewer system.

4.1.3. Carbon Change Outs

As needed, based on visual inspections, trends from analytical results, and manufacture specifications and recommendations, carbon change outs will be scheduled. NWFF technicians will ensure flow from the influent tanks to the filtration system is isolated prior to conducting the change out. Technicians will remove and containerize carbon media in 55-gallon reconditioned UN certified drums properly labeled and prepared for transport.

Samples will be collected on the first change out and submitted for characterization in order to submit a profile to the closest properly licensed disposal facility. Once the profile is approved, NWFF will transport under proper manifest to the appropriate facility. If sample results indicate hazardous waste, transportation will be completed by a CDL driver with hazardous materials endorsement and transport vehicle will be properly placarded.

4.2. Marcus Whitman Hotel

4.2.1. Daily Site Assessments

NWFF will conduct daily site assessments to ensure equipment is functioning properly and that there are no leaks. Visual inspections will include:

- Integrity of ducting.
- Functionality of negative air machines.
- Air flow meter and filters (if utilized) on negative air machines.
- Sump #1 and sump #2 area containments.
- Hoses and connections running from the sump.
- Water level meter
- VOC meter operation and readings

During the daily visual inspection, NWFF technicians will conduct air monitoring of the containment and surrounding areas. It is NWFF's intention to remove containment in the stairwells once containment areas are set up in the basement around the sump areas. NWFF will conduct air monitoring in the stairwells and on the upper floors daily. Minor repairs such as tears in ducting or temporary patching of hoses will be done during daily inspections. Any repairs requiring additional equipment or replacement of parts will be communicated to Ecology and coordination will be done with the property manager for a convenient time to make repairs. VOC readings that warrant additional mitigation measures will be reported to Ecology immediately and additional measures will be discussed prior to implementation.

4.2.2. Transport of Water

At intervals of approximately every three days, NWFF will coordinate a vac truck to collect water from the sump area and transport to the influent tank on the SHC property. Based on data from two separate sampling events, NWFF recommends that the Department of Ecology and the City of Walla Walla discuss the potential for direct discharge, which will reduce transportation of water and will reduce the amount of processing done on the SHC property of water not related to the 106 building. A smaller carbon unit and smaller holding tank can be placed in the basement of the MWH and directly discharged to the sewer system with permission from the city.

5.0. WASTE MANAGEMENT AND DISPOSAL

Waste streams associated with this project will be carbon filtration media, absorbent material, oily water, and personal protective equipment. Waste quantities expected are up to ninety 55-gallon drums. Characterization of waste will be done to determine if RCRA or WA Dangerous Waste accumulation timeframes are applicable in accordance with the generator status, which is assumed to be episodic. Waste will be labeled in accordance with the characterization and will be inspected weekly as required by RCRA and Dangerous Waste regulations. Waste will be transported to a properly permitted disposal facility under proper manifest in accordance with state and federal transportation regulations.

6.0. HEALTH & SAFETY PLAN

A site-specific health and safety plan (SSHSP) has been drafted and is attached in Appendix A. The current draft will be modified once the location and remediation system options are finalized.

7.0. COST & LEAD TIME

Exhibit B provides a detailed list of high cost and long lead time items for the implementation of water filtration and vapor mitigation systems outlined in this plan.

High Dollar/Long Lead Time Items

Item	Cost	Lead Time	Comments
Influent Tank (1) 4,000-gal	$37,300	2 Weeks	Reduced cost and footprint.
Oil Water Separator	$15,500	2 Weeks	
Hydrocarbon Sock Filter Unit	$6,300	2 Weeks	
Organoclay Vessel	$7,000	2 Weeks	
GAC Vessels (2) used	$14,000	2 Weeks	
Air Compressor	$14,950	1 Week	
Effluent Tanks (2) 12,000-gal	$40,900	2 weeks	
Automation Equipment	$13,980	2 weeks	

8.0. CLOSURE

This work plan was developed based on currently available data and an in-person site walk. Modifications to this workplan should only be completed in conjunction with and at the direction of Ecology and NWFF.

APPENDIX A

Site Specific Health and Safety Plan

SITE-SPECIFIC HEALTH & SAFETY PLAN

Stillwater Holdings Chevron
Immediate Mitigation Response Project

Marcus Whitman Hotel, 6 W. Rose St. Walla Walla, WA
Building 106, 106 N 2nd Ave. Walla Walla, WA

Prepared for:

DEPARTMENT OF ECOLOGY
State of Washington

Prepared by:

NWFF ENVIRONMENTAL

Prepared by: Tony T. Parkes, IH

NWFF Environmental
33979 Texas St SW
Albany, OR 97321
(541) 929-4884
NWFFENVIRO.COM

1.0

2.0 Table of Contents

KEY SAFETY POINTS

- Absolutely **NO** smoking on site.
- Eye protection, safety boots, and hard hat are required **at all times** while on-site.
- All personnel have stop work authority.
- Report any safety issues other than basic first aid to Site Safety Officer.
- **Call 911** for any emergency, then notify IC.

1.0 PROJECT INFORMATION

Project Name/Sites	Stillwater Holdings Chevron Immediate Mitigation Response Project
Location	Marcus Whitman Hotel, 6 W. Rose St. Walla Walla, WA Building 106, 106 N 2nd Ave. Walla Walla, WA
Project Owner	State of Washington, Department of Ecology/Stillwater Holdings Chevron
HASP Prepared by	Tony T. Parkes, IH 937-312-4675, NWFF
Incident Commander	Monique Lewis, CSP 907-654-5580, NWFF
Deputy Planning Section Chief	Tim Shaw, 907-250-0275, NWFF
Doc Unit Leader	Tony T. Parkes, IH 937-312-4675, NWFF
Safety Officer	Jason Storrs, CIH, CSP 206-966-1183, NWFF
Start Date	TBD
End Date	TBD
Site Team/Crew Size	TBD
Will Client, Agency or Other Personnel be On Onsite?	☐ Yes ☐ No
Work Hours	TBD

Responsibilities of the Safety Officer

The Project Site Safety Officer (SSO) shall:

- Implement this HASP and report any observed deviations from site conditions anticipated in the plan.
- Verify that on-site personnel and visitors are working in a manner consistent with applicable environmental and H&S regulations, site work plans and this project HASP, advise the affected individual if a deviation is noted, and follow-up as appropriate.
- Verify that required personal protective, monitoring, and emergency equipment is used as required.
- Report observed accidents/incidents or inadequate work practices to the IC Deputy/Command.
- Report all accidents/incidents and findings regarding personnel exposure and work practices to the IC Deputy/Command.
- Conduct daily or pre-entry safety briefings.
- Complete a Job Hazard Analysis (JHA) for tasks that are not covered within this HASP.
- It should be noted that the SSO can and will be filled by varying personnel at NWFF.

2.0 SITE DESCRIPTION AND BACKGROUND

Impacted Site	Petroleum-contaminated groundwater and vapors at the Marcus Whitman Hotel (MWH) and the adjacent office building (Building 106) in Walla Walla, WA
Site Description	6 W Rose St, Walla Walla, WA 46.06782335239818, -118.34103137111768 106 N 2nd Ave, Walla Walla, WA 46.068034313334735, -118.34004768815981 **BACKGROUND:** This remediation project focuses on managing petroleum-contaminated groundwater and vapors at the Marcus Whitman Hotel (MWH) and the adjacent office building (Building 106) in Walla Walla, WA. It serves as an interim measure to mitigate impacts from ongoing contamination from an off-site source, the Stillwater Holdings Chevron site. Following complaints of petroleum odors in September 2023, an investigation revealed a leak from an underground storage tank at the adjacent gas station, prompting emergency actions from the Department of Ecology. Current temporary filtration and ventilation systems will be replaced with new ones designed to effectively treat contaminated water and vapors. At MWH, a new ventilation system will include a blower unit and ducting, while Building 106 will have units venting directly to the outside. The MWH sump water will be pumped regularly into a filtration system, with treated water discharged into the city sewer. Building 106 will manage its sump water similarly. This interim solution is expected to last up to 2.5 years, until a permanent system is installed. **PURPOSE:** The purpose of this project is to install and maintain systems to ventilate petroleum vapors, and pump and filter petroleum contaminated water affecting the MWH and Building 106. After the ventilation, and pump and filtration systems are installed, it is anticipated that daily on-site activities will require contractor staff to be on site for five (5) days per week and on call as needed. Daily activities will allow for daily assessment and field screening of systems and regular transport, filtration, and disposal of contaminated sump water.
Special Conditions/Comments	Site is an active remediation site. This plan only covers worker safety related to remediation activities and is not designed to serve as the Health and Safety Plan for other construction, environment, or non-related activities.
Are Sources of Hazardous Substances Known to Have Been Released on Site?	☒ Yes ☐ No Known Chemicals of Release: Gasoline 8006-61-9

3.0 PROJECT SCOPE OF WORK

SCOPE OF WORK

This Site-Specific Health and Safety Plan (HASP) is written in conjunction with the information provided to NWFF by Stillwater Holdings Chevron and the State of Washington Department of Ecology.

The purpose of this plan is to protect the persons in and around areas where the contaminated release has occurred and where remediation activities are taking place. This HASP identifies and assesses the potential hazards associated with exposure to contaminants that were identified at the site and describes the response actions necessary. This plan only pertains to worker safety related to the hazards associated with contaminates released at the site and subsequent remediation activities and is not designed to serve as the Health and Safety Plan for other construction or non-related activities or hazards. Environmentally sensitive areas and resources are not part of the scope of this document. NWFF follows geographic area contingency plans with regard to environmentally, culturally, and economically sensitive areas in any area where NWFF conducts operations.

Mobilization / Site Preparation

- Mobilize all personnel, equipment, and materials as required to the site.
- Inspect site prior to starting work to evaluate conditions.
- Establish work perimeter.
- Establish work zones (exclusion, decontamination reduction, and support zones).
- Establish equipment and supplies management locations.

Implement Monitoring and Control Measures

- Assure relevant and appropriate equipment (e.g. remediation supplies, monitoring equipment, etc.) is on site and functioning prior to remediation activities.
- Establish containment around work or decontamination areas as appropriate.

Conduct Daily Safety Meeting and Periodic Safety Evaluations

- Assure all personnel are briefed on the day's tasks, known hazards, and hazard mitigation strategies.
- Encourage reporting unforeseen / unanticipated physical, equipment, and / or chemical hazards – issue **STOP WORK AUTHORITY** when necessary and review with all personnel – update Daily Toolbox Safety Meeting sheet.

Exposure Monitoring

Initial exposure monitoring for all work areas where exposure to known contaminants is to be encountered. Monitoring will also be conducted:

- If there is a change in production, equipment, personnel, or control measure.
- An employee exhibits signs and symptoms of exposure, SSO will promptly monitor the affected individual's exposure.
- If individual monitoring levels exceed the PEL action level.

4.0 CHEMICALS OF CONCERN

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS	ROUTES OF ENTRY	SYMPTOMS
Gasoline 8006-61-9	▪ Flash Point: -45°F ▪ Odor: Characteristic ▪ LEL = 1.4% ▪ UEL = 7.6%	▪ OSHA: TWA 300 ppm (900 mg/m ^{3}) ST 500 ppm (1500 mg/m ^{3})	• Inhalation • Ingestion • Skin absorption • Skin and/or eye contact	Inhalation: Repeated or prolonged overexposure to solvents can cause brain or other nervous system damage. The symptoms can include the loss of memory, the loss of intellectual capacity and the loss of coordination. Ingestion: Adverse symptoms may include the following: stomach pains nausea or vomiting. Skin Contact: Adverse symptoms may include the following: irritation, redness, dryness, or cracking. Eye Contact: Adverse symptoms may include the following: pain or irritation watering redness. Mucous membrane; dermatitis; headache, lassitude (weakness, exhaustion), blurred vision, dizziness, slurred speech, confusion, convulsions; chemical pneumonitis (aspiration liquid); possible liver, kidney damage; [potential occupational carcinogen]

5.0 PERSONNEL PROTECTIVE EQUIPMENT BY TASK

TASK	Level	MASK /CARTRIDGE /AIR	ADDITIONAL PPE
Establish support area / prepare	**D**	N/A	Hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
Contaminated Exposure	**C/D**	Full/half face OV, P100	Respiratory protection as needed, hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
Contamination handling	**C/D**	Full/half face OV, P100	Respiratory protection as needed, hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
Caution zone work	**D**	N/A	Hardhats, safety glasses, chemical protective clothing as needed, protective outerwear, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
Hot zone work	**C/D**	Full/half face OV, P100	Respiratory protection as needed, hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
Decontaminate equipment	**D**	N/A	Hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
Conduct daily safety meeting (before shift & after shift)	**D**	N/A	Hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
Site Preparation / site security / site postings	**D**	N/A	Hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
Inspect appropriate equipment each day	**D**	N/A	Hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.
De-mobilize	**D**	N/A	Hardhats, safety glasses, protective outerwear as needed, gloves appropriate for the task, suitable work boots or removable boot covers or chemical resistant boots, high visibility vest.

6.0 SAFETY EQUIPMENT AND PROCEDURES

Initial Level of Protection	Based on our evaluation of the work site, and the tasks that are to be completed, we have determined that Level D or Level C PPE to be adequate for conducting remediation activities. If site conditions change than PPE levels may need to be upgraded.
Training Requirements for Site Workers	HAZWOPER 40, Current 8 Hour Refresher, First Aid /CPR.
Medical Surveillance	A medical surveillance plan will be developed for all personal involved in operations who meet any of the following: • Are or may be exposed to hazardous substances or health hazards for at least 30 days a year, at or above the permissible exposure limits (PELs) or other published exposure levels • Wear a respirator for at least 30 days a year are injured, become ill, or develop signs or symptoms of possible overexposure to hazardous substances or health hazards • Are hazardous materials team (HAZMAT) members. Medical examination will include the following information for each affected employee. • A medical and work history, with special emphasis on symptoms related to handling hazardous substances and health hazards Information about fitness for duty including the ability to wear any personal protective equipment (PPE) under conditions that may be expected at the workplace. • Any additional information that is determined by the examining physician.
Decontamination Procedures	Boots and hands will be decontaminated with soap and water as necessary.

Health and Safety Equipment Checklist	
☒ *Respirator with Cartridges*	☒ *Fire Extinguisher*
☒ *Protective Clothing (coveralls, FRCs)*	☒ *Drinking Water*
☒ *Chemical Protective Gloves*	☒ *Rain Gear*
☒ *Decontamination equipment*	☒ *High Visibility Vest*
☒ *Appropriate Footwear*	☒ *Cell Phone*
☒ *Disposable Boot Covers*	☒ *Radios*
☒ *Safety Glasses*	☒ *Tychem Coveralls*
☒ *Hard Hat*	☒ *Emergency Eye Wash Bottles*
☒ *Caution Tape, Traffic Cones, or Barriers*	☒ *First Aid Kit*
☒ *Air Monitoring Equipment*	

7.0 HAZARD EVALUATION

Hazard Communication

- All personnel working in or around the remediation site will be required to attend and successfully complete the Project's Site-Specific orientation before working on site.
- Workers working in and/or around the remediation site must have completed training meeting the requirements of a 40-Hour HAZWOPER course and certification must be current.
- All employees need to realize that they have a responsibility to themselves and others to use good judgment when working in all areas at the Site.
- Any areas where employees suspect contamination (smell, stained soils, etc.), it is important that the area is immediately vacated, and the employee's supervisor informed so that testing or evaluation can take place.
- If other potential contaminants are discovered onsite, work shall cease in this area and the IC shall be immediately notified.

PPE

- Appropriate (PPE) shall be worn by all individuals on the jobsite. Minimum PPE for this jobsite consists of:
    - Suitable work boots
    - Highly visible vest
    - Hard hats
    - Eye protection
    - Hearing protection when applicable

Additionally, personal protective equipment to be utilized by the onsite personnel will be determined based upon exposure assessments, and air monitoring.

Employees who are working in areas identified as Hot Zones and who are directly involved with the disturbance of contamination, must wear, at a minimum, the following PPE:

- Protective eyewear
- Protective Outerwear
- Outer gloves
- Chemical resistant boots
- Highly Visible Vest
- Hard hats
- Respiratory Protection (as necessary)

When employee exposure monitoring results indicate that airborne hazardous material concentrations are low in a designated Hot Zone, the zone may be re-classified, or when employees are working in a caution zone, the following PPE should be worn at a minimum:

- Protective eyewear
- Outer gloves
- Suitable work boots
- Highly visible vest
- Hard hats

Air Monitoring (if applicable)

Air monitoring shall be conducted to identify and quantify airborne levels of hazardous substances and to document exposure levels within the Site during remediation activities. This information will be utilized to determine the effectiveness of engineering controls and work practices. Results of air monitoring will be submitted to the ICS Safety Officer with any exposure results above the action level will be noted and corrective action taken prior to next work shift.

All employers are directly and completely responsible for protecting their employees. Employees most likely to experience the highest potential exposure to hazardous substances and health hazards shall be monitored by their HAZWOPER Supervisor during all excavating and soil disturbance of contaminated soil or during the collection of absorbent materials. Employers are also responsible for providing all necessary monitoring and service of their equipment.

The goal of air quality monitoring is to detect and control off-site fugitive emissions of toxic air contaminants and should fulfill these objectives:

- Protect human health and the environment from airborne contamination.
- Monitor perimeter air quality during remediation activities.
- Identify the requirement for dust suppression systems.
- Comply with regulatory and recommended guidelines.
- Provide risk management and public confidence.
- Reduce project owner's potential for liability.

Summary of Action Levels:

Analyte	Action Level	Field Action	Instrument	Detection Limit
VOCs	0-25 ppm	No respiratory protection is required	MultiRAE	0.1 ppm
	25-250 ppm (sustained)	Level C	RKI GX-6000	0.1 ppm
	>250 ppm (sustained)	Stop Work and Reevaluate Methods	MiniRAE Lite	0.1 ppm
Oxygen	<19.5% >22.0%	Stop Work and Reevaluate Methods	MultiRAE	0.1% Volume
			RKI GX-6000	0.1% Volume
LEL	10% LEL	Stop Work and Reevaluate Methods	MultiRAE	1%
			RKI GX-6000	1%
Carbon Monoxide	12.5 ppm	Stop Work and Reevaluate Methods	MultiRAE	0.1 ppm
			RKI GX-6000	1 ppm

Hazard Assessment

ITEM	HAZARD	PREVENTION

Ambient weather / PPE load	Heat stress
	Dehydration
		• Implement heat stress plan for personnel for any of the following temperature.
		  ○ 52° - Nonbreathing clothes including vapor barrier clothing or PPE such as chemical resistant suits.
		  ○ 77° - Double-layer woven clothes including coveralls, jackets and sweatshirts.
		  ○ 89° - All other clothing.
		• Provide shaded rest area for personnel.
		• Shall provide one quart of water per employee per hour for drinking for the entire shift.
		• Supervisor to track site temperature conditions to monitor for weather.

Mobilization to site	Site Security Slips, Trips, Falls Traffic Overhead Hazards	• Clear & Mark off drop off area with barrier tape (if required). • Visual barriers will be in place during work hours, and when site is unattended. • Limit all walking and access to designated paths / destinations.
Air monitoring	Inhalation	• Ensure current calibration of equipment. • Fresh air calibration.

ITEM	HAZARD	PREVENTION
	Over exposure	• Monitor work zone area. • Monitor work area perimeter.
General work area	Slip / trip / fall	• Designated pathways. • Maintain pathways cleared of debris. • Enforce good construction housekeeping.
General work area – lifting	Lifting	• Plan and stage to minimize long distance carrying. • Split heavy loads into smaller loads. • Use mechanical lifting aids (i.e. forklift or excavator bucket) where possible and can be done safely. • Use assistant for heavy (>30 lbs.) or awkward load. • Use proper lifting techniques with good footing.
General work area – traffic	Struck by	• Set up visible barricades on access roads. • Wear high visibility safety vests (except in exclusion zone).
Traffic	Struck by	• Set up visible barricades. • Wear high visibility safety vests. • Only authorized personnel in work zones. • Set of Traffic Control and flagging if work is performed in the right of way.
Break time	Ingestion	• Thoroughly wash hands before eating, drinking, smoking.
Delivery of site equipment & supplies	Back Strains, Hand Injuries	• Do not throw equipment from truck. • Lift any object over 30lbs with assistance. If in doubt of the weight, ask for HELP first. • Lift properly with legs and maintain footing.
Loading, moving, and transportation activities (on-site)	Struck by Noise	• Level D/C PPE. • Hearing protection. • Back up alarms or rotating beacons. • Keep unauthorized personnel out of operating areas. • Train personnel on working safely around equipment. • Wear Reflective Vests. • Make eye to eye contact between operator/driver. • Signal or communicate movements. • Equipment operator controls movement of personnel in and out of swing zone or equipment travel area. • Stay clear of swing zone of equipment.
Use of hand tools	Pinch points Strain-sprain	• Use proper holding and supporting techniques when turning wrenches, screwdrivers, and other torque-enhancing tools.

ITEM	HAZARD	PREVENTION
	Difficult-positions Cut hazards	• Ensure proper direction and grip on plumbing fixtures prior to use of full body weight for counterbalance – use proper footing stance. • Verify correct pipelines prior to disassembly.
Confined space entry	Illness Death	• Not expected to be necessary, modify plan if required.
Falling	Bodily injury Death	• Fall protection will be used while accessing and egressing the trenches. • Ensure a 5,000lb anchor point is available. • Only authorized personnel will be allowed in fenced areas where fall hazards exist.
Dust Mitigation (if required)	Dust levels visible	• Water will be sprayed periodically over exposed work area.
Debris Removal /Material Handling	Struck by Overhead Skin irritation	• Establish visual contact with operator prior to any movement of excavator bucket. • Ground personnel to wear high visibility vest. • Avoid inhalation, skin/eye contact, absorption, and ingestion.

8.0 ACCIDENT/EXPOSURE PROCEDURES

TYPE CONTACT	FIRST AID
Eyes	• Flush each eye continuously for 15-30 minutes. • Tilt head to side to ensure liquid runs onto floor not in the other eye. • Refer to EMT for evaluation.
Skin	• Remove contaminated clothing immediately. • Wash skin continuously for 15-30 minutes. • Refer to physician if redness, swelling, or pain persists after washing.
Not Breathing	• Call **911.** • Remove to fresh air immediately if respiratory distress develops. • Begin CPR until EMT arrives.
Ingestion	• Aspiration hazard. • Do not induce vomiting. • Do not give anything by mouth.
Emergency Contact Information	• Providence St. Mary Medical Center **+15098973320** • Fire/Ambulance: **(911)** • Police: **(911)**
Accident Reporting	• Employees immediately report all accidents or incidents to the Site Safety Officer • Safety Officer will relay information as needed. • **Notify Client immediately in the event of any incident**

9.0 EMERGENCY RESOURCES AND PROCEDURES

ELEMENT	LOCATION, SPECIFICATION OR REASON FOR USE
NEAREST HOSPITAL	**Hospital: Providence St. Mary Medical Center** **401 W Poplar St., Walla Walla, WA 99362** **+15098973320**
NEAREST PHONE	Locations to be determined during initial safety meetings.
FIRST AID KIT	Locations to be determined during initial safety meetings.
FIRE EXTINGUISHER	Locations to be determined during initial safety meetings.
EYEWASH STATION AND EMERGENCY SHOWER	Locations to be determined during initial safety meetings.

