All Phase Environmental, Inc.

Limited Phase II Investigation Work Plan Revised

Goleta Train Depot
27 South La Patera Lane
Goleta, California, 93117

December 19, 2023

Prepared for:

City of Goleta
City Hall - 130 Cremona Drive, Suite B
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Prepared by:

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APEI Project No. 14242.00

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LIST OF APPENDIX SECTIONS

1.0 Summary

At the request of the City of Goleta, All Phase Environmental, Inc. (APEI) have been asked to prepare a work plan for a limited Phase II investigation of the site located at 27 South La Patera Lane, Goleta, California 93117, hereinafter referred to as the "subject property."

This work plan contains a summary of the history of the subject property, the goals of the investigation, the work procedures to be carried out, the reasons and locations for the proposed borings, and a summary of the Ground Penetrating Radar (GPR) work already completed in the area of the reportedly removed 7,000 gallon gasoline UST.

2.0 Subject Property Description

The subject property is a lot of approximately 2.48-acres, and the street address is 27 South Patera Lane, in the City of Goleta, in the County of Santa Barbara, California, 93117. The subject property is composed of one parcel with APN number 073-050-033. The subject property is located on the west and south side of South Patera Lane. South Patera Lane delimits the subject property to the east and to the north where it is being used as the Goleta Amtrack Train Depot. Industrial sites delimit the subject property to the south and west.

The subject property is developed with a one-story office and industrial warehouse structure. The building is approximately 30,000-square feet and was constructed in approximately 1967. There are office spaces along the south side of the building with a small mezzanine office and storage space in the southwest corner of the building. The remainder of the building is composed of two open warehouse areas. On the west end of the building is a grade level warehouse area. A loading dock is located on the east side of the warehouse and a ramp and receiving dock are situated in the northwest corner of the building. Outside the southwest corner of the building are a diesel generator and an 1,800-gallon diesel UST that remains operational. At the time of the investigation, the building was partially occupied by a tenant using it for intermittent classes, office space, and warehouse space.

Concrete paving covers the west end of the parcel and the land east of the east loading dock. An asphalt paved parking lot covers the remainder of the land south and east of the office area of the building. There are landscaped planters along the east border and strips of landscaped grounds bordering the east loading dock. The subject property can be accessed via a driveway from South La Patera to the east, and roll-up doors in the warehouse open to the Union Pacific Railroad to the north.

3.0 Summary of Historical Uses

Tenant History

The following is a summary of historical uses of the subject property obtained from a Phase I ESA previously performed by APEI in 2016:

- Orchards from prior to 1943 through 1947.
- Cleared of orchards between 1947 and 1967.
- Developed with the existing subject property building in 1967.
- Occupied by Sears from 1967 through 1988, most likely used as offices and warehouse space.
- Portions of the subject property were occupied by several delivery and transportation firms from at least 1980 through 1992. Durham Transportation was one of these tenants who stored small quantities of hazardous substances and petroleum products. Durham Transportation reportedly performed bus repairs on the subject property.
- Raytheon occupied the subject property from 1982 through August of 1990, and most likely used the building for offices and warehouse space.
- In 2018, the City of Goleta acquired the subject property for the purposes of constructing the Goleta Train Depot.
- The owner prior to acquisition by the City of Goleta in 2018 was Direct Relief International, which has occupied portions or all of the subject property since at least 1999.

Environmental History

The following is a summary of significant hazardous substances and petroleum product storage and uses on the subject property (APEI, 2016):