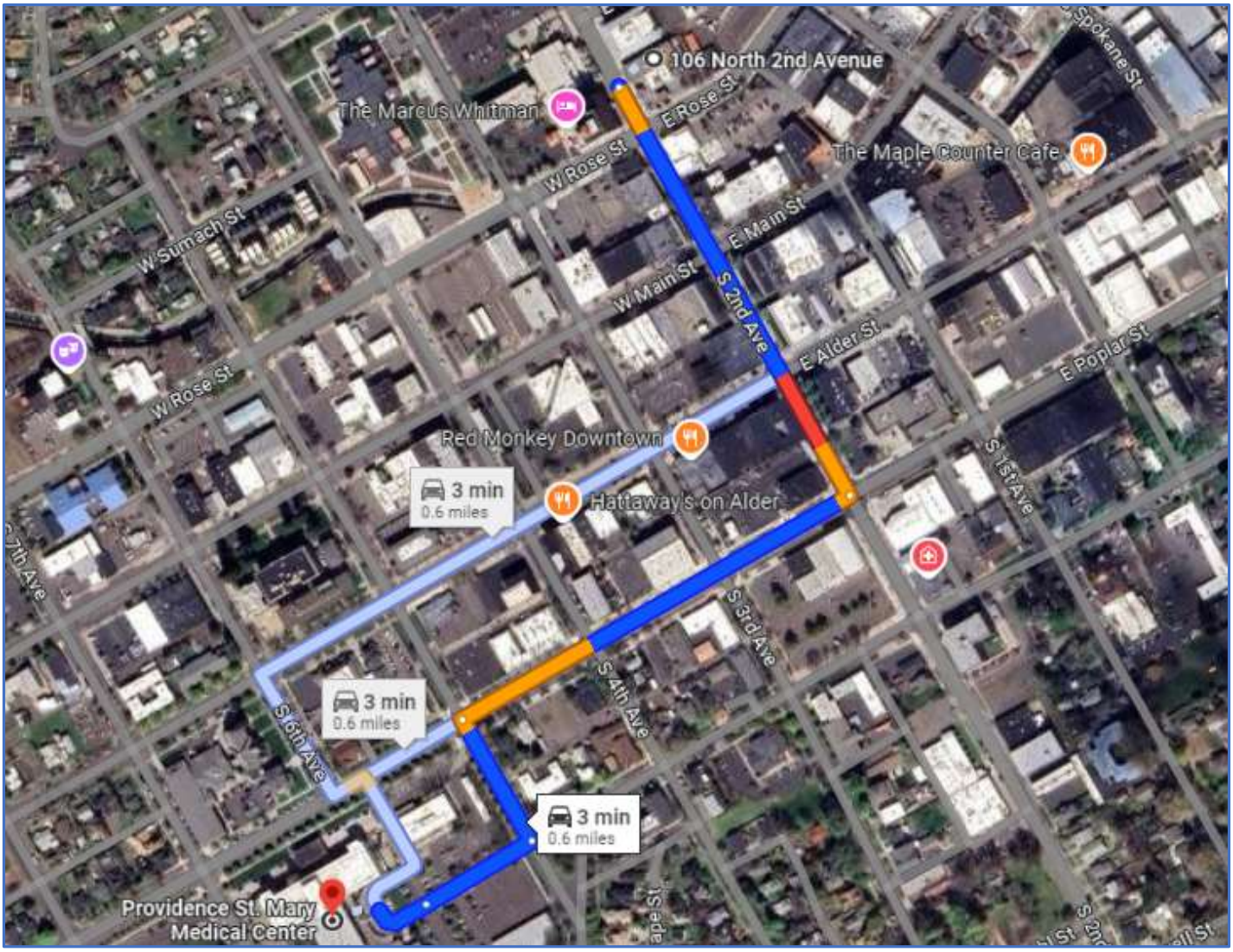
10.0 SIGNATURE PAGE

I have read and understand the attached Site-Specific Health & Safety Plan and agree to comply with the requirements described within.		
Date	**Print Name**	**Signature**

11.0 LIMITATIONS

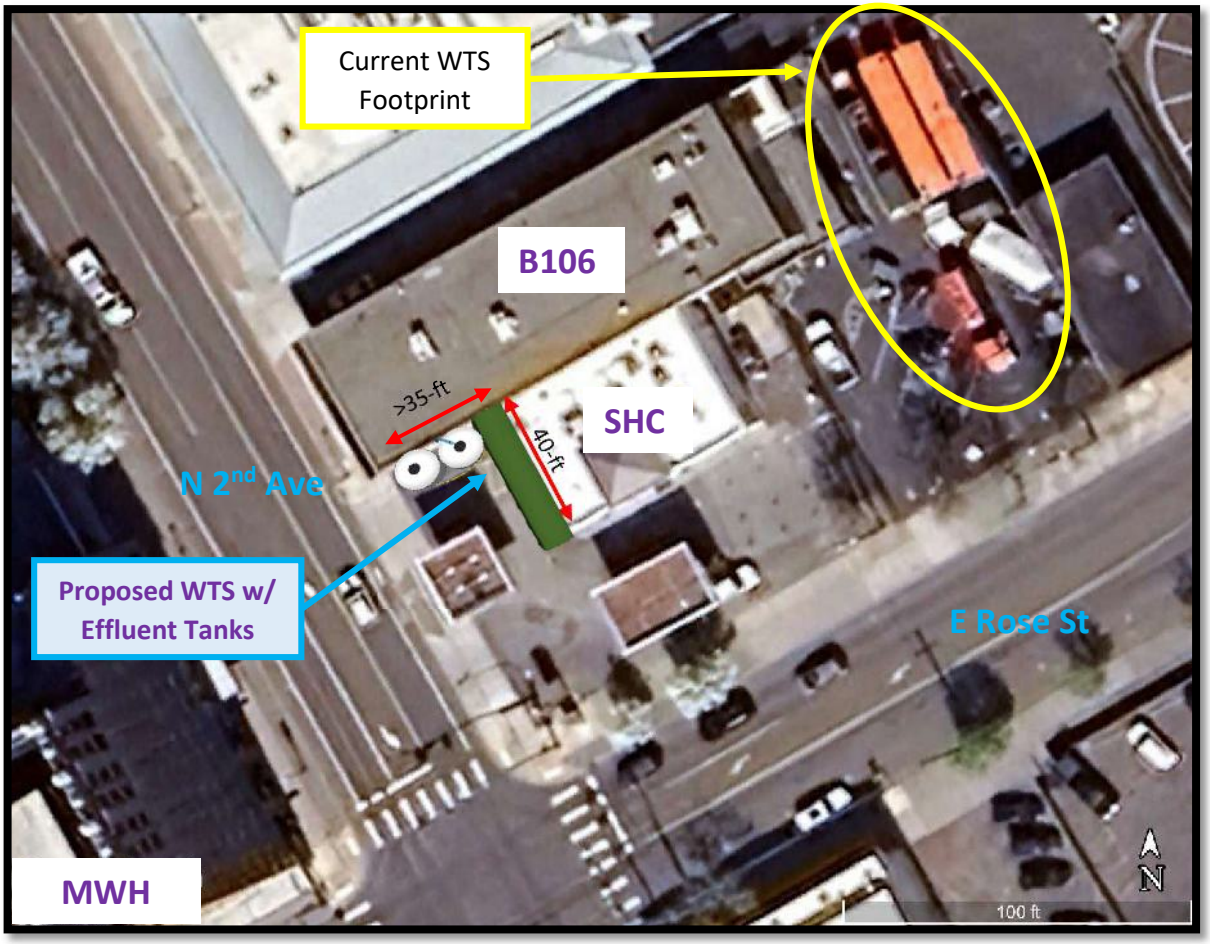
This site-specific Health and Safety Plan (HASP) has been prepared based on knowledge and data relating to site conditions as of the date indicated in Section 1.0. This HASP was not designed to identify all potential concerns or to address all risks associated with construction, waste disposal, or environmental issues. Evaluation of other risks not specifically described this HASP have not been included. For example, the following risks were not assessed: structural integrity, engineering loads, electrical, mechanical, slope stability, and building settlement. The intent of this HASP is to provide baseline information and a framework from which Job Hazard Analysis can be developed for individual tasks on the remediation project. If additional information becomes available regarding the site-specific conditions, this HASP may be revised/updated and resubmitted.

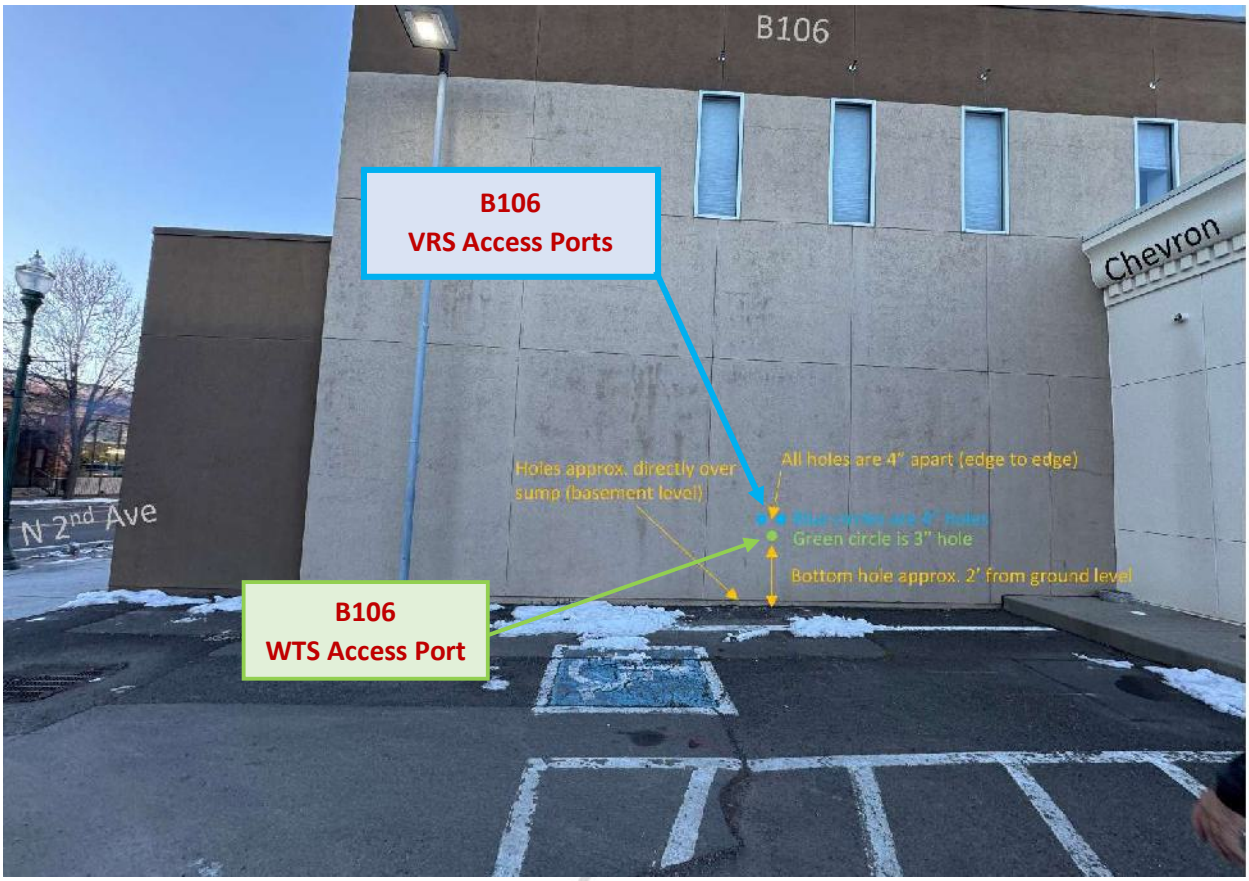
Figure 1: Map and Directions to Medical Center



APPENDIX B

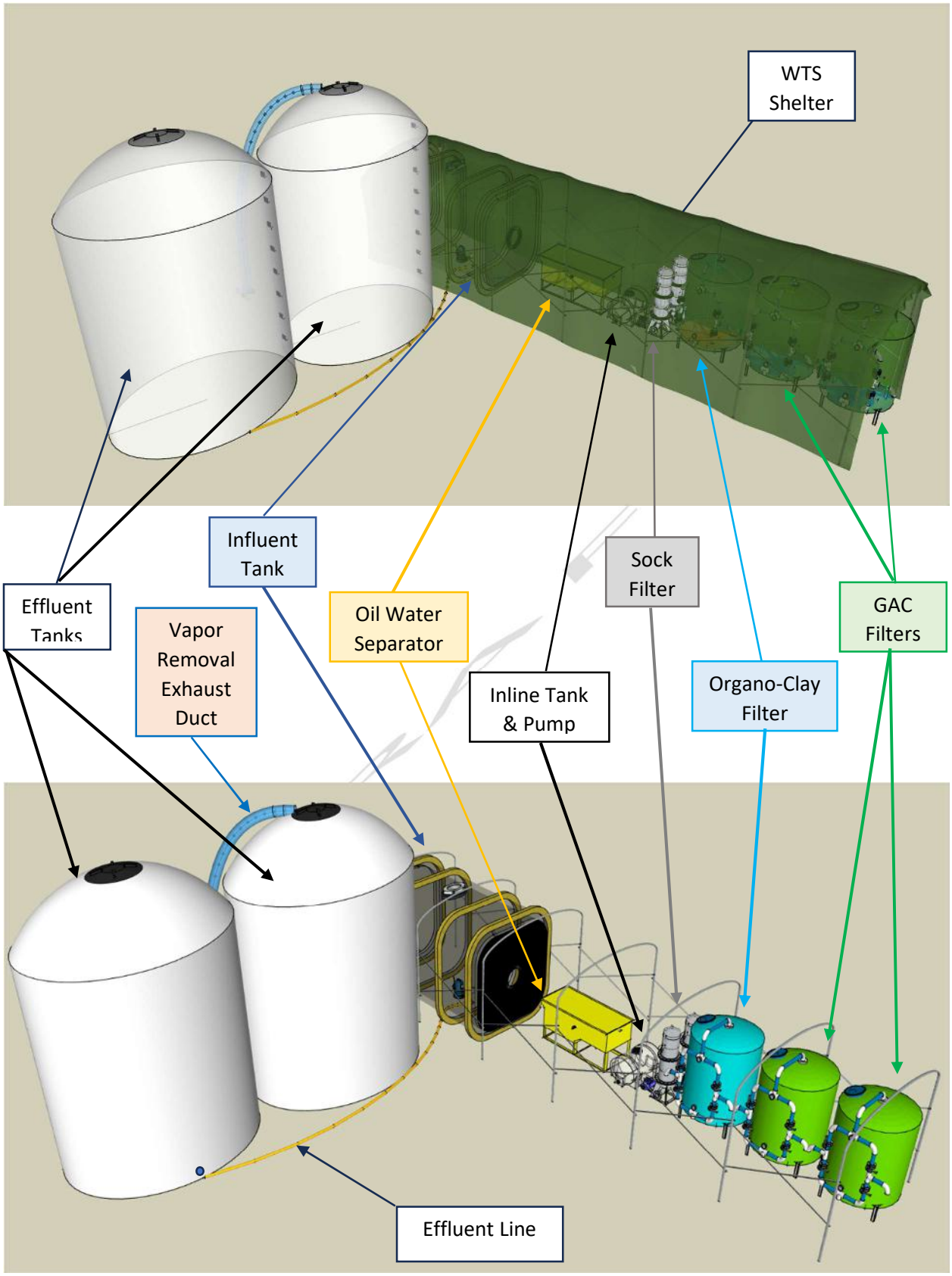
Water Filtration System

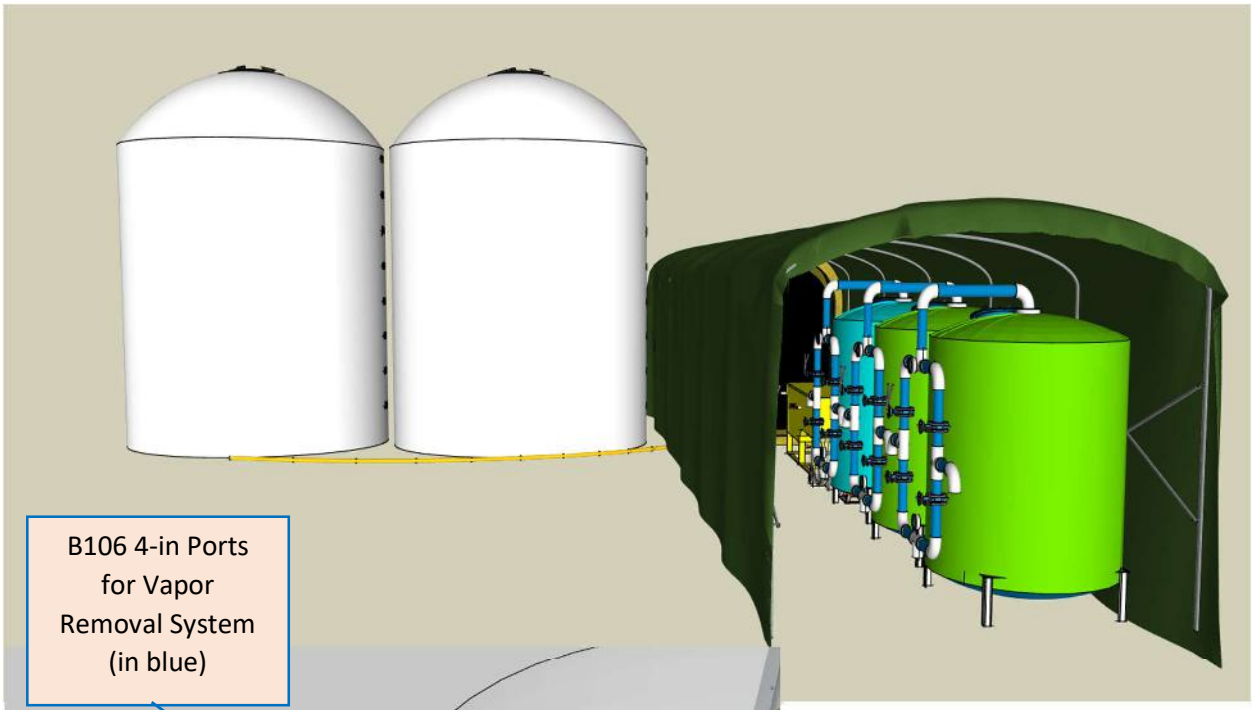




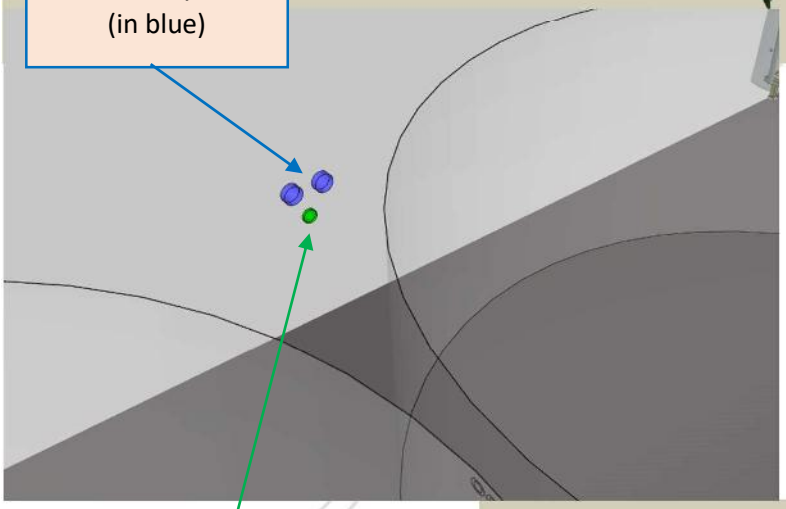
BUILDING 106 ACCESS PORT LOCATIONS

(picture provided by B106 owners)

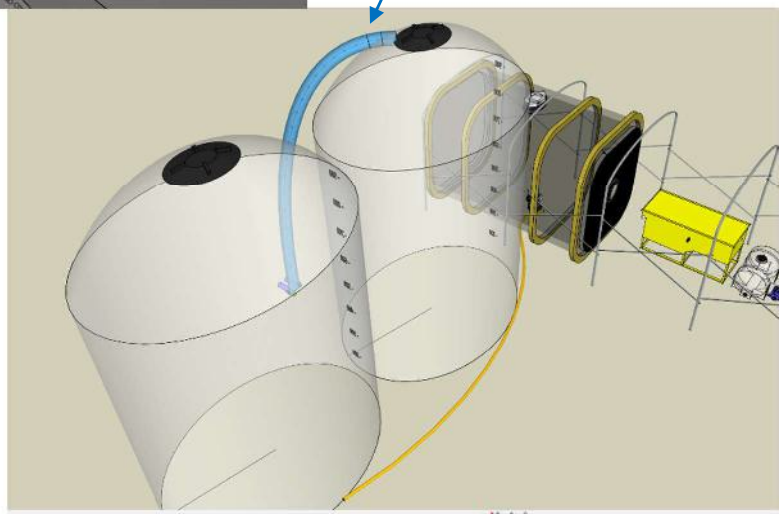

WTS Shelter
Influent Tank
Effluent Tanks
Vapor Removal Exhaust Duct
Oil Water Separator
Inline Tank & Pump
Sock Filter
Organo-Clay Filter
GAC Filters
Effluent Line



B106 4-in Ports for Vapor Removal System (in blue)



Vapor Removal Exhaust Ducted on Top of Effluent Tank

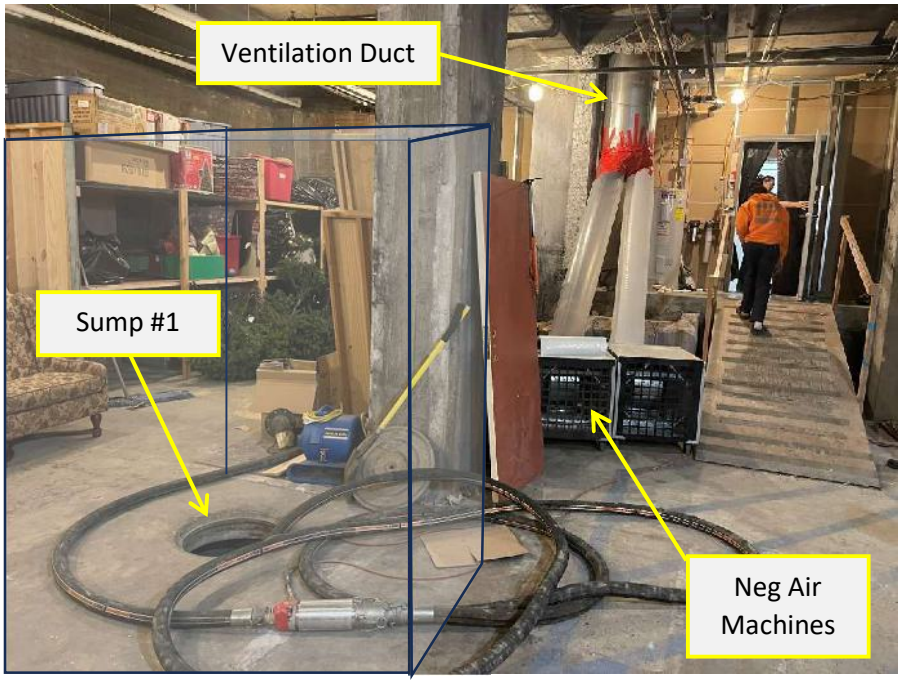


B106 3-in Port for Water Removal Line (in green)

APPENDIX C

MWH Vapor Removal System

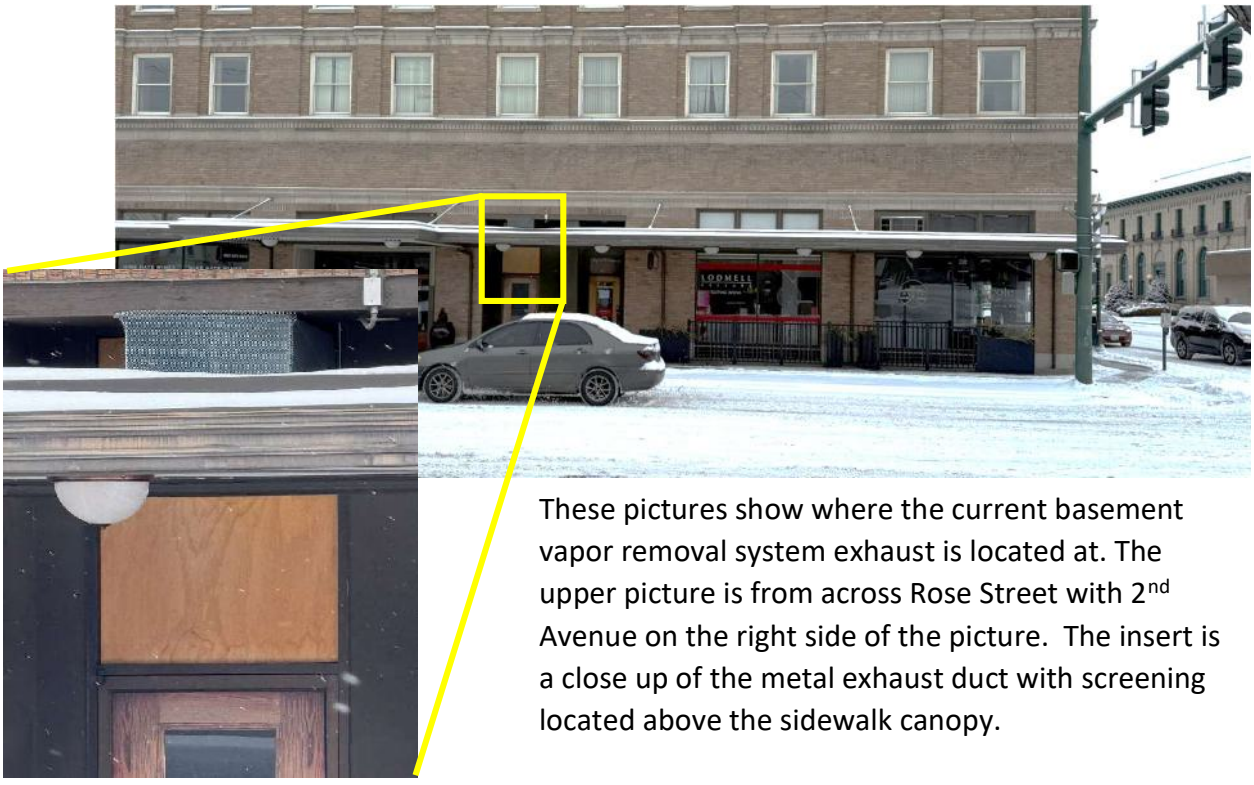
This picture depicts a containment enclosure similar to what is intended to cover the sump area in the MWH basement of MWH. It will be constructed with ¾-inch PVC pipe framing that will be total enclosed with 6-mil thick or better clear visqueen. Seems will be overlapped and duct taped inside and out. The containment will have a one-way intake valve for make up air that is removed from inside the enclosure. The valve will automatically close if the air pumps shut down. The enclosure will have an exhaust port connected to an intrinsically safe negative air mover to pull air from the enclosure and up the ventilation shaft that is currently being used.



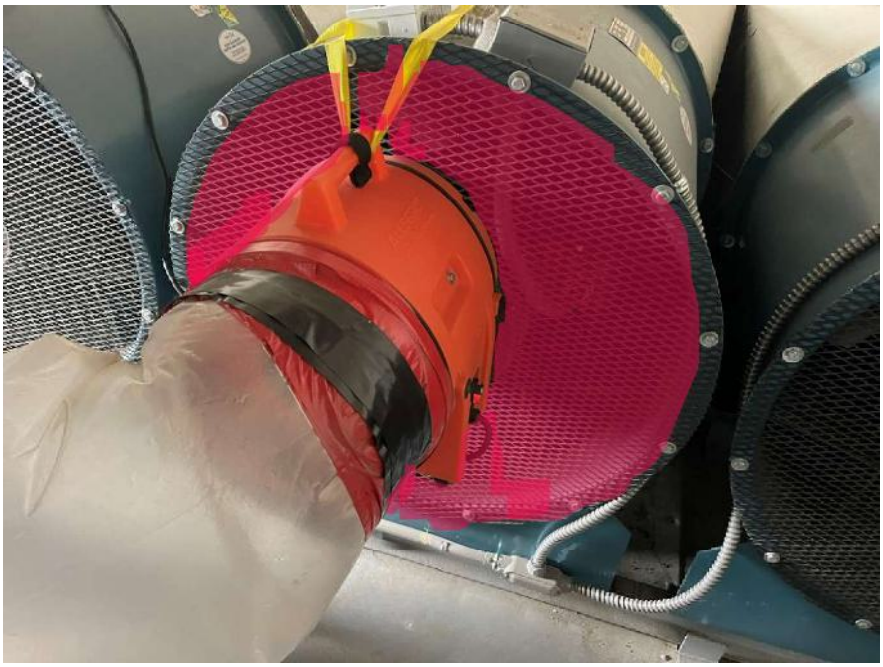
Picture of sump #1 where water is removed. The above enclosure would be placed over this sump (rough outline in the picture. Appropriate pentrations through the enclosure will be made for the make up air valve, air extraction exhaust port, water pumping, and overhead ducting from the Sump #2 enclosure. A remote access volatile organic compound (VOC) sensor will be located within the enclosure.

Sump #2 is located to the bottom right of the stairs seen in the previous picture. Sump #2 will also be enclosed similarly to Sump #1 with temporary air ducting between the two sumps being hung from overhead to minimize disruption to MWH activities.

There is an area in the MWH basement that has exposed ground. This is a potential for vapor instrusion. The proposal is for covering the exposed ground with a 10-mil or better geomembrane that blocks or significantly retards gasoline vapors. A valvedmonitoring port will be installed through the geomembrane to monitor VOCs. Should VOCs be found to be accumulating under the barrier it may be necessary to place a pipe under the barrier that leads to the Sump #2 enclosure so the vapors under the geomembrane can be evacuated. These suggested vapor control and removal processes are expected to allow the vapor barriers over the basement stairwell and service elevator access to be safely removed. This will afford MWH staff normal and unhindered access to and throughout the basement.



These pictures show where the current basement vapor removal system exhaust is located at. The upper picture is from across Rose Street with 2nd Avenue on the right side of the picture. The insert is a close up of the metal exhaust duct with screening located above the sidewalk canopy.



In the mechanical room, at the very top and south side tower of the Hotel, are the air ducts that serve the building. The duct pictured leads to the elevator shaft. The orange portable ventilation fan (ramfan) that is intrinsically safe is pulling air out of the shaft and out the west window.

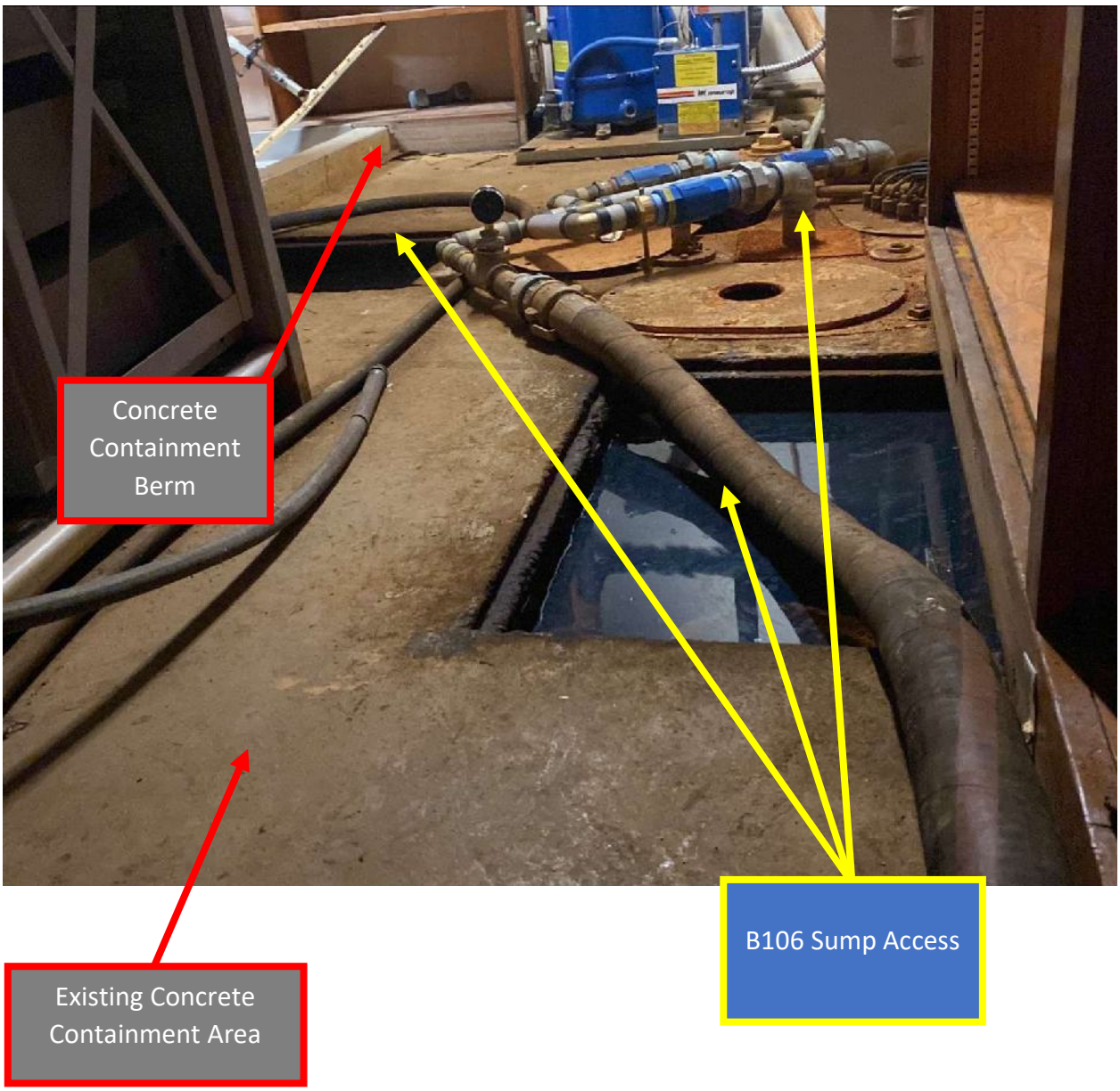
The containments in the basement should render this system unnecessary, however, we will be poised to implement such a system should significant levels of VOCs be detected in the shaft.

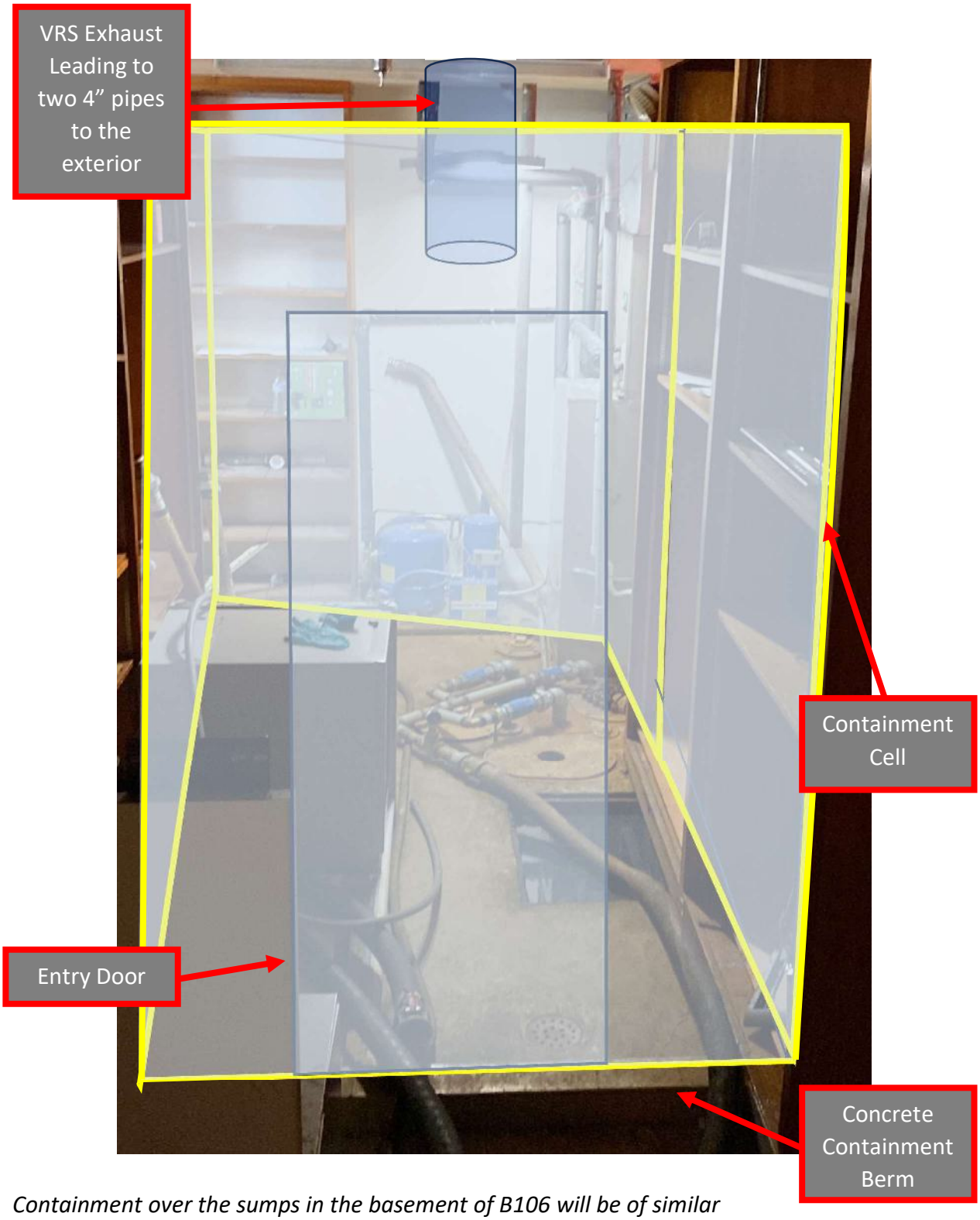
Our system, if implemented, would involve covering the end of the duct fan with visqueen (see the highlighted area in previous photo) and cutting an appropriately sized hole to match the intake of the ramfan to better control the air coming up the duct from the basement. dtThe current ramfan mounting pulls air from the duct and sends it through the clean plastic vent tubing to a window on the west side and near the northwest corner of the tower.

This picture shows where the flex ducting from the ramfan travels to the window on the west side of the tower near the northwest corner of the tower. Currently the ducting travels along the floor, this can be changed to hanging it from the ceiling so it does not create a tripping hazard along the stairs.

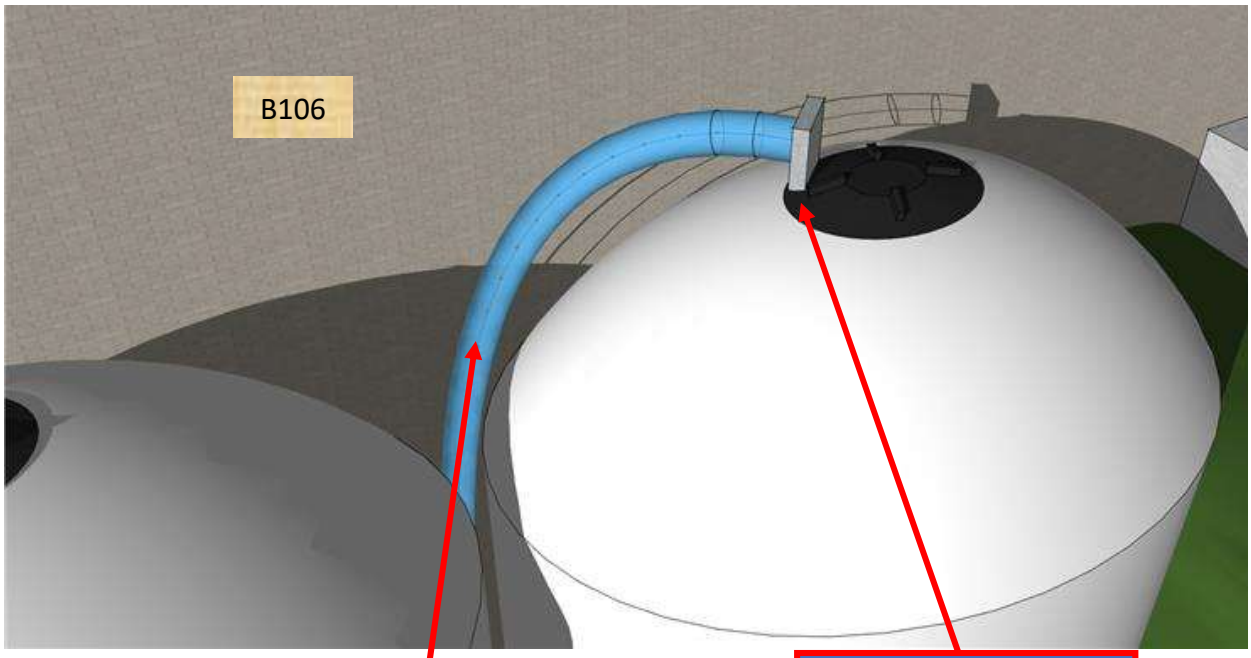
View from a window on the west side of the MWH tower. The West Wing of the Hotel is at the bottom right corner of the photo.

Building 106 VRS Containment Cell





Containment over the sumps in the basement of B106 will be of similar construction as in MWH. The wood shelving will be moved to the east to reveal the concrete containment berm which will be the foundation of the new VRS containment cell.



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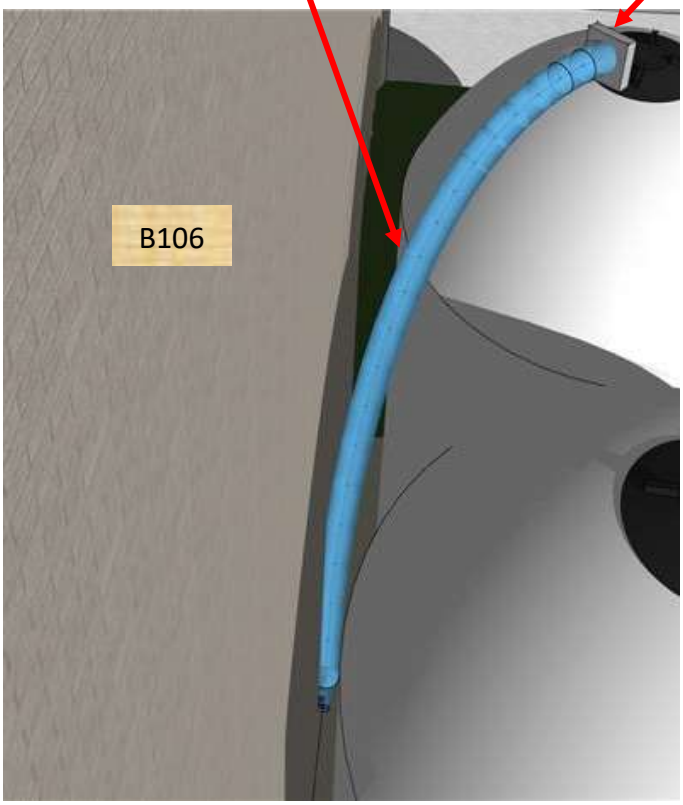

The two VRS ports coming out of B106 will be joined into one duct and be exhausted at the top of the east Effluent Tank. Should VOC vapors reach a level of concern for straight exhaust a carbon filter can be added at either end of the VRS ducting.

Work Plan

Stillwater Holdings Chevron Site—Vapor Sampling Plan
7 East Rose Street
Walla Walla, Washington

for
Washington State Department of Ecology

February 19, 2025

523 East Second Avenue
Spokane, Washington 99202
509.363.3125

GeoEngineers

Work Plan

Stillwater Holdings Chevron Site—Vapor Sampling Plan
7 East Rose Street
Walla Walla, Washington

File No. 0504-202-01
February 19, 2025

Prepared for:

Washington State Department of Ecology
Toxics Cleanup Program, Eastern Region Office
4601 North Monroe Street
Spokane, Washington 99205

Attention: Elizabeth Kercher, LUST Project Manager

Prepared by:

GeoEngineers, Inc.
523 East Second Avenue
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_____

Melissa Roskamp, PE
Project Engineer

_____

Scott H. Lathen, PE
Associate Environmental Engineer

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Table of Contents

List of Figures

Appendices

1.0 Introduction

This Vapor Sampling Work Plan (Work Plan) presents the scope of work and approach to conduct the vapor phase investigation for the Stillwater Holdings Chevron cleanup site (herein referred to as "Site"), as shown on the Vicinity Map, Figure 1. The Washington State Department of Ecology (Ecology) reference numbers for this Site include Facility Site ID (FSID) No. 28575673 and Cleanup Site ID (CSID) No. 5818. The Site includes the Chevron gas station located at 7 East Rose Street, the Marcus Whitman Hotel located at 6 West Rose Street, and the 106 Building located at 106 North 2nd Avenue, in Walla Walla, Washington, as shown on the Site Plan, Figure 2.