- Organochlorine pesticides may have been used when the subject property was occupied by orchards from prior to 1943 through 1947.
- Sears installed the former approximately 7,500-gallon diesel UST in 1967. Documents reviewed indicated that the associated piping and dispenser were located directly over the tank.
- Under permit and regulatory oversight, the tank, associated piping, and dispenser were removed from the subject property on April 12, 1990. Some visually stained soil was identified. The Santa Barbara County, Environmental Health Services (EHS) and Santa Barbara County Fire were present during the tank removal. The tank was reported to be in good condition, no groundwater was encountered but some discolored soils were noted at the midpoint of the tank. Soil samples were taken from the bottom and sidewall of the excavation and from stockpiled soils. Soil samples were analyzed for total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylene (BTEX), and total lead. Total lead was reported to be at background levels. The sidewall results for fuel constituents were below laboratory detection levels. The bottom sample had detectable levels of TPH at 2.1 parts per million (mg/kg or ppm) and trace BTEX concentrations. All results were reported to be below cleanup levels. Samples of excavated soils contained up to 11 ppm gasoline and 110 ppm diesel. No further action was recommended. Supporting documents indicated the soil and UST had been taken offsite for disposal.
- Documents reviewed indicated that the 7,500 gallon UST may have been used for diesel and gasoline.
- Direct Relief International installed the existing diesel generator and associated 1,800 gallon diesel UST in 2008.
- The remaining diesel UST is a double walled fiberglass tank with an outer reinforced steel jacket and double walled piping equipped with an interstitial Veeder Root monitoring system.
- During a 2016 ESA performed on the subject property for due diligence purposes prior to purchase, two unlabeled 55-gallon drums of an unknown solid were observed in the northwest corner of the subject property. These have since been removed.
- A 55-gallon drum of unidentified contents remains next to the diesel generator. This drum was labeled as hazardous waste.
- A waste oil AST and a clarifier were observed on the north adjacent site on the west end of the subject property that remain there as of the publication of this work plan.

4.0 Geology

The subject property is located in the Goleta Valley, a low-lying, gently southwest sloping coastal plain. The Goleta Valley is bounded to the north by the Santa Ynez Mountains, to the south and west by the Pacific Ocean, and to the east by the Mesa Hills and relatively elevated alluvial terraces. The surrounding highlands are composed of steeply south sloped consolidated sedimentary rocks of Tertiary age. These Tertiary age materials are interpreted to be present at depths of approximately 500-feet below the ground surface (Olson, 1982). Folded consolidated bedrock is unconformably overlain by almost flat-lying, unconsolidated sediments, including greater than approximately 430 feet of the Plio-Pleistocene Santa Barbara Formation, and approximately 70-feet of Recent alluvial deposits. The subject property is underlain by these alluvial deposits.

According to the Web Soil Survey by the National Resources Conservation Service dated September 3, 2015, the primary soil type at the subject property is Milpitas-Positas fine sandy loams. The landform setting for this soil is described as terraces with a slope of 2 to 9 percent. This soil is moderately well drained and the depth to the water table is more than 80-inches.

5.0 Hydrogeology

Unconfined groundwater exists within the younger alluvium in the basin but the vast majority of the groundwater is present in a confined or semi-confined condition. Most wells within the basin derive groundwater from the Santa Barbara Formation (Upson, 1951). Subsurface data was reviewed from investigations on the west adjacent site, Bardex Corporation. In a report, dated January 16, 2015, by The Source Group, Inc. entitled “Second Half 2014 Groundwater Monitoring Report” groundwater was reported to be at a depth of approximately 14.89 to 36.62 feet below the top of the well casing. Because these wells are located down a slope of at least ten-feet, groundwater below the subject property is expected to be deeper. The groundwater flow direction has historically been reported as variable, ranging in direction from westerly to southerly.

A geotechnical report by ENGIO in 2020, determined that the underlying soils were generally impermeable.

6.0 Geophysical Investigation Findings

The purpose of the investigation was to locate detectable utilities in the vicinity of the advancement of 10 proposed borings. The work also included a search for potential subsurface structures associated with the former 6,000 to 7,500-gallon Underground Storage Tank (UST) and pump island formerly located adjacent to the southern property boundary. Lastly, the investigation was to investigate three (3) areas roughly 25 feet by 25 feet in size. The three areas were to be searched for traces of subsurface structures associated with possible sumps and/or drain systems inside the subject property building.

All 10 borings were cleared of identifiable utilities.

The three areas investigated inside the subject property building did not identify any subsurface structures. One floor drain near the southeast corner of the large warehouse was deemed to have not been an industrial wastewater drain but was instead, a sanitary drain formerly associated with the adjacent bathrooms.