In September 2023, a gasoline release was identified as originating from an underground storage tank (UST) at the Chevron gas station. The gasoline plume has been determined to extend beneath the Marcus Whitman Hotel and Conference Center and the 106 Building, as well as in soil and groundwater on the Chevron gas station property.

This Work Plan has been prepared by GeoEngineers, Inc. (GeoEngineers) for Ecology under Master Contract No. C2500073. The purpose of this assessment is to act in compliance with Washington Administrative Code (WAC) 173-340-430 (Interim Actions) to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a contaminated groundwater or soil vapor. Data generated from assessment will support the development of the interim cleanup action.

A sampling plan with a description of field assessment procedures is provided in Appendix A; the Quality Assurance Project Plan (QAPP) and the Health and Safety Plan (HASP) are presented in Appendices B and C, respectively. The Work Plan is organized as follows:

- Site Description and Background – Section 2.0
- Interim Action Activities – Section 3.0
- Vapor Intrusion Assessment– Section 4.0
- References – Section 5.0

2.0 Site Description and Background

In September 2023, Ecology was notified of gasoline odor complaints at the Marcus Whitman Hotel. It was determined that gasoline vapors were entering the hotel building via sumps within the basement and that the gasoline was present in the groundwater. The sumps are located within a sub-basement that is below the rest of the Marcus Whitman basement, and generally has an earthen floor. Further investigation identified gasoline vapors and gasoline contaminated water in two sumps and vault in an adjacent 106 Building. Emergency actions were taken to vent potentially explosive levels of volatile organic compounds (VOCs) and recover product from the sumps.

The Chevron gas station, located northeast of the Marcus Whitman and adjacent to the 106 Building, was identified as the source of the gasoline release. Thirteen monitoring wells were installed on the Chevron gas station property or the City of Walla Walla right-of-way to delineate and monitor the spill, as shown in Site Plan Showing Investigation Locations, Figure 3. Emergency Removal Actions have continued at the Site since the identification of the release, including interception of contaminated groundwater in the sumps

and treatment through granular activated carbon (GAC) and discharge to municipal sewer. In May 2024, Stillwater Holdings, who owns the Chevron gas station, petitioned Ecology to take over the continued remediation of the Site due to lack of funds.

Emergency interim action remains necessary at the site as unmitigated response to groundwater contamination or exposure to soil vapors would create a potential risk to public safety and could present a threat to the environment.

2.1 PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

Assessment and remediation actions have been conducted at the Site since identification of the release in September 2023. Ecology and consultants hired by Stillwater Holdings have installed groundwater wells, implemented interim remediation measures, and monitored Site air and groundwater concentrations. Assessment and remediation actions have included:

- Venting fans and isolation of rooms (sealed plastic sheets) have been used to reduce VOC levels less than the lower explosive limit (LEL) and mitigate risks to human health in the Marcus Whitman and the 106 Building. The sub-basement in the Marcus Whitman remains an exclusion zone;
- Groundwater is being intercepted in existing sumps within the Marcus Whitman and the 106 Building, where it is then manually removed and treated for VOCs prior to discharge to the Walla Walla publicly owned treatment works (POTW);
- Indoor air sampling for VOCs has been conducted in the 106 Building and the Marcus Whitman and evaluates the efficacy of the vapor ventilation systems in use at the properties;
- Intercepted groundwater is being routinely sampled for VOCs and other constituents, following treatment by GAC, as required by the Industrial Pretreatment Program with the City of Walla Walla;
- Thirteen groundwater monitoring wells have been installed to delineate and monitor the impacts of the September 2023 release. The groundwater monitoring well network has been sampled by Ecology or Aspect Consulting (Aspect) for VOCs, lead, naphthalene and product thickness in wells; and
- A preferential pathway investigation was conducted to determine pathways of soil vapor entering the 106 Building. Only the stormwater sump was identified as a soil vapor pathway to this building.

2.2 SITE USE HISTORY AND EXISTING DATA

Available records indicate that the property 7 East Rose Street has operated as a service station since at least 1981, when three 10,000-gallon fiberglass USTs were installed[1]. Two of the USTs were used to store gasoline and one to store diesel. Historical records available from Ecology document a previous soil and groundwater cleanup at the Subject Property, identified at the time as Bill Singers Chevron or Singer's Chevron, conducted between 2010 and 2013. In May 2013, Ecology issued a No Further Action

[1] ALLWEST, 2022, Phase I Environmental Site Assessment, Bill Singer's Chevron, 7 East Rose Street, Walla Walla, Washington, 99362, October 7, 2022.

determination for gasoline-range petroleum hydrocarbons in soil and groundwater with an Environmental Covenant that required maintenance of a surface cap over contaminated soil (Ecology 2013[2]).

After the September 2023 release, chemical analytical results from groundwater sampling between November 2023 and November 2024 indicated that gasoline-range petroleum hydrocarbons (GRPH) and various non-halogenated VOCs were present in groundwater in 10 monitoring wells (AMW-01 through AMW-04, MW-2, MW-3, MW-5, MW-6, MW-8 and MW-9) at concentrations greater than the Model Toxics Control Act (MTCA) Method A groundwater cleanup levels. Chlorinated solvents (tetrachloroethene, trichloroethene) were also detected in MW-7, MW-8 and MW-9 at concentrations greater than the MTCA Method A groundwater cleanup level but are not believed to have originated on Site, nor were they detected in Site wells. Lead has not been detected in the groundwater samples.

2.3 SITE CONTAMINANTS OF POTENTIAL CONCERN

Contaminants of Potential Concern (COPCs) for soil vapor at the site include contaminants previously detected at levels exceeding MTCA Method A cleanup levels and contaminants associated with historic storage and distribution of petroleum products. COPCs for the site include the following constituents:

- GRPH;
- VOCs, including benzene, toluene, ethylbenzene, and xylenes (BTEX); and
- Previously detected chlorinated solvents, including tetrachloroethene (PCE), trichloroethene (TCE) and their daughter compounds.

3.0 Interim Action

The purpose of the Interim Action will be to reduce the threat to human health and the environment by eliminating or substantially reducing one or more pathways for exposure to contaminated groundwater or soil vapor. The Interim Action will include evaluating the indoor air conditions at the Site and the design and installation of vapor remediation systems in the Marcus Whitman and 106 Building. Other consultants acting on behalf of Stillwater Holdings have prepared a preliminary design for these treatment systems[3].

Vapor and groundwater sampling will be performed to obtain sufficient data to design and install the vapor remediation systems. This Work Plan covers the vapor intrusion (VI) evaluation which will be used to inform that design. The VI evaluation is based on the Marcus Whitman Hotel Vapor Intrusion Evaluation Workplan prepared by Aspect on behalf of Stillwater Holdings[4]. This VI evaluation will be conducted in accordance

[2] Environmental Covenant for Tax Parcel 360720574707 executed on May 13, 2013 between Bill D. & Loretta R. Singer and State of Washington, Department of Ecology

[3] Draft Engineering Design Report Wastewater Treatment: Marcus Whitman Hotel—Wastewater Treatment System, dated May 8.

[4] Marcus Whitman Hotel Vapor Intrusion Evaluation Workplan, dated March 27, 2024 and associated Memorandum between Aspect and Ecology, dated February 7, 2024.

with the Ecology Guidance for Evaluating Vapor Intrusion in Washinton State[5] and will include a Tier II assessment to evaluate the potential presence of petroleum hydrocarbons and related VOCs in indoor air. The Tier II assessment will include a building evaluation and collection of indoor air, ambient air, and sub-slab soil vapor samples.

The basis of design and complete approach to the Interim Action will be presented in the Interim Action Work Plan, following the completion of the vapor intrusion assessment (Section 4.0). Based on the results of this sampling event, additional samples may be recommended prior to the completion of the Interim Action Work Plan.

4.0 Vapor Intrusion Assessment

GeoEngineers will conduct the vapor intrusion assessment, described below, to collect additional data to finalize preliminary designs. Field procedures will be performed according to the requirements of WAC 173-340-410. Field Assessment Procedures are included in Appendix A and the project Quality Assurance Plan is included as Appendix B. Work will be performed in accordance with the health and safety plan requirements of WAC 173-340-810. The Site-specific health and safety plan is included as Appendix C. Sub-slab soil vapor and ambient indoor air will be assessed to evaluate the potential VI risk associated with petroleum contamination beneath the Stillwater Holdings Chevron Site. We expect the VI assessment to require up to 24 hours (3 days) to allow for 24-hour ambient air samples.

Samples will be analyzed for BTEX and naphthalene using U.S. Environmental Protection Agency (EPA) Method TO-15 SIM and APH by Massachusetts Department of Environmental Protection Method for Air Phase Hydrocarbons (MA-APH). The sub-slab vapor (SSV) samples will additionally be analyzed for helium using Modified ASTM International (ASTM) Method D-1946.

Prior to, or concurrent with sampling, all Site buildings will be reviewed and photographed for the ongoing preferential pathways analysis. The condition of previously sealed cracks will be documented.

4.1 PRE-SAMPLING CHEMICAL STORAGE IN THE MARCUS WHITMAN

Two areas in the basement have previously been identified as storing chemicals which could potentially interfere with the indoor vapor sampling assessment. Both areas, a shelf on the southern perimeter of the basement corridor, and chemical storage in the Wood Shop located in the southwestern corner of the basement, are shown on Figure 4.

Chemical storage should be consolidated into an enclosed space that can be sealed and that does not contain an HVAC return air register. An empty storage room is in the northern basement hallway that could serve this function. GeoEngineers will coordinate with Marcus Whitman representatives to facilitate relocation of chemical storage, and the selected storage room(s) will be sealed off with tape or plastic sheeting for at least 1 week before and while indoor air sampling is conducted. GeoEngineers will

[5] March, 2022 Guidance for Evaluating Vapor Intrusion in Washington State, Washington State Department of Ecology, March 2022

coordinate with Marcus Whitman representatives to ensure that chemicals needed for daily operation remain easily accessible.

4.2 HVAC ASSESSMENT IN THE MARCUS WHITMAN

An initial assessment of heating, ventilation, and air conditioning (HVAC) elements at the Marcus Whitman was conducted during emergency interim actions by Aspect and the emergency response contractor. Currently, vapors from the sub-basement exclusion zone are collected and vented at street level. Return-air is supplied from the roof and is intended to be fresh air. Sampling locations were chosen, in part, due to their location relative to HVAC elements (supply, return, and/or exhaust)[6]. Any changes to the HVAC elements or operation may have implications on the VI assessment or the design and implementation of the Interim Action. Current settings will be verified with the remediation contractor and the HVAC professional familiar with the Marcus Whitman system.

For the purposes of this VI evaluation, HVAC and temporary venting operations will continue in their current settings. This will allow for an evaluation of baseline VI under the current operational conditions. The VI data, along with current ventilation settings, will be utilized for an engineered mitigation design that may incorporate sub-slab, targeted ventilation and/or HVAC modification. Pending further evaluation of air intakes to the basement and first floor HVAC zones, additional ambient air samples may be collected at roof-mounted air intakes that approximately correspond with supply intakes to the basement and first floor-floor air supplies. Additionally, if sub-slab treatment is selected, then coring of the basement slab and evaluation of the base material (moisture content, porosity, evidence of contamination, etc.) may be recommended.

4.3 VAPOR SAMPLING ACTIVITIES—MARCUS WHITMAN

GeoEngineers will conduct the following VI sampling activities at the Site:

- Mobilize to/from the Site to conduct the VI assessment. Verify that chemical storage containers have been isolated in the Marcus Whitman, as described above. Document any changes in isolation zones, chemical storage, or building operation at the sampling locations.
- Deploy one Summa canister air sampling device (Summa canister) outside the Marcus Whitman to collect outdoor background (ambient) air (OA) sample. The OA sample location will depend on meteorological conditions on the day of sampling (i.e., they will be placed upwind of the building entrance and air intake system). The OA sample will be collected following procedures described in Appendix A.

Indoor air sampling will consist of collecting nine indoor air samples withing the Marcus Whitman. Sampling locations will consist of six basement-level samples and three samples collected from the first-floor level. Indoor air samples collected in the basement will measure reasonable worst-case VI conditions. Sampling locations are shown on Figures 3 and 4.

[6] Marcus Whitman Hotel Vapor Intrusion Evaluation Workplan, dated March 27, 2024 and associated Memorandum between Aspect and Ecology, dated February 7, 2024.

- Deploy a Summa canister at each sampling location to collect indoor air (IA) samples. Each Summa canister will be placed so that the sample will be obtained from the breathing zone, approximately 3 to 5 feet above the floor surface (unless otherwise specified). Basement level IA samples will generally be paired with an SSV location. The IA samples will be collected following procedures described in Appendix A.
- Install permanent Vapor Pins® in the basement of the Marcus Whitman at each sampling location to collect SSV samples, and to later facilitate monitoring of the Interim Action.
  - SSV-01, SSV-03, SSV-04, SSV-5, and SSV-06 are co-located with ambient air sampling locations.
  - SSV-02: This location is intended to evaluate sub-slab conditions adjacent to the elevator shaft. Along with the elevator shaft air sample, this sub-slab sample will allow for further consideration of mitigation strategy of the shaft as a preferential pathway.
  - SSV-07: This location in the northeast portion of the sub-basement to evaluate sub-slab conditions in the vicinity of the known exposed-soil areas where vapor suppression products were applied by the emergency response contractor.
  - SSV-08: This location is in the southern portion of the western hallway, positioned between the large-diameter supply and return air sub-slab conduits.
  - SSV-09: This location is in the northern portion of the western hallway to evaluate the extent of VOCs in sub-slab soil gas beneath the basement slab.

4.3.1 Basement Sampling Locations

- One sample (IA-01) will be collected from the central area of the sub-basement, co-located with sub-slab sample SSV-01. This sample is anticipated to represent a baseline for the worst-case scenario VI under the current conditions.
- One sample (IA-02) will be collected from the Elevator 2 pit. This will be conducted by placing a summa cannister at the bottom of the pit if possible or routing an approximate 10-foot length of ¼-inch diameter Teflon tubing into the lower pit space. This sample will allow for further evaluation of VI to the elevator shaft and implications for VI to above-grade hotel levels from the elevator.
- One sample (IA-03) will be collected in the basement hallway, co-located with sub-slab sample SSV-03. This sample is located towards the eastern end of the basement, near the sub-slab return air conduit, and is located near a supply air register.
- One sample (IA-04) will be collected from the office, co-located with sub-slab sample SSV-04. This sample is located in the northeastern portion of the basement, in a confined office space setting. Figure 4 indicates that a return air register and 6-inch by 6-inch supply air source are located within the office.
- One sample (IA-05) will be collected from the Men's Locker Room, co-located with sub-slab sample SSV-05. This sample location is in an employee-occupied space with supply, return, and exhaust HVAC components installed. An 18-inch sub-slab supply conduit is located approximately 10 to 15 feet to the west of the sample location. The 28-inch and 12-inch sub-slab return air conduits are located to the south and east of the sample location, respectively.
- One sample (IA-06) will be collected from the central area of the Banquet Storage Room, co-located with sub-slab sample SS-06. This room was noted by remediation contractor to have a relatively higher

concentration of VOCs (based on field photoionization detector measurements) during the emergency response actions. Sub-slab supply and return air conduits are located within approximately 10 feet.

4.3.2 First Floor Sampling Locations

- IA-07 will be located near the first-floor entrance to the southeast elevator, mentioned above. This location corresponds with the elevator pit sample that will be collected in the basement and will allow for further evaluation of the elevator as a preferential pathway.
- IA-08 will be located on the east side of the building, behind the reception counter. This is a consistently occupied area of the first floor and is adjacent to a stairwell that leads to the eastern perimeter of the basement. HVAC influence to this area is anticipated to be consistent with other areas of the large and open reception area.
- One sample (IA-09) will be collected from an enclosed space on the first floor, with dedicated HVAC supply and return registers that will be determined in consultation with Marcus Whitman representatives at the time of sampling, based on conditions and use.

4.4 VAPOR SAMPLING ACTIVITIES—106 BUILDING AND CHEVRON

GeoEngineers will conduct the following VI sampling activities at the Site:

- Verify that no chemical storage has been introduced at the 106 Building or Wine Country Convenience Store which is likely to interfere with the VI evaluation. If present, the SDS sheets will be reviewed and, in agreement with Site contacts, chemical storage containers will be removed from the sampling areas. Document any changes in isolation zones, chemical storage, or building operation in all sampling locations. Current HVAC operation and returns will be documented, relative to sample locations.
- Deploy one Summa canister outside both the 106 Building to collect an outdoor ambient air sample (OA-02) relevant to the 106 Building and the Chevron property. The OA sample location will depend on meteorological conditions on the day of sampling (i.e., they will be placed upwind of the fuel dispensers, and building air intake systems). The OA sample will be collected following procedures described in Appendix A.
- Deploy a Summa canister at each sampling location to collect indoor air IA samples. Each Summa canister will be placed so that the sample will be obtained from the breathing zone, approximately 3 to 5 feet above the floor surface (unless otherwise specified). The IA samples will be collected following procedures described in Appendix A.

Indoor air sampling will consist of collecting one sample, each, within the 106 Building and Wine Country Convenience Store. Sampling locations are shown on Figures 3.

- Install temporary Vapor Pins® at each sampling location to collect SSV samples.
  - A total of two Vapor Pins® will be installed in the 106 Building basement. One pin will be installed through the concrete slab in the storage room with the sump, and the other will be installed in the general purpose/break room.
  - A single Vapor Pin® will be installed in the Wine Country Convenience Store, near the bathroom.

- One sample (IA-10) will be collected from the 106 Building basement exclusion area, near the sump, co-located with sub-slab sample SSV-10. This sample is anticipated to represent a baseline for the worst-case scenario VI under the current conditions.
- One sample (IA-11) will be collected from the Wine Country Convenience Store, co-located with sub-slab sample SSV-11.
- One sample (SSV-12) will be collected from the general purpose/break room area in the 106 Building basement.

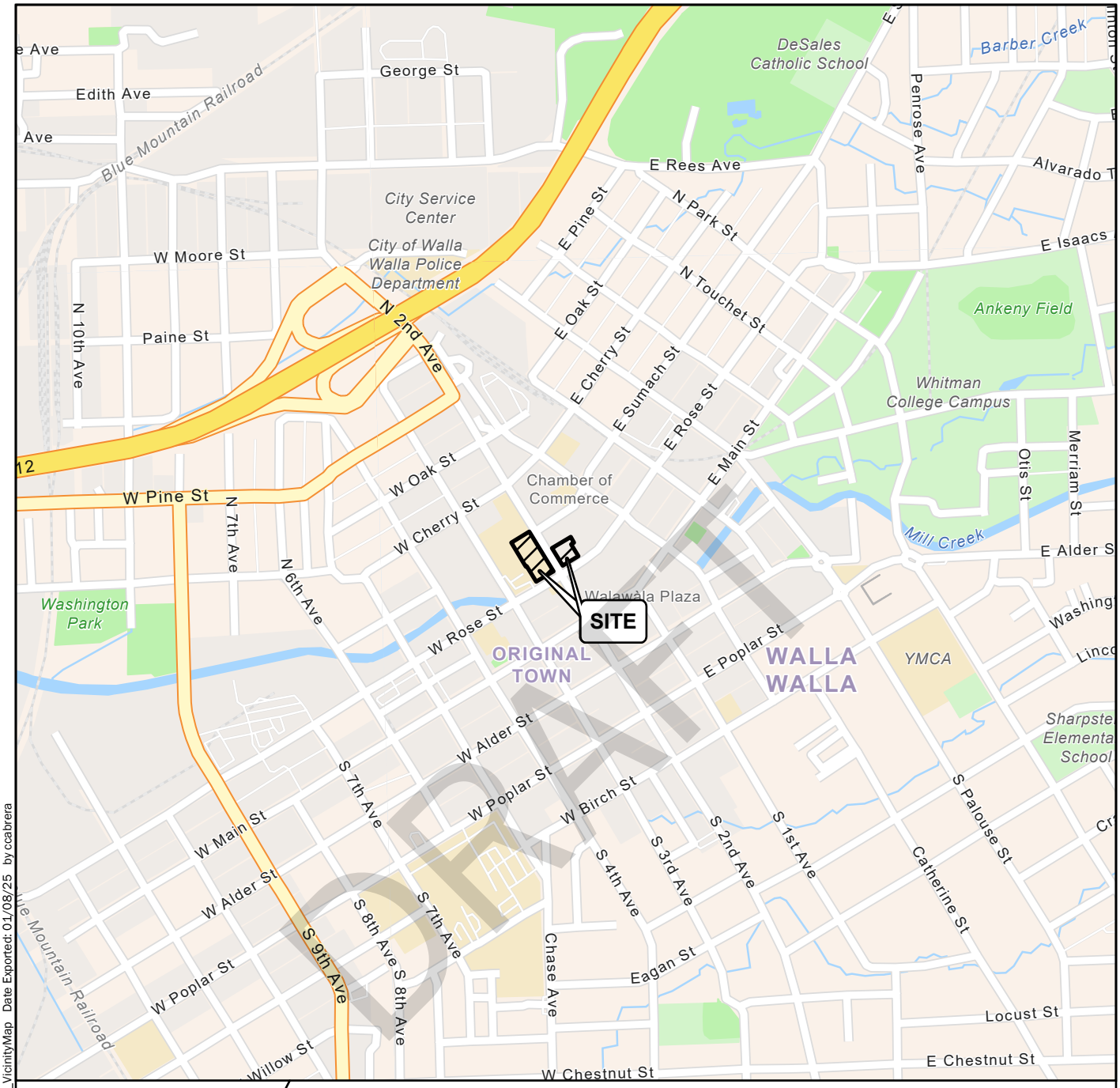
5.0 References

Draft Engineering Design Report Wastewater Treatment: Marcus Whitman Hotel—Wastewater Treatment System, dated May 8,

Marcus Whitman Hotel Vapor Intrusion Evaluation Workplan, dated March 27, 2024 and associated Memorandum between Aspect Consulting and Ecology, dated February 7, 2024

Washington State Department of Ecology. 2013. "Model Toxics Control Act Regulation and Statute, Champer 173-340 WAC and 70.105D RCW." Revised 2024.