The Ground Penetrating Radar (GPR) investigation identified two anomalies that could not be attributed to above ground cultural features and/or detected utilities. A search of the area depicted on regulatory record drawings showed undisturbed soil. It was deemed that these hand-drawn maps were not accurate. Searching further to the west, an area was identified where there had been significant disturbance to the soil below the asphalt. This was then determined to likely have been the location of the former UST. In addition to disturbed soil, two anomalies were identified.

Anomaly A was approximately 26-feet by 17-feet in size and at a depth of approximately 3 to 6 feet below the surface. Using GPR it was revealed that it was possibly reinforced concrete mesh beneath the asphalt in an area of disturbed soil. The presence of reinforced concrete mesh is only an estimate, it is possible that the anomaly is some other object. It is also possible that something else lies beneath the reinforced concrete mesh/object that was not detected which could be a UST.

Anomaly B was approximately 31-feet by 12-feet in size and at a depth of approximately 3 to 6 feet below the surface. Using GPR it was revealed that it was possibly reinforced concrete mesh beneath the asphalt with an additional uneven layered reflection deeper in the profiles in an area of disturbed soil. The presence of reinforced concrete mesh is only an estimate, it is possible that the anomaly is some other object. Readings interpreted from deeper analysis indicated that the area below the reinforced concrete mesh/object was deemed not typical of an excavation or a UST.

Because Spectrum could not 100% confirm that USTs were not present, they recommended further investigation in these areas to determine the sources. APEI agrees that these areas should be investigated by excavation at some time in the future. However, if no contamination is identified in borings B1, B2, or B3, then it is likely that the anomalies are not USTs, or at least have not led to significant subsurface impact. It would then be advised that this area be excavated during the redevelopment and grading of the subject property.

7.0 Boring Locations, Strategies, and Descriptions

Figure 1 in Appendix A contains a drawing illustrating the proposed boring locations and Appendix C contains photographs of the locations.

Boring Locations B1, B2, and B3
These three borings are intended to identify possible releases from the former 7,500 gallon diesel/gasoline UST. The locations were selected using the data from the GPR report. All three borings are situated around the identified anomalies since drilling into the anomalies would likely result in refusal. B1 will be advanced to a terminal depth of 36 feet below ground surface (bgs) or refusal and is intended to investigate possible releases from the former underground tank, associated piping, or dispensers not previously identified during the tank removal. Borings B2 and B3 will be advanced to a terminal depth of 10 feet below ground surface (bgs) or refusal and are intended to investigate for releases from the associated piping or dispensers not previously identified during the tank removal.

Boring Location B4
B4 is intended to identify possible undetected releases from the existing 1,800 gallon diesel UST. It will be advanced to a terminal depth of 36 feet bgs or refusal. The location was selected to be nearest to the tank and associated piping without being located in the tank excavation (which would be filled with pea gravel).

Boring Location B5
B5 is intended to identify possible undetected releases that may have migrated to this corner where there is a stormwater collection drain for the west side of the subject property. It is postulated that Durham Transportation performed bus repairs on the west side of the subject property and any spills in this area would migrate to this corner. In addition, two unlabeled 55 gallon drums of an unknown solid were previously observed in this corner. B5 will be advanced to a terminal depth of 5 feet bgs or refusal.

Boring Location B6
B6 is intended to identify possible undetected releases that may have migrated to this area from stored materials, improper disposal into solid waste dumpsters formerly located in this area, and from the north adjacent waste oil AST and clarifier. B6 will be advanced to a terminal depth of 5 feet bgs or refusal.

Boring Location B7
B7 is intended to identify possible undetected releases that may have migrated to this area from the east loading dock and from a drain/sump located in this corner. B7 will be advanced to a terminal depth of 5 feet bgs or refusal.

Boring Location B8
B8 is intended to identify possible undetected releases that may have migrated to this area from former work performed in the west end warehouse space. This location was selected because it was the lowest elevation in this area and there were no other conduits to the subsurface identified during the visual and GPR survey. It is not known what work may have been performed in this area of the warehouse but if vehicle repairs were being performed by Durham Transportation, it is likely that they would have used this area of the warehouse. B8 will be advanced to a terminal depth of 5 feet bgs or refusal.