Figures



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Source(s):
- ESRI

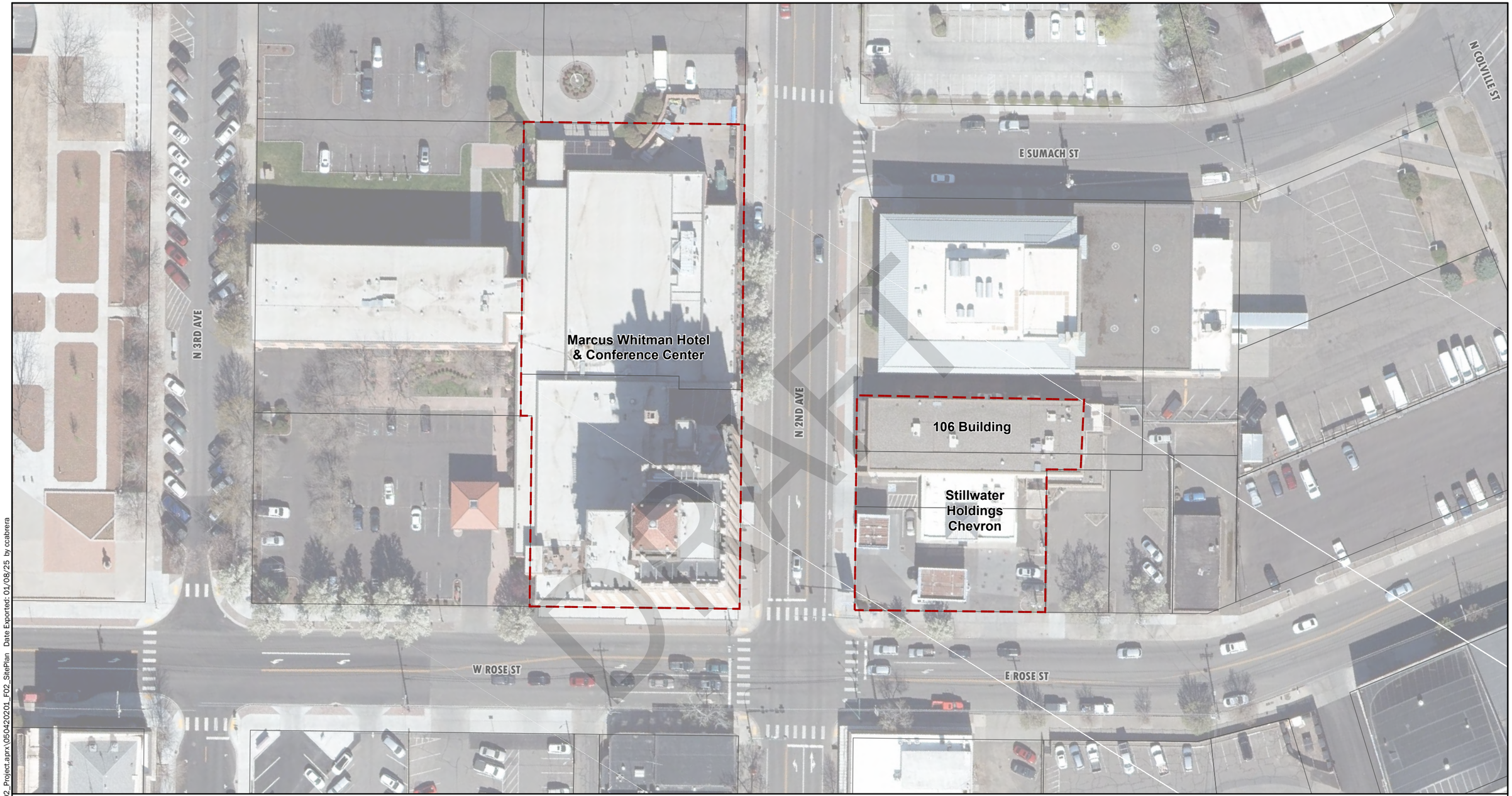
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Vicinity Map

Stillwater Holdings Chevron
Walla Walla, Washington

GeoEngineers

Figure 1



Site Buildings

Walla Walla Tax Parcel

Source(s):
- Walla Walla GIS

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

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Site Plan

Stillwater Holdings Chevron
Walla Walla, Washington

GeoEngineers

Figure 2

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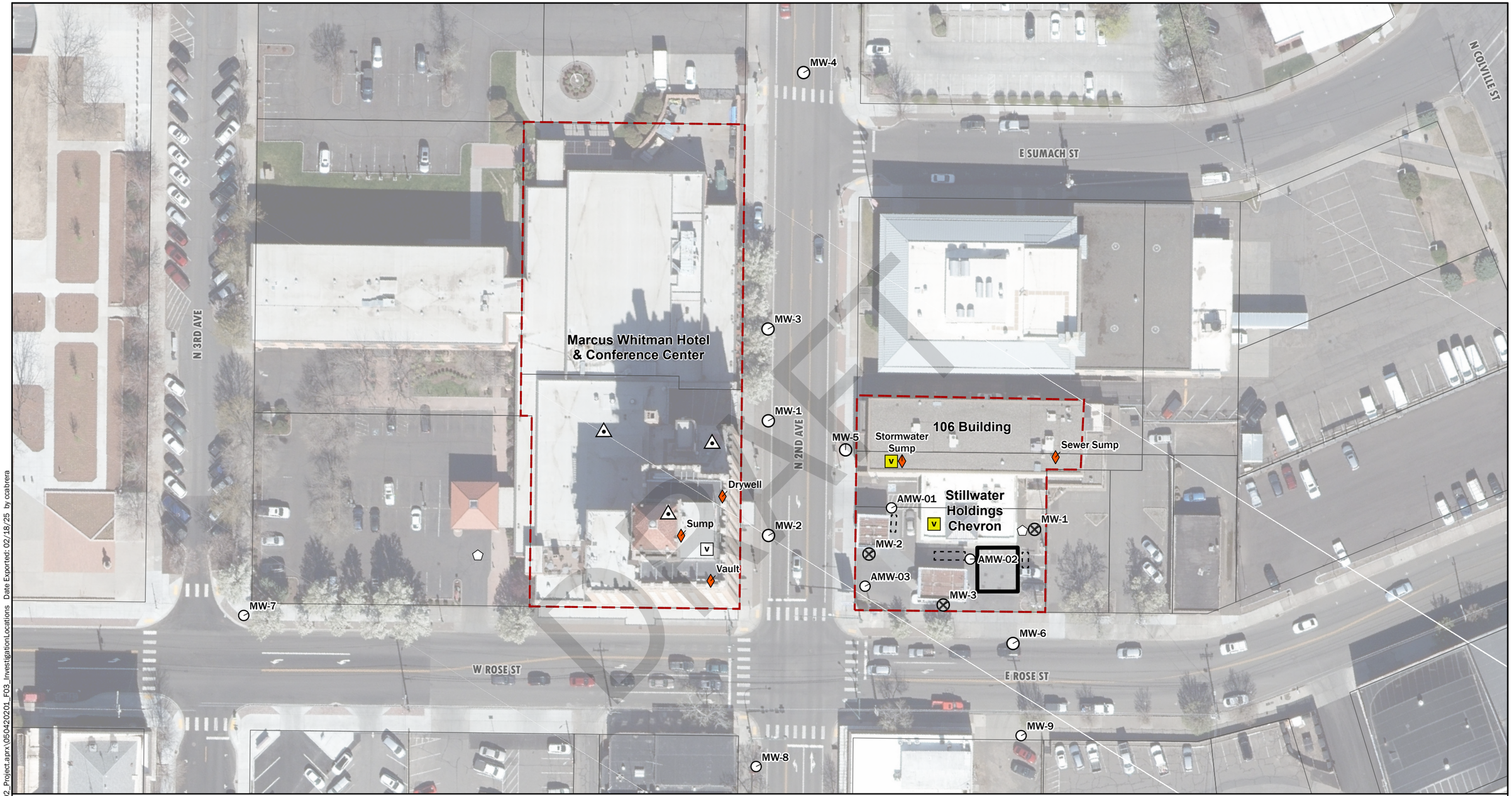

Notes:
1. Basement samples in Marcus Whitman Hotel not shown on this figure.

Source(s):
- Walla Walla GIS

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

- Monitoring Well
- Decommissioned Monitoring Well
- Sump
- Outdoor Air Sampling Location
- Co-located Subslab Soil Vapor and Ambient Air Location
- Subslab Soil Vapor Location
- First Floor Ambient Air Sample Location
- Existing UST and Limits of Excavation
- Decommissioned UST
- Site Buildings
- Walla Walla Tax Parcel

N

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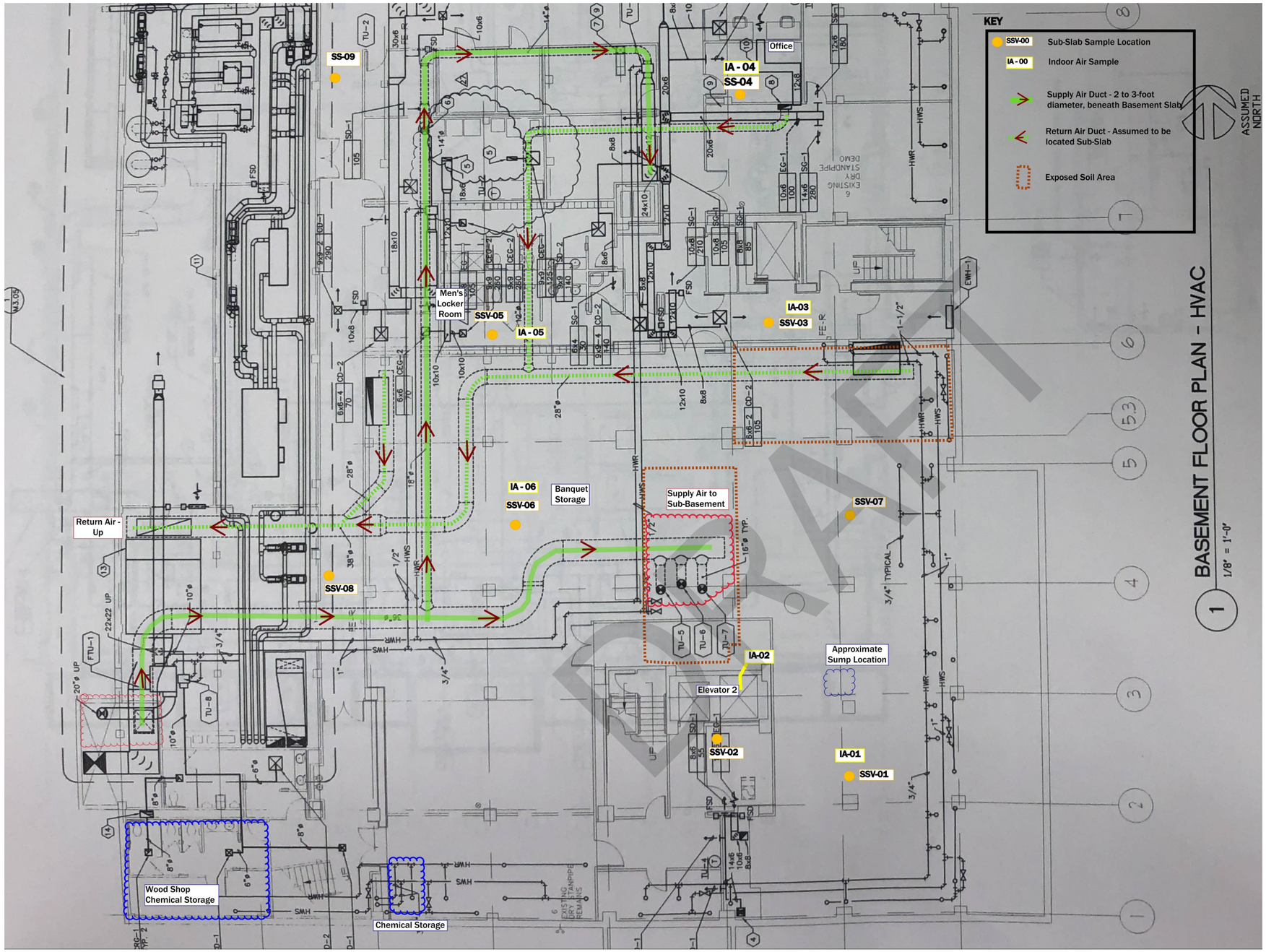
Site Plan Showing Investigation Locations

Stillwater Holdings Chevron
Walla Walla, Washington

GeoEngineers

Figure 3

P:\0\0504202\GIS\0504202_Project\0504202_Project.aprx\0504202_F03_InvestigationLocations Date Exported: 02/18/25 by ccabrera



Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Marcus Whitman Hotel HVAC Plans

Not to Scale

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Marcus Whitman Hotel Basement

Stillwater Holdings Chevron
Walla Walla, Washington

GeoEngineers

Figure 4

0504-202-01 Date Exported: 02/18/2025

Appendices

Appendix A
Field Assessment Procedures

Appendix A
Field Assessment Procedures

1.0 Standard Procedures

This section contains standard procedures for field data collection that are anticipated during the Site assessment at the Stillwater Holdings Chevron Site located at 7 East Rose Street in Walla Walla, Washington, including the following:

- Vapor intrusion sampling including:
  - Sub-slab soil vapor sample point construction and sampling;
  - Indoor and outdoor air sampling;
- Handling of investigation-derived waste (IDW);
- Sample location control;
- Sample handling and custody requirements;
- Field measurement and observation documentation; and
- Sample identification.

2.0 Vapor Intrusion Sampling

Sub-slab soil vapor (SSV), indoor air (IA) and outdoor air (OA) samples will be collected and analyzed in the Marcus Whitman, 106 Building and the Wine Country Convenience store as described below.

2.1 SUB-SLAB VAPOR SAMPLE POINT CONSTRUCTION AND SAMPLING

Approximately twelve permanent and temporary SSV sample points will be installed inside the Marcus Whitman basement, and 106 Building basement, and the Wine Country Convenience Store to assess sub-slab vapor conditions. Each SSV sample point will be comprised of a Vapor Pin® installed through the concrete building slab following the manufacturers specifications. Following installation, the Vapor Pin® will be connected to a sampling manifold constructed of Teflon™ or Tygon® tubing. The sampling manifold will be vacuum tested (shut-in test) by briefly introducing a vacuum to the aboveground portion of the sampling train and checking for loss of vacuum. If vacuum loss is observed, connections and fittings in the sample train will be checked and adjusted.

After vacuum testing the sampling manifold, the SSV sample point will be leak tested using a helium shroud, or another approved method according to the Guidance for Evaluating Vapor Intrusion in Washington State[7]. A portable air pump will be attached to the end of the manifold. A shroud will be placed over the SSV sample point and filled with helium. The SSV sample point will be purged using the portable air pump for 1 minute and the pump exhaust will be monitored for helium during purging using a helium detector.

[7] March, 2022 Guidance for Evaluating Vapor Intrusion in Washington State, Washington State Department of Ecology, March 2022

If helium is detected in the pump exhaust, the leak will be repaired, and the port will be resampled before a Summa canister is connected to the sample line.

The results of the shut-in test and helium test will be recorded on a field data form for each SSV sample and if helium is not detected in the exhaust port, a 6-liter Summa canister fitted with a flow controller will be attached to the sample tubing. The flow controller will be set by the analytical laboratory to collect the sample over approximately 30 minutes. Initial canister pressure, start data and start time will be recorded on a field data form for each SSV sample. The inlet valve on the canister will be opened and air from the sampling port will be drawn into the canister for approximately 30 minutes until the canister is filled, but before atmospheric pressure is reached. At the conclusion of the sampling period, the inlet valve will be closed and the final canister pressure, stop date and stop time will be recorded on the field data form. After the sampling period, the Vapor Pin® will be removed and the SSV point will be patched with concrete.

The SSV sample(s) will be prepared and delivered to Friedman & Bruya (F&B) in Seattle, Washington, for analysis of BTEX and naphthalene by EPA Method TO-15 SIM, APH by MA-APH, and helium using Modified ASTM International (ASTM) Method D-1946, under chain-of-custody (COC) procedures as described in the Quality Assurance Project Plan (QAPP). GeoEngineers will request below reporting limit/calibration curve, estimated concentration "method detection limit" reporting from the selected laboratory.

Consistent with Ecology's vapor intrusion (VI) Guidance, SSV samples will not be obtained during or immediately after a significant rain event. For the purposes of this Work Plan, a significant rain event is defined as ½-inch or greater during the preceding 24-hour period (DTSC 2012).

2.2 INDOOR AND OUTDOOR AIR SAMPLING

Eleven IA and two OA samples will be collected over an 8-hour or 24-hour period using 6-liter Summa canisters and flow controllers calibrated by the analytical laboratory to collect the appropriate duration samples. The IA samples collected in the 106 Building and the Wine Country Mercantile, as well as the OA sample collected near the Chevron gas station, will be 8 hours in duration due to the commercial nature of both spaces. The IA samples in the Marcus Whitman, along with the OA sample collected on the Marcus Whitman property, will be collected for a 24-hour duration to account for the more sensitive receptors that may be found in a hotel. The air intake for the IA samples will be positioned approximately 3 to 5 feet above the building floor to collect samples representative of the building occupants' breathing zone. Barometric pressure can impact samples, with an especially significant impact on SSV samples. Barometric pressure trends at the time of sampling will be documented during sampling activities.

The OA samples will be collected using the procedure described for IA samples, except that the air intake for the OA sample will be positioned approximately 1 to 2 feet above the ground surface. The OA sample locations will be determined on the day of sampling based on the prevailing wind direction. The OA samples will be positioned upwind of their respective building's air intake.

Initial canister pressure, start date and start time will be recorded on a field data form for the IA and OA samples. The inlet valve on the canister will be opened to collect the sample. The canisters will be filled for the appropriate period, until the canister is filled, but before atmospheric pressure is reached. At the conclusion of the sampling period, the inlet valve will be closed and the final canister pressure, stop date and stop time will be recorded on the field data form.

The IA and OA samples will be prepared and delivered to F&B for analysis of BTEX and naphthalene using EPA Method TO-15 SIM and APH using MA-APH under COC procedures as described in the QAPP. GeoEngineers will request below reporting limit/calibration curve, estimated concentration "method detection limit" reporting from the selected laboratory.

3.0 Handling of IDW

Disposable items, such as sample tubing, disposable gloves and protective overalls, paper towels, etc., will be placed in plastic bags after use and deposited in trash receptacles for disposal.

4.0 Sample Location Control

Horizontal sample control will be maintained throughout the project. Horizontal control will be established using measuring tapes or a hand-held global positioning system (GPS) meter accurate to approximately 15 lateral feet. Vapor Pin® locations also will be established by measuring their distance relative to permanent Site features.

5.0 Sample Handling and Custody Requirements

Samples will be handled in accordance with the QAPP (Appendix B). A complete discussion of the sample identification and custody procedures is provided in the QAPP.

6.0 Field Measurements and Observations Documentation

Field measurements and observations will be recorded in a project field notebook. Daily field logs will be dated, and pages will be consecutively numbered. Entries will be recorded directly and legibly in the daily field log and signed and dated by the person conducting the work. If changes are made, the changes will not obscure the previous entry, and the changes will be signed and dated. At a minimum, the following data will be recorded in the project field notebook and/or field logs:

- Purpose and location of investigation;
- Location of activity;
- Site plan or sampling area sketch showing sample locations and distances to fixed reference points;
- Date and time of sampling;
- Type of sample (matrix);
- Designation as a discrete or composite sample;
- Sample identification number (should match with what is on jar and COC);
- Sample preservation (if any);
- Sampling equipment used;
- Field measurements and observations (e.g., odor, color, staining, sheens, etc.);

- Field conditions that are pertinent to the integrity of the samples (e.g., weather conditions, performance of the sampling equipment, sample depth control, sample disturbance, etc.);
- Relevant comments regarding field activities; and
- Shipping arrangements (including overnight air bill number, if applicable) and receiving laboratory.

Information will be recorded in the project field notebook with enough detail so that field activities can be reconstructed without reliance on personnel memory. In addition to the sampling information, the following specific information also will be recorded in the field log for each day of sampling:

- Team members and their responsibilities;
- Time of arrival/entry on site and time of Site departure;
- Other personnel present at the Site;
- Summary of pertinent meetings or discussions with regulatory agency or contractor personnel;
- Deviations from sampling plans, Site safety plans and QAPP procedures;
- Changes in personnel and responsibilities with reasons for the changes;
- Levels of safety protection;
- Weather conditions; and
- Calibration readings for any equipment used and equipment model and serial number.

7.0 Sample Identification

Sample identification is important to provide concise data management and to quickly determine sample location and date when comparing multiple samples.

Site Number-Sample ID-Date

For example, soil vapor sampled from SSV sample point SSV-01 at the Stillwater Holdings Chevron Site on February 17, 2025, will be labeled as SSV-01-021725.

Indoor air samples will be co-located with a SSV sample and dated the date the sample collection began. An indoor air sample collected near SSV-01 between February 17 and 18, 2025, will be labeled as IA-01-021725.

8.0 References

U.S. Environmental Protection Agency (EPA). 2002. Method 5035A (SW-846). Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples. Draft Revision 1. Washington, D.C. July 2002.

Washington Department of Ecology. 2022. “Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action.” March 2022, Publication 09-09-047.

Appendix B
Quality Assurance Project Plan

Appendix B
Quality Assurance Project Plan

This Quality Assurance Project Plan (QAPP) was developed to guide laboratory analyses for soil vapor and ambient air collected as part of the assessment conducted for the Washington State Department of Ecology (Ecology) under contract C2500073. The QAPP presents the objectives, procedures, organization, functional activities and specific Quality Assurance (QA) and Quality Control (QC) activities designed to achieve data quality goals established for the projects. This QAPP is based on Ecology guidelines (Ecology 2016) and the U.S. Environmental Protection Agency (EPA) Requirements for Quality Assurance Project Plans (EPA 2001) and related guidelines (EPA 2002).

Throughout the projects, environmental measurements will be conducted to produce data that are scientifically valid, of known and acceptable quality and meet established objectives. QA/QC procedures will be implemented so that precision, accuracy, representativeness, completeness and comparability (PARCC) of data generated meet the specified data quality objectives to the extent possible.

1.0 Project Organization and Responsibility

Descriptions of the responsibilities, lines of authority and communication for the key positions to QA/QC are provided below. This organization facilitates the efficient production of project work, allows for an independent quality review and permits resolution of QA issues before submittal.

1.1 PROJECT LEADERSHIP AND MANAGEMENT

The Project Manager's (PM) duties consist of providing concise technical work statements for project tasks, selecting project team members, determining subcontractor participation, establishing budgets and schedules, adhering to budgets and schedules, providing technical oversight, and providing overall production and review of project deliverables. Melissa Roskamp, Professional Engineer (PE), is the PM for activities at the Site. The Principal-in-Charge, Scott Lathen, Professional Engineer (PE), is responsible to Ecology for fulfilling contractual and administrative control of the project.

1.2 FIELD COORDINATOR

The Field Coordinator is responsible for the daily management of activities in the field. Specific responsibilities include the following:

- Provides technical direction to the field staff;
- Develops schedules and allocates resources for field tasks;
- Coordinates data collection activities to be consistent with information requirements;
- Supervises the compilation of field data and laboratory analytical results;
- Assures that data are correctly and completely reported;
- Implements and oversees field sampling in accordance with project plans;
- Supervises field personnel;

- Coordinates work with on-site subcontractors;
- Schedules sample shipment, if necessary, with the analytical laboratory;
- Monitors that appropriate sampling, testing and measurement procedures are followed;
- Coordinates the transfer of field data, sample tracking forms, and logbooks to the PM for data reduction and validation; and
- Participates in QA corrective actions, as required.

The Field Coordinator for each work assignment will be drawn from our pool of experienced staff since fieldwork may be conducted concurrently at multiple sites. Staff that will serve as Field Coordinator could include Melissa Roskamp, Justin Orr or Matthew Kaufman.

1.3 QA LEADER

The GeoEngineers' QA Leader is under the direction of Melissa Roskamp and Scott Lathen, who are responsible for the project's overall QA. The QA Leader is responsible for coordinating QA/QC activities as they relate to the acquisition of field data. Denell Warren is the QA Leader. The QA Leader has the following responsibilities:

- Serves as the official contact for laboratory data QA concerns;
- Responds to laboratory data, QA needs, resolves issues and answers requests for guidance and assistance;
- Reviews the implementation of the QAPP and the adequacy of the data generated from a quality perspective;
- Maintains the authority to implement corrective actions, as necessary;
- Reviews and approves the laboratory QA Plan;
- Evaluates the laboratory's final QA report for any condition that adversely impacts data generation;
- Ensures that appropriate sampling, testing and analysis procedures are followed and that correct QC checks are implemented; and
- Monitors subcontractor compliance with data quality requirements.

1.4 LABORATORY MANAGEMENT

The Ecology-accredited subcontracted laboratories (Friedman & Bruya [F&B] of Seattle, Washington). conducting sample analyses for this project are required to obtain approval from the QA Leader before the initiation of sample analysis to assure that the laboratory QA plan complies with the project QA objectives. The Laboratory QA Coordinators (Michael Erdahl for F&B) administer the Laboratory QA Plans and are responsible for QC. Specific responsibilities of this position include:

- Ensures implementation of the QA Plan;
- Serves as the laboratory point of contact;
- Activates corrective action for out-of-control events;

- Issues the final laboratory QA/QC report;
- Administers QA sample analysis;
- Complies with the specifications established in the project plans as related to laboratory services; and
- Participates in QA audits and compliance inspections.

2.0 Data Quality Objectives

The QA objective for technical data is to collect environmental monitoring data of known, acceptable and documentable quality. The QA objectives established for the project are:

- Implement the procedures outlined herein for field sampling, sample custody, equipment operation and calibration, laboratory analysis, and data reporting that will facilitate consistency and thoroughness of data generated; and
- Achieve the acceptable level of confidence and quality required so that data generated are scientifically valid and of known and documented quality. This will be performed by establishing criteria for PARCC, and by testing data against these criteria.

The sampling design, field procedures, laboratory procedures and QC procedures are set up to provide high-quality data for use in this project. Specific data quality factors that may affect data usability include quantitative factors (precision, bias, accuracy, completeness and reporting limits) and qualitative factors (representativeness and comparability). The measurement quality objectives (MQO) associated with these data quality factors are summarized in Table B-1 (soil vapor and ambient air) and are discussed below.

2.1 ANALYTES AND MATRICES OF CONCERN

Samples of soil vapor or ambient air will be collected from five sub-slab and four ambient air samples during the assessment. Table B-1 summarize the analyses to be performed at the site for soil vapor and ambient air.

2.2 DETECTION LIMITS

Analytical methods have quantitative limitations at a given statistical level of confidence that are often expressed as the method detection limit (MDL). Individual instruments often can detect but not accurately quantify compounds at concentrations lower than the MDL, referred to as the instrument detection limit (IDL). Although results reported near the MDL or IDL provide insight to site conditions, QA dictates that analytical methods achieve a consistently reliable level of detection known as the practical quantitation limit (PQL). The contract laboratory will provide numerical results for all analytes and report them as detected above the PQL or undetected at the PQL.

Achieving a stated detection limit for a given analyte is helpful in providing statistically useful data. Intended data uses, such as comparison to numerical criteria or risk assessments, typically dictate specific project target reporting limits (TRLs) necessary to fulfill stated objectives. The PQLs for vapor contaminants of potential concern (COPCs) at the Site are presented in Table B-1. These reporting limits were obtained from F&B, the Ecology-accredited labs that will be analyzing the samples. Other criteria include State of Washington (Washington Administrative Code [WAC] 173-201) water quality criteria and federal ambient

water quality criteria (AWQC). The analytical methods and processes selected will provide PQLs less than the TRLs under ideal conditions. However, the reporting limits in Table B-1 are considered targets because analytical procedures may require sample dilutions or other practices to accurately quantify a particular analyte at concentrations above the range of the instrument. The effect is that other analytes could be reported as undetected but at a value much higher than a specified TRL. Data users must be aware that high non-detect values, although correctly reported, can bias statistical summaries and careful interpretation is required to correctly characterize site conditions.

2.3 PRECISION

Precision is the measure of mutual agreement among replicate or duplicate measurements of an analyte from the same sample and applies to field duplicate or split samples, replicate analyses and duplicate spiked environmental samples (matrix spike duplicates). The closer the measured values are to each other, the more precise the measurement process. Precision error may affect data usefulness. Good precision is indicative of relative consistency and comparability between different samples. Precision will be expressed as the relative percent difference (RPD) for spike sample comparisons of various matrices and field duplicate comparisons for water samples. This value is calculated by:

$$RPD\,(\%) = \frac{|D_1 - D_2|}{(D_1 + D_2)/2} X\ 100,$$

Where

D_1 = Concentration of analyte in sample.

D_2 = Concentration of analyte in duplicate sample.

The calculation applies to split samples, replicate analyses, duplicate spiked environmental samples (matrix spike duplicates) and laboratory control duplicates. The RPD will be calculated for samples and compared to the applicable criteria. Precision can also be expressed as the percent difference (%D) between replicate analyses. Persons performing the evaluation must review one or more pertinent documents (EPA 2017a,b) that address criteria exceedances and courses of action. Relative percent difference goals for this effort are no greater than 25 percent in soil vapor and ambient air for all analyses, unless the duplicate sample values are within 5 times the reporting limit. In this case, the absolute difference is used instead of the RPD. The absolute difference control limit is equal to the lowest reporting limit of the two samples for water, two times the lowest reporting limit of the two samples for soil and 2 times the lowest reporting limit of the two soil vapor samples.

2.4 ACCURACY

Accuracy is a measure of bias in the analytic process. The closer the measurement value is to the true value, the greater the accuracy. This measure is defined as the difference between the reported value versus the actual value and is often measured with the addition of a known compound to a sample. The amount of known compound reported in the sample, or percent recovery, assists in determining the performance of the analytical system in correctly quantifying the compounds of interest. Since most environmental data collected represent one point spatially and temporally rather than an average of values, accuracy plays a greater role than precision in assessing the results. In general, if the percent recovery is low, non-detect results may indicate that compounds of interest are not present when in fact, these

compounds are present. Detected compounds may be biased low or reported at a value less than actual environmental conditions. The reverse is true when recoveries are high. Non-detect values are considered accurate while detected results may be higher than the true value.

Accuracy will be expressed as the percent recovery of a surrogate compound (also known as "system monitoring compound"), a matrix spike (MS) result, or from a standard reference material where:

$$Recovery\,(\%) = \frac{Sample\ Result}{Spike\ Amount}\ X\ 100$$

Persons performing the evaluation must review one or more pertinent documents (EPA 2017a,b) that address criteria exceedances and courses of action. Accuracy criteria for surrogate spikes, MS and laboratory control spikes (LCS) are found in Table B-1 of this QAPP.

2.5 REPRESENTATIVENESS, COMPLETENESS AND COMPARABILITY

Representativeness expresses the degree to which data accurately and precisely represent the actual Site conditions. The determination of the representativeness of the data will be performed by completing the following:

- Comparing actual sampling procedures to those delineated within the Work Plan and this QAPP;
- Comparing analytical results of field duplicates to determine the variations in the analytical results; and
- Invalidating non-representative data or identifying data to be classified as questionable or qualitative. Only representative data will be used in subsequent data reduction, validation and reporting activities.

Completeness establishes whether a sufficient amount of valid measurements were obtained to meet project objectives. The number of samples and results expected establishes the comparative basis for completeness. Completeness goals are 90 percent useable data for samples/analyses planned. If the completeness goal is not achieved, an evaluation will be made to determine if the data are adequate to meet study objectives.

Comparability expresses the confidence with which one set of data can be compared to another. Although numeric goals do not exist for comparability, a statement on comparability will be prepared to determine overall usefulness of data sets, following the determination of both precision and accuracy.

2.6 HOLDING TIMES

Holding times are defined as the time between sample collection and extraction, sample collection and analysis, or sample extraction and analysis. Some analytical methods specify a holding time for analysis only. For many methods, holding times may be extended by sample preservation techniques in the field. If a sample exceeds a holding time, then the results may be biased low. For example, if the extraction holding time for volatile analysis of a water sample is exceeded, then the possibility exists that some of the organic constituents have volatilized from the sample or degraded. Results for that analysis will be qualified as estimated to indicate that the reported results may be lower than actual site conditions. Holding times are presented in Table B-2.

2.7 BLANKS

According to the *National Functional Guidelines for Organic Data Review* (EPA 2017b), "The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. The criteria for evaluation of blanks apply to any blank associated with the samples (e.g., method blanks, instrument blanks, trip blanks and equipment blanks)." Trip blanks are placed with samples during shipment; method blanks are created during sample preparation and follow samples throughout the analysis process.

Analytical results for blanks will be interpreted in general accordance with *National Functional Guidelines for Organic Data Review* and professional judgment.

3.0 Sample Collection, Handling and Custody

Sampling procedures are provided in this section and Appendix A of this Work Plan.

3.1 SAMPLING EQUIPMENT DECONTAMINATION

Sampling equipment decontamination procedures are described in Appendix A of the Work Plan.

3.2 SAMPLE CONTAINERS AND LABELING

The Field Coordinator will establish field protocol to manage field sample collection, handling and documentation.

Sample containers (Summa tag) will be labeled with the following information at the time of collection:

- Project name and number;
- Sample name; and
- Date and time of collection.

The sample collection activities will be noted in the field logbooks. The Field Coordinator will monitor consistency between the Work Plan, sample containers/labels, field logbooks and the chain-of-custody (COC).

3.3 SAMPLE STORAGE

Summa canisters will be kept at ambient temperature before and after shipment.

3.4 SAMPLE SHIPMENT

The samples will be transported and delivered to the analytical laboratory in laboratory-supplied shipping container (typically carboard boxes for Summa containers). Samples that are being submitted from a remote location for analysis will be transported by a commercial express mailing service on an overnight basis or returning field personnel. The Field Coordinator will monitor that the shipping container has been properly secured using clear packing tape and custody seals.

Measures will be implemented to minimize the potential for sample breakage, which includes packaging materials and placing sample bottles in the cooler in a manner intended to minimize damage. Sample bottles will be wrapped with bubble wrap or other protective material before being placed in coolers.

3.4.1 Chain-of-Custody Records

Field personnel are responsible for the security of samples from the time the samples are taken until the samples have been received by the shipper or laboratory. A COC form will be completed at the end of each field day for samples being shipped to the laboratory. Information to be included on the COC form includes:

- Project name and number;
- Sample identification number;
- Date and time of sampling;
- Sample matrix (water, soil, or vapor) and number of containers from each sampling point, including preservatives used;
- Analyses to be performed;
- Names of sampling personnel and transfer of custody acknowledgment spaces; and
- Shipping information including shipping container number.

The original COC record will be signed by a member of the field team and bear a unique tracking number. Field personnel shall retain carbon copies and place the original and remaining copies in a sealed plastic bag, placed within the cooler or taped to the inside lid of the cooler or box before sealing the container for shipment. This record will accompany the samples during transit by carrier to the laboratory.

3.5 LABORATORY CUSTODY PROCEDURES

The laboratory will follow their standard operating procedures (SOPs) to document sample handling from time of receipt (sample log-in) to reporting. Documentation will include, at a minimum, the analyst's name or initial, time and date.

4.0 Calibration Procedures

4.1 FIELD INSTRUMENTATION

Equipment and instrumentation calibration facilitate accurate and reliable field measurements. Field and laboratory equipment used on the project will be calibrated and adjusted in general accordance with the manufacturer's recommendations. Methods and intervals of calibration and maintenance will be based on the type of equipment, stability characteristics, required accuracy, intended use and environmental conditions. The basic calibration frequencies are described below.

The photoionization detector (PID) used for vapor measurements will be calibrated daily, if required (based on the model used), for Site safety monitoring purposes in general accordance with the manufacturer's specifications. If daily calibration is not required for a specific PID model, calibration of the PID will be checked to make sure it is up to date. The calibration results will be recorded in the field logbook.

4.2 LABORATORY INSTRUMENTATION

For analytical chemistry, calibration procedures will be performed in general accordance with the methods cited and laboratory SOPs. Calibration documentation will be retained at the laboratory and readily available for a period of 6 months.

5.0 Data Reporting and Laboratory Deliverables

Laboratories will report data in formatted hardcopy and digital form. Analytical laboratory measurements will be recorded in standard formats that display, at a minimum, the field sample identification, the laboratory identification, reporting units, qualifiers, analytical method, analyte tested, analytical result, extraction and analysis dates, and detection limit (PQL only). Each sample delivery group will be accompanied by sample receipt forms and a case narrative identifying data quality issues. Laboratory electronic data deliverable (EDD) formats will be established by GeoEngineers, Inc., with the contract laboratory. Final results will be sent to the PM.

6.0 Internal QC

There will be no planned internal QC of soil vapor or ambient air samples.

6.1 FIELD QC

Field QC samples serve as a control and check mechanism to monitor the consistency of sampling methods and the influence of off-site factors on environmental samples. Off-site factors include airborne volatile organic compounds (VOCs).

6.1.1 Field Duplicates

A field duplicate will not be collected for the soil vapor or ambient air samples.

6.1.2 Trip Blanks

Trip blanks will not accompany the soil vapor or ambient air samples.

6.2 LABORATORY QC

Laboratory QC procedures will be evaluated through a formal data validation process. The analytical laboratory will follow standard method procedures that include specified QC monitoring requirements. These requirements will vary by method but generally include:

- Method blanks;
- Internal standards;
- Calibrations;
- MS/matrix spike duplicates (MSD);
- LCS/laboratory control spike duplicates (LCSD);
- Laboratory replicates or duplicates; and

- Surrogate spikes.

6.2.1 Laboratory Blanks

Laboratory procedures employ the use of several types of blanks but the most commonly used blank for QA/QC assessments are method blanks. Method blanks are laboratory QC samples that consist of either a soil-like material having undergone a contaminant destruction process or high-performance liquid-chromatography (HPLC) water. Method blanks are extracted and analyzed with each batch of environmental samples undergoing analysis. Method blanks are particularly useful during volatiles analysis since VOCs can be transported in the laboratory through the vapor phase. If a substance is found in the method blank, then one (or more) of the following occurred:

- Measurement apparatus or containers were not properly cleaned and contained contaminants;
- Reagents used in the process were contaminated with a substance(s) of interest;
- Contaminated analytical equipment was not properly cleaned; and/or
- Volatile substances in the air with high solubility or affinities toward the sample matrix contaminated the samples during preparation or analysis.

It is difficult to determine which of the above scenarios took place if blank contamination occurs. However, it is assumed that the conditions that affected the blanks also likely affected the project samples. Given method blank results, validation rules assist in determining which substances in samples are considered "real," and which ones are attributable to the analytical process. Furthermore, the guidelines state, "…there may be instances where little or no contamination was present in the associated blank, but qualification of the sample is deemed necessary. Contamination introduced through dilution water is one example."

6.2.2 Calibrations

Several types of calibrations are used, depending on the method, to determine whether the methodology is 'in control' by verifying the linearity of the calibration curve and to assure that the sample results reflect accurate and precise measurements. The main calibrations used are initial calibrations, daily calibrations and continuing calibration verification.

6.2.3 MS/MSD

MS/MSD samples are used to assess influences or interferences caused by the physical or chemical properties of the sample itself. For example, extreme pH affects the results of semi-volatile organic compounds (SVOCs). Or the presence of a compound may interfere with accurate quantitation of another analyte. MS/MSD data is reviewed in combination with other QC monitoring data to determine matrix effects. In some cases, matrix affects cannot be determined due to dilution and/or high levels of related substances in the sample. A MS is evaluated by spiking a known amount of one or more of the target analytes ideally at a concentration of 5 to 10 times higher than the sample result. A percent recovery is calculated by subtracting the sample result from the spike result, dividing by the spiked amount and multiplying by 100.

The samples for the MS and MSD analyses should be collected from a boring or sampling location that is believed to exhibit low-level contamination. A sample from an area of low-level contamination is needed because the objective of MS/MSD analyses is to determine the presence of matrix interferences, which

can best be achieved with low levels of contaminants. Additional sample volume will be collected for these analyses. This MS/MSD sample will be a composite to achieve a level of representativeness and reproducibility in the data.

6.2.4 LCS/LCSD

Also known as blanks spikes, LCSs are similar to MSs in that a known amount of one or more of the target analytes are spiked into a prepared media and a percent recovery of the spiked substances are calculated. The primary difference between a MS and LCS is that the LCS media is considered "clean" or contaminant free. For example, HPLC water is typically used for LCS water analyses. The purpose of an LCS is to help assess the overall accuracy and precision of the analytical process including sample preparation, instrument performance and analyst performance. LCS data must be reviewed in context with other controls to determine if out-of-control events occur.

6.2.5 Laboratory Replicates/Duplicates

Laboratories often utilize MS/MSDs, LCS/LCSDs and/or replicates to assess precision. Replicates are a second analysis of a field-collected environmental sample. Replicates can be split at varying stages of the sample preparation and analysis process, but most commonly occur as a second analysis on the extracted media.

6.2.6 Surrogate Spikes

The purposes of using a surrogate are to verify the accuracy of the instrument being used and extraction procedures. Surrogates are substances similar to, but not one of, the target analytes. A known concentration of surrogate is added to the sample and passed through the instrument, noting the surrogate recovery. Each surrogate used has an acceptable range of percent recovery. If a surrogate recovery is low, sample results may be biased low and depending on the recovery value, a possibility of false negatives may exist. Conversely, when recoveries are above the specified range of acceptance a possibility of false positives exist, although non-detected results are considered accurate.

7.0 Data Reduction and Assessment Procedures

7.1 DATA REDUCTION

Data reduction involves the conversion or transcription of field and analytical data to a useable format. The laboratory personnel will reduce the analytical data for review by the QA Leader and PM.

7.2 FIELD MEASUREMENT EVALUATION

Field data will be reviewed at the end of each day by following the QC checks outlined below and procedures in the Work Plan. Field data documentation will be checked against the applicable criteria as follows:

- Sample collection information;
- Field instrumentation and calibration;
- Sample collection protocol;
- Sample containers, preservation, and volume;

- Field QC samples collected at the frequency specified;
- Sample documentation and COC protocols; and
- Sample shipment.

Cooler receipt forms and sample condition forms provided by the laboratory will be reviewed for out-of-control incidents. The final report will contain what effects, if any, an incident has on data quality. Sample collection information will be reviewed for correctness before inclusion in a final report.

7.3 FIELD QC EVALUATION

A field QC evaluation will be conducted by reviewing field logbooks and daily reports, discussing field activities with staff and reviewing field QC samples (trip blanks and field duplicates). Trip blanks will be evaluated using the same criteria as method blanks.

7.4 LABORATORY DATA QC EVALUATION

The laboratory data assessment will consist of a formal review of the following QC parameters:

- Holding times;
- Method blanks;
- MS/MSD;
- LCS/LCSD;
- Surrogate spikes; and
- Replicates.

In addition to these QC mechanisms, other documentation such as cooler receipt forms and case narratives will be reviewed to fully evaluate laboratory QA/QC.

8.0 References

U.S. Environmental Protection Agency). 2001. EPA Requirements for Quality Assurance Project Plans. EPA QA/R-5. EPA/240/B-01/003. Office of Environmental Information, Washington, D.C. March 2001.

U.S. Environmental Protection Agency). 2002. Guidance for Quality Assurance Project Plans. EPA QA/G-5. EPA/240/R-02/009. Office of Environmental Information, Washington, D.C. December 2002.

U.S. Environmental Protection Agency. 2017a. National Functional Guidelines for Inorganic Superfund Methods Data Review. 540-R-2017-001. Office of Superfund Remediation and Technology Innovation. Washington, D.C. January 2017.

U.S. Environmental Protection Agency. 2017b. National Functional Guidelines for Organic Superfund Methods Data Review. Office of Superfund Remediation and Technology Innovation. Washington, D.C. 540-R-2017-002. January 2017.

Washington State Department of Ecology. 2016. Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies. Publication No. 04-03-030. July 2004 (revised December 2016).

Table B-1

Soil Vapor and Ambient Air Measurement Quality Objective and Target Reporting Limits

Stillwater Holdings Chevron

Walla Walla, Washington

Analyte	Method	MDL ($\mu g/m^3$)	PQL ($\mu g/m^3$)	LCS/LCSD			MTCA Method B Soil Gas Screening Level ($\mu g/m^3$)	MTCA Method B Soil Gas Screening Level ($\mu g/m^3$)	MTCA Method B Cleanup Level ($\mu g/m^3$)	MTCA Method B Cleanup Level ($\mu g/m^3$)
				Lower	Upper	RPD				
VOCs							**Residential**	**Commercial[a]**	**Residential**	**Commercial[a]**
Benzene	EPA TO-15 SIM	0.04	0.32	70	130	30	11	50	0.32	1.50
Toluene	EPA TO-15 SIM	0.1	7.5	70	130	30	76,000	650,000	2,286	19,470
Ethylbenzene	EPA TO-15 SIM	0.046	0.43	70	130	30	15,000	130,000	457	3,893
m, p-Xylene	EPA TO-15 SIM	0.14	0.87	70	130	30	NE	NE	NE	NE
o-Xylene	EPA TO-15 SIM	0.058	0.43	70	130	30	NE	NE	NE	NE
Xylene (Total)	EPA TO-15 SIM	Derived as sum of m, o and p isomers					1,500	13,000	45.7	390.0
Napthalene	EPA TO-15 SIM	0.018	0.26	0.0735	130	30	2.5	11	0.074	0.340
APH										
EC5-8 aliphatics	MA-APH	47.0	75	70	130	30	NE	NE	46 or Site Specific	390 or Site Specific
EC9-12 aliphatics	MA-APH	2.5	25	70	130	30	NE	NE		
EC9-10 aromatics	MA-APH	2.5	25	70	130	30	NE	NE		
TPH							1,500	13,000	46 or Site Specific	390 or Site Specific

Notes:

Practical quantitation limits (PQLs) based on information provided by Freidman and Bruya, Inc. in Seattle, Washington.

EPA = U.S. Environmental Protection Agency

VOCs = volatile organic compounds; APH = air-phase hydrocarbons;

MDL = method detection limit; LCS = laboratory control spike; LCSD = laboratory control spike duplicate; RPD = relative percent difference;

MTCA = Model Toxics Control Act

MTCA Method B Screening Level = MTCA Method B Soil Gas Screening Level

MTCA Method B Cleanup Level = MTCA Method B Indoor Air Cleanup Level

$\mu g/m^3$ = micrograms per cubic meter; NE = Not established;

a = Calculated by method specifed in Section 4.4 of Guidance for Evaluating Vapor Intrusion in Washington State

Table B-2

Soil Vapor and Ambient Air Test Methods, Sample Containers, Preservation and Holding Time[1]

Stillwater Holdings Chevron

Walla Walla, Washington

Analysis	Matrix	Method	Minimum Sample Size	Sample Containers	Sample Preservation	Holding Times
VOCs (sub-slab)	Air	EPA TO-15	1 L	Summa Canister	None	30 days
VOCs (indoor/outdoor)	Air	EPA TO-15	6 L	Summa Canister	None	30 days

Notes:

[1]Holding times are based on elapsed time from date of collection.

EPA = U.S. Environmental Protection Agency

VOC = volatile organic compound; APH = air-phase hydrocarbons

L = liters

Appendix C
Health and Safety Plan

Appendix C
GeoEngineers, Inc.
Health and Safety Plan

Stillwater Holdings Chevron Site, 7 East Rose Street, Walla Walla, Washington

This Health and Safety Plan (HASP) is to be used in conjunction with the GeoEngineers, Inc. (GeoEngineers) Safety Programs. Together, the written GeoEngineers' safety programs and this HASP constitute the Site safety plan for this subject Site. This HASP is required by the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation (29 Code of Federal Regulations [CFR] 1910.120) when performing mandatory or voluntary clean-up operations and initial investigations conducted to determine the presence or absence of hazardous substances unless the employer can demonstrate that the work does not involve employee exposure to safety and health hazards from hazardous substances at the site. This HASP is to be used by GeoEngineers' personnel on this Site and must be available on site, as well as in project Safety folder on SharePoint. This HASP is to be used in conjunction with current standards and policies outlined in the GeoEngineers' Health and Safety Programs.

Liability Clause: If requested by subcontractors, this site HASP may be provided for informational purposes only. In this case, Form 1 of this HASP shall be signed by the subcontractor. Please be advised that this site-specific HASP is intended for use by GeoEngineers' employees only. Nothing herein shall be construed as granting rights to GeoEngineers' subcontractors or any other contractors working on this site to use or legally rely on this HASP. GeoEngineers specifically disclaims any responsibility for the health and safety of any person not employed by the company.

1.0 General Project Information

Project Name:	Stillwater Holdings Chevron
Project Number:	504-202-01
Type of Project:	Stillwater Holdings Chevron—Interim Remedial Action
Start/Completion:	January – December 2025
Subcontractors:	
Client:	Washington State Department of Ecology

CHAIN OF COMMAND

1	**Current Property Owner (c/o Ecology Project Manager)**	Beth Kercher	O: 509.385.5443
2	**Principal-in-Charge**	Scott Lathen	O: 509.209.2843 C: 509.251.5239
3	**Health and Safety Manager (HSM)**	Chad Kean	O: 425.284.7256 C: 425.515.5340
4	**Health and Safety Specialist (HSS)**	Connor Jordan	O: 253.72.2426 C: 530.210.5462
6	**Project Manager (PM)**	Melissa Roskamp	O: 509.209.2843 C: 509.979.1537
7	**Site Safety Officer (SSO)**	Matt Kaufman	C. 570.590.7258
8	**Field Personnel**	Matt Kaufman Justin Orr Melissa Roskamp	C. 570.590.7258 C. 406.890.1310 C. 509.979.1537
10	**Subcontractor(s)**	Friedman & Bruya Eurofins	206.285.8282 ex:247 509.924.9200

1.1 FUNCTIONAL RESPONSIBILITY

1.1.1 Health and Safety Manager (HSM)

GeoEngineers' Health and Safety Manager (HSM) is responsible for implementing and promoting employee participation in the company Health and Safety Program. The HSM has overall responsibility for the general health and safety of GeoEngineers' personnel. The HSM issues directives, advisories and information regarding health and safety to the technical staff. Additionally, the HSM has the authority to audit on-site compliance with HASPs, suspend work or modify work practices for safety reasons, and dismiss from the Site any GeoEngineers' or subcontractor employees whose conduct on the Site endangers the health and safety of themselves or others.

1.1.2 Health and Safety Specialist (HSS)

GeoEngineers' Health and Safety Specialist (HSS) is a designated safety specialist. The HSS provides technical support to the PM and SSO to ensure that that GeoEngineers' staff are following GeoEngineers' safety program and safe work practices during Site activities. The HSS works with the PM and SSO to ensure the subcontractors' crews are following the Site general HASPs, the activities HASP/Job Hazard Analysis (JHAs) and safe work practices. The HSS may periodically go on-site to perform safety observations and mentor on-site personnel on safety behavior practices. Additionally, the HSS has the authority to suspend work or modify work practices for safety reasons and dismiss from the Site any GeoEngineers' or subcontractor employees whose conduct on the Site endangers the health and safety of themselves or others. The HSS shall keep the PM and HSM informed of the project's health- and safety-related matters, as necessary.

1.1.3 Project Manager (PM)

A PM is assigned to manage the activities of various projects and is responsible to the principal-in-charge of the project. The PM has the responsibility of ensuring the safety of all GeoEngineers' personnel on job sites. The PM is responsible for assessing the hazards present at the job Site and incorporating the appropriate safety measures for field staff protection into the field briefing and/or Site Safety Plan. He or she is also responsible for assuring that appropriate HASPs are developed. The PM will provide a summary of chemical analysis to personnel completing the HASP. PMs shall also see that their project budgets consider health and safety costs. The PM shall keep the HSM and HSS informed of the project's health- and safety-related matters, as necessary. The PM shall designate the project SSO and help the SSO implement the specifications of the HASP. The PM is responsible for communicating information in Site safety plans and checklists to appropriate field personnel. Additionally, the PM and SSO shall hold a Site safety briefing before any field activities begin. The PM is responsible for transmitting health and safety information to the SSO when appropriate.

1.1.4 SSO/HAZWOPER

The SSO will have the on-site responsibility and authority to modify and stop work or remove GeoEngineers' personnel from the Site if working conditions change that may affect on-site and off-site health and safety. The SSO will be the main contact for any on-site emergency situation. The SSO is First Aid and cardiopulmonary resuscitation (CPR) qualified and has current HAZWOPER training when working at hazardous waste sites. The SSO is responsible for implementing and enforcing the project safety program and safe work practices during site activities. The SSO shall conduct daily safety meetings, perform air monitoring as required, conduct site safety inspections as required, coordinate emergency medical care, and ensure personnel are wearing the appropriate personal protective equipment (PPE). The SSO shall have advanced fieldwork experience and shall be familiar with health and safety requirements specific to the project. The SSO has the authority to suspend site activities if unsafe conditions are reported or observed.

Duties of the SSO include the following:

- Implementing the HASP in the field and monitoring staff compliance with its guidelines;
- Ensuring that all GeoEngineers' field personnel have met the training and medical examination requirements. Advising other contractor employees of these requirements;
- Maintaining adequate and functioning safety supplies and equipment at the Site;
- Setting up work zones, markers, signs and security systems, if necessary;
- Performing or supervising air quality measurements. Communicating information on these measurements to GeoEngineers' field staff and subcontractor personnel;
- Leading the pre-entry briefing (at the beginning of the Site activities) and the Site safety meetings (daily and/or weekly), with on-site personnel. These meetings should include a discussion of emergency response, Site communications and Site hazards associated with the planned activities;
- Communicating health and safety requirements and Site hazards to field personnel, subcontractors and contractor employees, and site visitors;
- Directing personnel to wear PPE and guiding compliance with all health and safety practices in the field;

- Consulting with the PM regarding new or unanticipated Site conditions, including emergency response activities. If monitoring detects concentrations of potentially hazardous substances at or above the established exposure limits, notify/consult with the PM. Consult with the PM, the HSS and the HSM regarding new or unanticipated Site conditions, including emergency response activities. If field monitoring indicates concentrations of potentially hazardous substances at or above the established exposure limits, the HSM must be notified, and corrective action taken;
- Documenting all Site accidents, injuries, illnesses and unsafe activities or conditions and/or near misses, and reporting them to the PM, HSS and the HSM as soon as practical, but no later than the end of the day; and
- Directing decontamination operations of equipment and personnel.

1.1.5 Field Employees

All employees working on site that have the potential of coming in contact with hazardous substances or chemical, biological and/or physical hazards are responsible for participating in the health and safety program and complying with the Site-specific health and safety plans. These employees are required to:

- Read, participate and be familiar with the GeoEngineers' health and safety programs located in SharePoint. Attend applicable safety training;
- Notify the SSO that when there is need to stop work to address an unsafe situation;
- Comply with the HASP and acknowledge understanding of the plan discussed during the health and safety pre-entry briefing;
- Review applicable JHAs prior starting a new activity and follow the recommended critical actions to mitigate hazards;
- Perform Task Safety Analysis (TSA) at the beginning of a new task, before changing tasks, when conditions changes and after a near miss or incident;
- Report to the SSO, PM or HSM any unsafe conditions and all facts pertaining to near misses, incidents or accidents that could result in physical injury or exposure to hazardous materials and/or equipment damage;
- Participate in health and safety training, including initial 40-hour HAZWOPER course, annual 8-hour HAZWOPER refresher and First Aid/CPR training;
- Participate in the medical surveillance program, if applicable;
- Schedule and take a respirator fit test annually; and
- Any field employee working on site may stop work if the employee believes the work is unsafe.

1.1.6 Contractors Under GeoEngineers Supervision

GeoEngineers will hire contractors for this project? Yes ☒ No ☐

Contractors working on the Site directly for the Client will have their own HASPs or JHAs. Subcontractors working on the Site under GeoEngineers' supervision that have the potential of coming in contact with hazardous substances or chemical, biological and/or physical hazards shall have their own health and safety programs and safety plan that is generally consistent with the requirements of this HASP.

CONTRACTOR NAME	PREDICTED START/END DATES
1. Friedman & Bruya	February 2025
Contractor Scope Summary:	Laboratory analysis (soil vapor and ambient air)
2. Eurofins Environment Testing	February 2025-December 2025
Contractor Scope Summary:	Laboratory analysis (soil and groundwater)
3. TBD	July 2025-Jauary 2026

1.2 GEOENGINEERS FIELD PERSONNEL QUALIFICATIONS AND READINESS STATUS

NAME OF EMPLOYEE ON SITE	LEVEL OF HAZWOPER TRAINING (24-HOUR/40-HOUR)	DATE OF LAST 8-HR REFRESHER TRAINING	LAST FIRST AID/CPR TRAINING DATE
Matt Kaufman	40-hour	November 2024	February 2023
Justin Orr	40-hour	March 2024	February 2024
Melissa Roskamp	40-hour	April 2024	February 2024

1.3 PERSONNEL MEDICAL SURVEILLANCE

Field personnel on this job site are ☐; are not ☒ entered in a GeoEngineers provided medical surveillance program.

2.0 Work Site

2.1 SITE DESCRIPTION

Stillwater Holdings Chevron cleanup site (herein referred to as "Site"), as shown on the Vicinity Map, Figure 1. The Washington State Department of Ecology (Ecology) reference numbers for this Site include Facility Site ID (FSID) No. 28575673 and Cleanup Site ID (CSID) No. 5818. The Site includes the Chevron gas station located at 7 East Rose Street, the Marcus Whitman Hotel located at 6 West Rose Street, and the 106 Building located at 106 North 2nd Avenue, all in Walla Walla, Washington. The Site is occupied by the Chevron gas station and Wine Country convenience store. The north corner of the Site is occupied by the Wine Country Convenience Store; the south, east and west corners surrounding the store are paved areas containing parking spaces, two gas pump canopies with 6 pumps in total. The Marcus Whitman Hotel is located across 2nd Avenue at 6 West Rose Street. The 106 Building shares a property line with the Chevron gas station to the South.

During field work tasks, there will be vehicles entering and leaving the parking lot and pedestrian traffic entering and leaving the building. Set up traffic cones and exclusion zones to vehicle and pedestrian traffic near the work area. When installing sub-slab soil vapor points, communicate with the store manager to determine the best time to perform the work so as to not impact store operations.

2.2 SITE MAP

Please refer to the Site Plan, Figure 2, included with the Work Plan for the Site layout. Monitoring locations and work areas are shown on Site Plan Showing Investigation Locations, Figure 3.

2.3 PREVIOUS INVESTIGATIONS

Available records indicate that the property 7 East Rose Street has operated as a service station since at least 1981, when three 10,000-gallon fiberglass underground storage tanks (USTs) were installed[8]. Two of the USTs are used to store gasoline and one UST to store diesel. Historical records available from Ecology document a previous soil and groundwater cleanup at the Chevron gas station, identified at the time as Bill Singers Chevron or Singer's Chevron, conducted between 2010 and 2013. In May 2013, Ecology issued a No Further Action determination for gasoline-range petroleum hydrocarbons in soil and groundwater with an Environmental Covenant that required maintenance of a surface cap over contaminated soil (Ecology, 2013[9]).

A now closed chlorinated solvent site (FID: 776) was located across the street from the Site.

In September 2023, a gasoline release was identified as originating from a UST at the Chevron gas station. The gasoline plume has been determined to extend beneath the Marcus Whitman Hotel and Conference Center and the 106 Building, as well as in soil and groundwater on the Chevron gas station property.

The following table presents the most recent available data of contaminants of concern collected during the historical Site Investigation(s) conducted at the subject Site.

PREVIOUS INVESTIGATION CONTAMINANTS DATA

KEY STUDY (NAME/COMPANY/DATE [YEAR])	MAIN CONTAMINANTS OF CONCERN (TPH, VOCS, PAHS, METALS, PCBS, PFAS ETC.)	MEDIA (SOIL, GROUNDWATER, SEDIMENTS, AIR)
Aspect, 2023 Ecology, 2024	GRPH, BTEX, PCE, TCE	Soil, groundwater, soil vapor, air

Notes:
TPH = total petroleum hydrocarbons; VOC = volatile organic compounds; PAH = polycyclic aromatic hydrocarbons; PCB = polychlorinated biphenyls; PCE = tetrachloroethene; TCE = trichloroethene

3.0 GeoEngineers Scope of Work

3.1 SUMMARY OF PROJECT SCOPE

To complete Interim Remedial Action, GeoEngineers will assess groundwater, ambient air, and soil vapor conditions for potential contamination associated with September 2023 gasoline release. This will be done by sampling existing monitoring wells, collecting sub-slab vapor (SSV), indoor air (IA), and outdoor air (OA) samples. The three USTs at the Chevron site will be decommissioned and removed. GeoEngineers will perform the UST Site Assessment and soil sampling associated with the decommissioning.

[8] ALLWEST, 2022, Phase I Environmental Site Assessment, Bill Singer's Chevron, 7 East Rose Street, Walla Walla, Washington, 99362, October 7, 2022.

[9] Environmental Covenant for Tax Parcel 360720574707 executed on May 13, 2013 between Bill D. & Loretta R. Singer and State of Washington, Department of Ecology

3.1.1 Primary Field Tasks to be Performed by GeoEngineers

TASK NO.	PRIMARY FIELD TASK	PREDICTED START/END DATES
1	Sub-Slab Soil Vapor Sample Point Installation	Jan. 2025/Dec. 2025
	Task Description:	Install temporary Vapor Pins, collect summa samples from sub-slab.
2	Ambient Air (Indoor and Outdoor) Sampling	Jan. 2025/Dec. 2025
	Task Description:	Set Summa canisters for ambient air sample collection.
3	Monitoring Well Sampling	Jan. 2025/Dec. 2025
	Task Description:	Use low-flow sampling techniques to purge and sample existing monitoring wells.
4	Groundwater depth gauging	Jan. 2025/Dec. 2025
	Task Description:	During monitoring well sampling the groundwater depth and presence/thickness of product in wells will be gauged.
5	UST Decommissioning	June 2025/Oct. 2025
	Task Description:	Supervise the decommissioning, excavation, and removal of three USTs. Perform Site Assessment activities, including air monitoring, field assessments, and soil sampling.
6	Groundwater Treatment System Water Sampling	Jan. 2025/Dec. 2025
	Task Description:	Collect grab samples from the groundwater treatment system for laboratory analysis.

4.0 Hazard Analysis

4.1 GENERAL SAFE WORK PRACTICES

- Lifting hazards - use proper techniques, mechanical devices where appropriate.
- Terrain obstacles - Terrain will be paved asphalt or interior of buildings.
- Personnel will wear high-visibility vests for increased visibility by vehicle and equipment operators.
- At the beginning of the day, conduct a tail gate safety meeting discussing the jobs, the hazards, exclusion zone(s) surrounding work area(s), utilities clearance and actions that will be taken to prevent injury and reduce risk. Discuss “Stop Work Authority” as it applies to each Site member. Discuss appropriate PPE, including high visibility clothing such as reflective vest. Discuss Competent Person’s responsibilities and support of excavation (SOE) protective system(s) and potential de-watering.

4.2 ELEVATED RISK ACTIVITIES

Does this project have Elevated Risk Activities? Yes ☐ or No ☒

4.3 GENERAL HAZARD REVIEW

The Primary Field Tasks (excluding the previously identified ERA) identified in Section 4.2 included in the following Primary Field Task Hazard Analysis Tables. Hazards are divided into three categories: (A) Chemical; (B) Biological; and (C) Physical. Add others, as necessary.

4.4 PRIMARY FIELD TASK HAZARD ANALYSIS

PRIMARY FIELD TASKS	
No. 1	Chemical, Physical
No. 2	Chemical, Physical
No. 3	Chemical, Physical
No. 4	Chemical, Physical
No. 5	Chemical, Physical

TASK HAZARD RECOGNITION – EVALUATE PRIMARY FIELD TASKS FOR HAZARDS					
CHEMICAL HAZARDS	TASK NO.	BIOLOGICAL HAZARDS	TASK NO.	PHYSICAL HAZARDS	TASK NO.
Vapors	1,2,5			Ergonomic	1
Acids/Caustics (laboratory preservatives)	3,5,6			Noise	1, 5
Dermal exposure to contaminated groundwater	3,4,6			Heat Exposure Risk	3,4,5,6
				Cold Exposure Risk	3,4,5,6
				Vehicular Traffic	3

HAZARD DETAILS AND CONTROLS - INCLUDE THOSE ITEMS CHECKED ABOVE		
CHEMICAL HAZARDS		
HAZARD	WHEN/HOW EXPOSURE MAY OCCUR	CRITICAL ACTIONS TO MITIGATE HAZARDS
Known or Expected Human Carcinogens	Anytime during sampling activities, especially when handling groundwater.	Wear gloves when handling potentially contaminated media. Wash hands prior to leaving site and/or eating or drinking.
Dermal Exposure Potential	Anytime during sampling activities, especially when handling groundwater.	Wear gloves when handling potentially contaminated media.

PHYSICAL HAZARD		
HAZARD	**WHEN/HOW EXPOSURE MAY OCCUR**	**CRITICAL ACTIONS TO MITIGATE HAZARDS**
Ergonomic	Installing SSV Vapor Pins. Power tools are heavy and can be awkward.	Make sure you are familiar with power tool use.
Noise	Installing SSV Vapor Pins. Roto hammer and vacuum will be loud. Working near heaving equipment.	Wear hearing protection during SSV installation activities and near excavator/heavy equipment.
Heat Exposure Risk	Workdays may be hot.	Take breaks and monitor hydration. Know the symptoms of heat stress/exhaustion/stroke.
Cold Exposure Risk	Workdays may be cold.	Dress in layers. Take breaks when necessary.
Vehicle Traffic	Some monitoring wells are in the City right-of-way	An engineer-approved traffic control plan will be implemented. Signage will be deployed. Wear high visibility gear.

PPE	TASK NO.	EQUIPMENT	TASK NO.	TOOLS	TASK NO.
☒ Hard Hat	5	☐ Safety Beacons		☒Cell Phone/Satellite	All
☒ Eye Protection	All	☒ First Aid Kit	All	☒Digital Camera	All
☒ Hearing Protection	1,5	☒ Fire Extinguisher	All	☐Radio/Spare Batteries	
☒ Gloves	All	☒ Sunglasses/Sunscreen	All	☐ Flashlight	
☒ High Visibility Vest	All	☐ Drinking Water		☒ Hands Tools	All
☒ Steel Toe Boots	All	☐ Survival Gear		☐ Other	
☐ Face Shield		☒ Eye Wash Kit	All	☐	
☐		☐ Other		☐	

4.5 CHEMICAL HAZARDS

The following table is a summary of the chemicals known to be historically or currently present on the Site and their associated occupational exposure limits (OEL).

4.5.1 Summary of Chemical Hazard Exposure Limits

CHEMICAL COMPOUND/ CAS NO.	PRIMARY FIELD TASK OR ELEVATED RISK ACTIVITY WITH POTENTIAL EXPOSURES	OSHA PERMISIBLE EXPOSURE LIMIT (PEL)	APPLICABLE* STATE OSHA PLAN (PEL)	ACGIH EXPOSURE LIMITS (TLV AND/OR TWA)	NIOSH EXPOSURE LIMITS (REL AND/OR IDLH)
Gasoline	All	None established by OSHA	PEL: 300 ppm STEL: 500 ppm	TWA: 300 ppm STEL: 500 ppm	Not established
Benzene	All	PEL: 1 ppm STEL: 5 ppm	TWA: 1 ppm STEL: 5 ppm	TLV-TWA: 0.5 ppm TLV-STEL: 2.5 ppm	TWA 0.1 ppm STEL= 1 ppm
Toluene	All	PEL: 200 ppm	PEL: 100 ppm STEL: 150 ppm	TLV-TWA: 20 ppm	TWA: 100 ppm
Ethylbenzene	All	PEL: 100 ppm	PEL 100 ppm STEL: 125 ppm	TLV-TWA: 100 ppm TLV-STEL 125 ppm	REL: 100 ppm IDLH: 800 ppm
Xylenes	All	PEL: 100 ppm	PEL: 100 ppm STEL: 150 ppm	STEL: 100 ppm	TWA: 100 ppm
Naphthalene	All	PEL: 10 ppm	TWA: 10 ppm STEL: 15 ppm	TLV-TWA: 10 ppm TLV-STEL: 15 ppm	TWA: 10 ppm
Tetrachloroethene (PCE) (PERC, perchloroethylene)	3,4	TWA 100 ppm C 200 ppm	--	TLV-TWA 25 ppm STEL 100 ppm	TWA 100 ppm C 200 ppm IDLH 150 ppm
Trichloroethene (TCE)	3,4	TWA 100 ppm C 200 ppm	WA L&I PEL: TWA – 50 ppm STEL – 200 ppm	TLV-TWA 10 ppm TLV-STEL 25 ppm	TWA 100 ppm C 200 ppm IDLH 150 ppm TLV TWA 25 ppm STEL 100 ppm

Notes:

*If a State has established a PEL more restrictive than the OSHA limits, then the applicable State limit becomes the legal limit.

IDLH = immediately dangerous to life or health

OSHA = Occupational Safety and Health Administration; ACGIH = American Conference of Governmental Industrial Hygienists

NIOSH = National Institute of Occupational Safety & Health

TWA = time-weighted average (over 8 hours), basis of most exposure limits

PEL = permissible exposure limit, legally enforceable; REL= recommended exposure limit (over 10 hours)

TLV = threshold limit value (over 8 hours)

STEL = short-term exposure limit (15 minutes)

Ceiling (C) – concentration never to be exceeded

mg/m3 = milligrams per cubic meter (dust or particulate conc.); ppm = parts per million (vapor conc.)

4.5.2 Descriptive Summaries of Chemicals Present

The following table summarizes the physical characteristics and symptoms of exposure for the chemicals identified above.

CHEMICAL COMPOUND	PHYSICAL CHARACTERISTICS OF CHEMICAL	ACUTE ☒ AND/OR CHRONIC ☒ SYMPTOMS OF EXPOSURE
Gasoline	Clear liquid with a characteristic odor. Motor fuel, motor spirits, natural gasoline. A complex mixture of volatile hydrocarbons (paraffins, cycloparaffins and aromatics)	Irritation eyes, skin, mucous membrane; dermatitis, headache, lassitude (weakness, exhaustion), blurred vision, dizziness, slurred-speech, confusion, convulsions; chemical pneumonitis. (aspiration liquid)
Benzene	Organic chemical compound that is colorless and highly flammable liquid with a sweet smell, and is partially responsible for the aroma of gasoline	Irritated eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lassitude (weakness, exhaustion); dermatitis; bone marrow depression; (potential occupational carcinogen).
Toluene	Colorless, water-insoluble liquid with the smell associated with paint thinners.	Fatigue, weakness, dizziness, headaches, eye and nose irritation, anxiety.
Ethylbenzene	Highly flammable, colorless liquid with an odor similar to that of gasoline	Eye and mucous membrane irritation, respiratory irritation, dermatitis.
Xylenes	Colorless, flammable, slightly greasy liquid	Nausea, headaches, dizziness, weakness, irritability, confusion, loss of balance, sleepiness, loss of consciousness, death.
Naphthalene	White crystalline solid with a characteristic odor	Destruction of red blood cells, confusion, nausea, diarrhea, blood in urine, jaundice.
Tetrachloroethene (PCE) (PERC, perchloroethylene)	colorless liquid widely used for dry cleaning of fabrics, hence it is sometimes called "dry-cleaning fluid"	Irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; (potential occupational carcinogen)
Trichloroethene (TCE)	clear, colorless non-flammable liquid with a chloroform-like sweet smell	Sleepiness, fatigue, headache, confusion, tissue damage to kidneys, lungs, hearts, nervous tissue damage
Where and how exposure may occur:	Handling potentially contaminated media while logging soil or purging groundwater and while collecting soil and groundwater samples. Through vapors if present in ambient air.	

5.0 Air Monitoring Plan

Air monitoring for personal exposures will ☒ , will not ☐ be implemented as part of this HASP.

An air monitoring plan will be implemented based on the previous presence of VOCs in ambient air above occupational exposure limits. Temporary air venting systems in the Marcus Whitman and the 106 Building will be turned off at least 24-hours prior to sampling. Air monitoring will be conducted in the basement of the Marcus Whitman and the 106 Building prior to beginning the installation of sub-slab soil vapor points, and every 1 hour thereafter. Air monitoring will also be conducted during the decommissioning of the USTs at the Chevron gas station. The breathing zone can be monitoring between field screening of samples.

All deployed instrumentation will be calibrated and field verified according to manufacturer's recommendation and recorded on the attached form (Attachment 5).

The following table is a list of all instrumentation to be used to monitor air parameters while on site. This list will be updated if new chemicals or other airborne hazards are identified, or scope of work changes necessitate enhanced monitoring.

INSTRUMENTATION TO BE USED	CHEMICALS FROM HAZARD ASSESSMENT TO BE DETECTED WITH INSTRUMENT	BRAND, MODEL, CALIBRATION AND ANY ADDITIONAL ATTACHMENTS
PID (10.6 eV)	VOCs	MiniRAE 3000+, Butane

6.0 Other Personal Protective Equipment

The appropriate PPE will be selected on a daily or task-specific basis. These PPE selections will be communicated to field personnel during the pre-work briefing before the start of Site operations.

GLOVES	CLOTHING
☒ Nitrile ☐ Latex ☐ Liners ☒ Cold Weather	☒ High-vis Vest ☐ Tyvek ☐ Saranex ☐ Snake Chaps
☐ Leather ☒ General Construction Gloves ☐ Cut resistant/Kevlar ☐ Rubber ☐ Other	☐ Fire Retardant Clothing ☒ Long Pants ☒ Rain gear ☐ Long Sleeve Shirt ☐ Other
HEAD	**EYE & FACE**
☒ Hard Hat ☐ Climbing Helmut ☐ Sunhat	☒ Safety Glasses ☐ Face Shield ☐ Goggles ☐ Sunglasses
HEARING PROTECTION	**FEET**
☒ Ear Plugs ☐ Earmuffs ☐ Flanges	☒ Safety Toe Work Boot/Shoe ☐ Safety Toe Rubber Boot ☐ Hiking Boot ☐ Hip Wader ☐ Chest Wader

PERSONAL PROTECTIVE EQUIPMENT INSPECTIONS

PPE ensemble shall be selected daily or before each separate task to provide protection against known or anticipated hazards. To obtain maximum performance from PPE, site personnel shall be trained in the proper use and inspection of PPE.

7.0 Site Control Plan

7.1 TRAFFIC OR VEHICLE ACCESS CONTROL PLANS

Will vehicles, heavy equipment and/or pedestrians traffic be controlled on this site? Yes ☒ No ☐.

Traffic cones and/or caution tapes will be used to cordon off any working areas (sub-slab soil vapor point construction) to restrict public vehicles, heavy equipment and pedestrian access.

A Traffic Control Plan, approved by the Project Manager and filed with the City of Walla Walla, will need to be implemented for all groundwater sampling activities in the city right-of-way.

7.2 SITE WORK ZONES

Work zones will be considered to be within 50 feet of the backhoe, or other equipment. Employees should work upwind of the machinery if possible. To the extent practicable, use the buddy system. Do not approach heavy equipment unless you are sure the operator sees you and has indicated it is safe to approach.

Exclusion zones will be established within approximately 10 to 15 feet around each working area. Only persons with the appropriate training will enter this perimeter while work is being conducted in these exclusion zones.

In addition, an exclusion zone, contamination reduction zone and support zone should be established when the project involves significant chemical contamination and potential of for exposure to contaminants to on-site personnel. Passage through zones or out of the Site should be consistent with the level of decontamination required.

Decontamination, at a minimum, should include removing and disposing of PPE when exiting the exclusion zone and washing your hands. Decontamination may also consist of removing outer protective gloves and washing soiled boots and gloves using bucket and brush provided on site in the contamination reduction zone. If needed, inner gloves will then be removed, and hands and face will be washed in either a portable wash station or a bathroom facility at the Site. Employees will perform decontamination procedures and wash before eating, drinking or leaving the Site.

The contamination reduction zone, at a minimum, should consist of garbage bags into which used PPE should be disposed. Personnel should wash hands before eating or leaving the reduction zone.

Drinking, eating, smoking and using phone are not allowed in the Exclusion and Reduction Zones.

A site control / site layout map was included in Section 2.2. Yes ☐ or No ☒.

7.2.1 Work Zone Parameters and Decontamination Procedures

Work zones will be implemented during UST Decommissioning and excavation activities.

ZONE	SIZE/LOCATION OF ZONE	STEPS REQUIRED TO ENTER	STEPS REQUIRED TO EXIT
Exclusion	15 feet around excavation equipment (during UST Removal)	1. Level D PPE and nitrile gloves 2. Eye contact with operator	1. Discard nitrile gloves, make sure boots are clean
Reduction	Trash bags	1. Throw away disposable PPE and sampling equipment	1. Wash hands
Support Zone	Site area more than 15 feet from excavation	1. Notify SSO	1. Notify SSO

Equipment or tools operated or maintained by GeoEngineers on a contaminated Site may need to undergo decontamination procedures as they travel through Site work zones. The following table summarizes the steps needed to safely move these items through zones.

WORK ZONE PARAMETERS FOR EQUIPMENT OR TOOLS

ZONE	STEPS REQUIRED TO ENTER	STEPS REQUIRED TO EXIT
Exclusion		Knock large debris off equipment near the excavation or stockpile
Reduction	Large debris has been removed from equipment	Decontaminate equipment per instructions in the Work Plan
Support Zone		

7.3 BUDDY SYSTEM

Personnel on site should use the buddy system (pairs), particularly whenever communication is restricted. If only one GeoEngineers' employee is on site, a buddy system can be arranged with subcontractor/ contractor personnel.

7.4 SITE COMMUNICATION PLAN

COMMUNICATION EQUIPMENT	LOCATION USED	PHONE NO./CHANNELS
Cell phones	Site	See contact information (Section 1.0)

Positive communications (within sight and hearing distance or via radio) should be maintained between workers on site, with the pair remaining in proximity to assist each other in case of emergencies. The field team should prearrange other emergency signals for communication when voice communication becomes impaired (including cases of dropped cell phone or radio breakdown) and an agreed upon location for an emergency assembly area.

All personnel from GeoEngineers and subcontractor(s) should be made aware of safety features during safety tailgate meeting (location of fire extinguishers, cell phone numbers, etc.).

On-site personnel will be visible to the operator at all times and will remain out of the swing and/or direction of the equipment apparatus (excavator or backhoe) only when they are certain the operator has indicated it is safe to do so. ("Show My Hands Technique" or another agreed sign language).

7.5 INVESTIGATION-DERIVED WASTE (IDW) DISPOSAL OR STORAGE

IDW TYPE	ACTION
PPE	☐ On site, pending analysis and further action
	☐ Secured (list method):
	☒ Other (describe destination, responsible parties): placed in black contractor bags and disposed in trash receptacle

7.6 SPILL CONTAINMENT PLANS

Will spill containment contingencies be needed on this project? Yes ☐ or No ☒

7.7 SAMPLING, MANAGING AND HANDLING DRUMS AND CONTAINERS

There will be drums or sealed containers on site during this project? Yes ☒ or No ☐

Drums and containers used during the investigation and/or cleanup activities shall meet the appropriate Department of Transportation (DOT), OSHA, U.S. Environmental Protection Agency (EPA) and applicable state regulations for the waste that they contain. Site operations shall be organized to minimize the amount of drum or container on-site temporary storage and movement. When practicable, drums and containers shall be inspected, and their integrity shall be ensured before they are moved. Unlabeled drums and containers shall be considered to contain hazardous substances and handled accordingly until the contents are positively identified and labeled. Before drums or containers are moved, all employees involved in the transfer operation shall be warned of the potential hazards associated with the contents. Personnel involved with the coordination of the drum or container's off-site disposal shall ensure that the off-site disposal facility is approved by the GeoEngineers' PM and the Client.

Drums or containers and suitable quantities of proper absorbent shall be kept available and used where spills, leaks or rupturing may occur. Where major spills may occur, a spill containment program shall be implemented to contain and isolate the entire volume of the hazardous substance being transferred.

Fire extinguishing equipment shall be on hand and ready for use to control incipient fires.

7.8 SANITATION

Field staff and subcontractors will have access to sanitation facilities on Site in the Wine Country Mercantile store, 106 Building, or the lobby of the Marcus Whitman hotel.

7.9 LIGHTING

Work is anticipated to be performed during daylight hours. Work may extend slightly into the evening provided adequate lighting is used (e.g., portable flood lights).

8.0 Emergency Response

For each potential site emergency indicate what site-specific procedures you will implement to address the occurrence.

EMERGENCY EVENT	RESPONSE PLAN
Medical	Get injured personnel to the hospital. If life-threatening, call 911.

8.1 GENERAL RESPONSE GUIDANCE

- If any member of the field crew experiences any adverse exposure symptoms while on site or an injury, the entire field crew should immediately halt work and act according to the instructions provided by the SSO.
- The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated should result in the evacuation of the field team, contact of the PM, and reevaluation of the hazard and the level of protection required.
- As soon as feasible, notify GeoEngineers' PM and follow the GeoEngineers' Incident Reporting and Investigation Program, and Health and Safety Injury Management Procedures Flowchart (see copy attached to this HASP).
- If an accident occurs, the SSO and the injured person are to complete, within 24 hours, an Incident Report (Form 3) for submittal to the PM, the HSM and Human Resources (HR). The PM should ensure that follow-up action is taken to correct the situation that caused the accident or exposure.

Hospital Name and Address: **Providence St. Mary Medical Center**
401 W. Poplar Street, Walla Walla, Washington 99362

Phone Numbers (Hospital ER): 509.897.3320

Distance: 0.6 miles

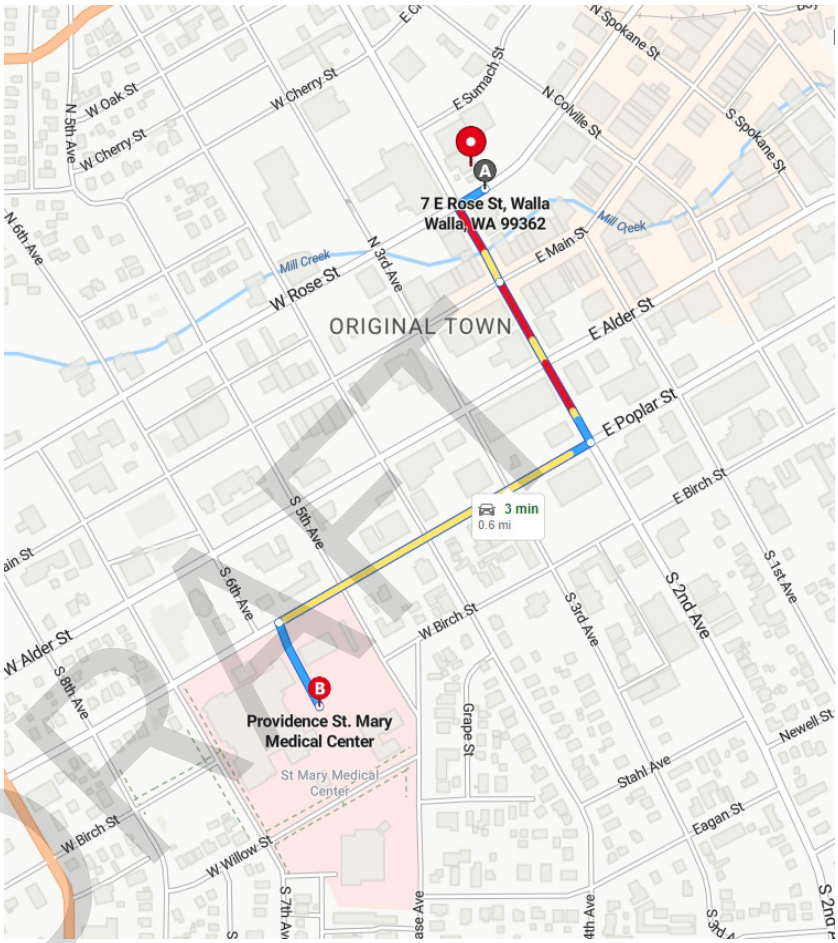
Route to Hospital:

From the Site, head south on S 2nd Avenue for 0.3 miles.

Turn Right onto W. Poplar St. and continue for 0.3 miles.

Turn left into the parking lot.

Map to Hospital:



Ambulance: 9-1-1

Poison Control: 800.732.6985

Police: 9-1-1

Fire: 9-1-1

Location of Nearest Telephone: Cell phones are carried by field personnel. Check connectivity at Site location.

Nearest Fire Extinguisher: Located in the GeoEngineers vehicle on site.

Nearest First-Aid Kit: Located in the GeoEngineers vehicle on site.

Standard Emergency Procedures

Get help

- Send another worker to phone 9-1-1 (if necessary)
- As soon as feasible, notify the GeoEngineers' PM and/or GeoEngineers HSM and follow the GeoEngineers' Incident Reporting and Investigation Program, and Health and Safety Injury Management Procedures Flowchart (see copy attached to this HASP).

Reduce risk to injured person

- Turn off equipment.
- Move person from injury location to safer area (if in life-threatening situation only).
- Keep person warm.
- Perform CPR (if necessary).

Transport injured person to medical treatment facility (if necessary)

- By ambulance (if necessary) or GeoEngineers' vehicle.
- Stay with person at medical facility.
- Keep GeoEngineers' PM apprised of situation and notify HR Manager of situation.
- Accidents involving injuries requiring professional medical attention must be reported within 1 hour of occurrence to the Safety Officer.
- First aid cases not involving professional medical attention must be reported within 24 hours after occurrence.
- Incidents involving property damage must be reported within 24 hours of occurrence.
- After hours illnesses must be reported within 24 hours (i.e., flu, rashes).

9.0 Documentation to Be Completed for HAZWOPER Projects

- PM Checklist
- Daily Field Log
- FORM 1—Health and Safety Pre-Entry Briefing and Acknowledgment of Site Health and Safety Plan for use by employees, subcontractors and visitors
- FORM 2—Safety Meeting Record
- FORM 3—Near Miss Form or Incident Report Form

10.0 Approvals - HASP for Stillwater Holdings Chevron Site

NOTE: THIS HASP IS NOT CONSIDERED APPROVED OR ACTIVE UNTIL AT LEAST LINES 1 THROUGH 2 HAVE BEEN SIGNED by the designated personnel. For HASPs with elevated risk tasks including but not limited to confined spaces, working over water, hazardous atmospheres, chemical hazards, extreme weather conditions, fall protection/rope access, or respirator usage the Health and Safety Team must review and sign lines 3 and 4. The Health and Safety Team may review other JHAs/HASPs as they have time upon request and will sign lines 3 and/or 4.

1. Plan Prepared by

Signature	Date

2. Project Manager Plan Approval

PM Signature	Date

3. Health and Safety Specialist or Consultant

HSS or HSC Signature	Date

4. Health and Safety Manager

HSM Signature	Date

5. GeoEngineers Laboratory Manager

GLM Signature	Date

Attachments:

Form 1: HEALTH AND SAFETY PRE-ENTRY BRIEFING AND ACKNOWLEDGEMENT

Form 2: SITE SAFETY MEETING RECORD (Daily or weekly)

Form 3: NEAR MISS OR INCIDENT REPORT FORM

Form 1
Health and Safety Pre-Entry Briefing and Acknowledgement

FOR GEOENGINEERS' EMPLOYEES, SUBCONTRACTORS AND VISITORS
Stillwater Holdings Chevron Site, 7 East Rose Street, Walla Walla, Washington.
File No. 0504-202-01

Inform GeoEngineers employees, contractors and subcontractors or their representatives about:

- The nature, level and degree of exposure to hazardous substances and other hazards they are likely to encounter;
- All Site-related emergency response procedures; and
- Any identified potential fire, explosion, health, safety or other hazards.

Conduct safety pre-entry briefing meeting with GeoEngineers on-site employees, contractors and subcontractors, or their representatives as follows:

- A pre-entry briefing before any Site activity is started.
- Additional briefings, as needed, to make sure that the Site-specific HASP is followed, especially prior to starting new activities and/or when new on-site personnel is planning to work at the site.
- Make sure all employees (GeoEngineers, contractors, subcontractors and equipment/material delivery companies) working on the Site are informed of any risks identified and trained on how to protect themselves and other workers against the Site hazards and risks.
- Update all information to reflect current Site activities and hazards.
- All personnel participating in this project must receive "initial" health and safety orientation. Thereafter, brief daily or weekly tailgate safety meetings will be held as deemed necessary by the Site Safety Officer.
- The orientation and the tailgate safety meetings shall include a discussion of emergency response, Site communications and Site hazards associated with the planned activities and activities performed concurrently by others at the Site in the vicinity of the working areas.
- Have all personnel attending the pre-entry briefing meeting sign Form 2 of the HASP.

(All of GeoEngineers' Site workers shall complete this Form 1, which should remain attached to the HASP and be filed with other project documentation). Please be advised that this Site-specific HASP is intended for use by GeoEngineers employees only. Nothing herein shall be construed as granting rights to GeoEngineers' subcontractors or any other contractors working on this Site to use or legally rely on this HASP. GeoEngineers specifically disclaims any responsibility for the health and safety of any person not employed by the company.

I hereby verify that a copy of the current HASP has been provided by GeoEngineers, Inc., for my review and personal use. I have read the document completely and acknowledge an understanding of the safety procedures and protocol for my responsibilities on site. I agree to comply with all required specified safety regulations and procedures.

Print Name	Company	Signature	Date

Form 1 (continued)
Health and Safety Pre-Entry Briefing and Acknowledgement

Stillwater Holdings Chevron Site, 7 East Rose Street, Walla Walla, Washington.
File No. 0504-202-01

Print Name	Company	Signature	Date

Form 2
Site Safety Meeting Record (Daily or Weekly)

Stillwater Holdings Chevron Site, 7 East Rose Street, Walla Walla, Washington.
File No. 0504-202-01

Site Safety meetings should include a discussion of emergency response, site communications and site hazards associated with the planned activities. Site safety meeting should be completed prior implementing site activities at a minimum in the beginning of each day and/or at a minimum weekly for similar activities performed few consecutive days.

- Use in conjunction with the HASP Hazard Review to help identify hazards with the planned activities and activities performed concurrently by others at the Site in the vicinity of the working areas.

Date: _____ **Site Safety Officer (SSO):** _____

Topics: _____

_____

Attendees:

Print Name	Company	Signature

Form 3
Near Miss or Incident Report Form

Stillwater Holdings Chevron Site, 7 East Rose Street, Walla Walla, Washington.
File No. 0504-202-01

Electronic Version Available at: https://safety.geoengineers.com/nearmisses/new or https://safety.geoengineers.com/incidents/new

NEAR MISS

Near Miss Date

Reported By

Location

Location Type

Incident Details

How did the incident happen?

What led to the Near Miss occurring? (Contributing factors, constraints, the setting, behaviors, etc.)

What is the most important thing you learned from this Near Miss that others could learn from?

INCIDENT REPORT

Basic Information

Incident Date

Reported By

Location

Location Type

Business Unit

Office Information

Project Manager

Group Leader

Office Manager

Other Emails

Incident Type (more than one OK)

_____ Injury

_____ Vehicle

_____ Utility Strike

_____ Damaged Property

_____ Stolen Equipment

Incident Details

What happened? Describe how the incident occurred. Where the employee was located at the time of the incident.

Project Number (if project related)

Date & Time employee started working

Date & Time supervisor notified

Supervisor Name

Notified Project Manager/PA ___ Yes ___ No

Client Notified ___ Yes ___ No

Supervisor Comments (Optional. These are usually filled out later.)

Supervisor Comments Date

Project Manager Comments (Optional. These are usually filled out later.)

Project Manager Comments Date

Health and Safety Comments (Optional. These are usually filled out later.)

Health & Safety Rep Name

Health & Safety Comments Date

Corrective Action (Optional. These are usually filled out later.)