Boring Locations B9 and B10
B9 and B10 are intended to identify possible undetected releases that may have occurred from former onsite operations in the main area of the subject property warehouse. The visual and GPR survey did not identify any subsurface anomalies worthy of testing. There were no areas in the warehouse where trenching or signs of prior uses, other than warehousing, were evident. Therefore, if there had been a release in the main warehouse, it would have likely been due to spillage from stored materials in the building. Boring B9 was located next to what looks like a boring from a prior investigation. Boring B10 was located next to a rack that had an eyewash station, typical of an area where hazardous materials would have been stored. B9 and B10 will be advanced to a terminal depth of 15 feet bgs or refusal.

8.0 Sampling Depths, Media, and Laboratory Analysis

B1
- Advanced to a terminal depth of 36 feet bgs or refusal.
- Soil samples will be taken at depths of 5', 10', 15', 20', 25', 36'. These will be analyzed for TPH-G.
- Soil vapor probes will be installed at depths of 5' and at the terminal depth or shallower if groundwater is encountered. Soil Vapor samples will be analyzed at 5' and terminal depth for VOCs.
- A groundwater grab sample will be collected if available at less than 36 feet bgs and analyzed for VOCs.

B2 and B3
- Advanced to a terminal depth of 10 feet bgs or refusal.
- Soil samples will be taken at depths of 5' and 10'. These will be analyzed for TPH-G.
- Soil vapor probes will be installed at depths of 5' and 10'. Soil Vapor samples will be analyzed at both depths for VOCs.

B4
- Advanced to a terminal depth of 36 feet bgs or refusal.
- Soil samples will be taken at depths of 5', 10', 15', 20', 25', 36'. These will be analyzed for TPH-D/MO.
- A groundwater grab sample will be collected if available at less than 36 feet bgs and analyzed for TPH-D/MO.

B5
- Advanced to a terminal depth of 5 feet bgs or refusal.
- Soil samples will be taken at 5' and analyzed for TPH-G, TPH-D/MO, organochlorine pesticides, and Title 22 Metals (CAM15).
- A soil vapor probe will be installed at 5' and analyzed for VOCs and TPH-G.

B6
- Advanced to a terminal depth of 5 feet bgs or refusal.
- Soil samples will be taken at 5' and analyzed for TPH-Gallon and TPH-D/MO.
- A soil vapor probe will be installed at 5' and analyzed for VOCs and TPH-G.

B7
- Advanced to a terminal depth of 5 feet bgs or refusal.
- Soil samples will be taken at 5' and analyzed for TPH-Gallon and TPH-D/MO.
- A soil vapor probe will be installed at 5' and analyzed for VOCs and TPH-G.

B8
- Advanced to a terminal depth of 5 feet bgs or refusal.
- Soil samples will be taken at 5' and analyzed for TPH-Gallon and TPH-D/MO.
- A soil vapor probe will be installed at 5' and analyzed for VOCs and TPH-G.

B9 and B10
- Advanced to a terminal depth of 15 feet bgs or refusal.
- Soil samples will be taken at depths of 5' and 15'. The 5' samples will be analyzed for TPH-G, TPH-D/MO, and Title 22 Metals (CAM15). Soil samples at 15' will be preserved for possible additional analysis pending the results from the 5' samples.
- Soil vapor probes will be installed at depths of 5' and 15'. Soil Vapor samples will be analyzed at both depths for VOCs, TPH-G, and methane. One duplicate soil vapor sample will be collected and analyzed for VOCs, TPH-G, and methane.

9.0 Soil Sampling Protocol

Soil borings will be advanced using a direct-push sampling rig. The direct-push system is driven by a hydraulic hammer and is equipped with a dual-tube core barrel. As the hollow dual-tube core barrel is driven downward, soil is pushed into a 4-foot long acetate sleeve that is located within the inner core barrel. The inner core barrel is lifted up and the acetate sleeve is removed, and another empty sleeve is inserted into the inner core barrel. The outer core barrel is temporarily left in place to provide bore-hole stability. This procedure is repeated until the desired depth is reached.

At select depths, soil samples are collected within the acetate sleeve and a six-inch long portion of the sleeve is isolated and cut from the 4-foot long sleeve. That sample is immediately capped and preserved with Teflon tape and end caps and chilled on ice in a cooler pending delivery to a State certified laboratory. When soil samples are slated for analysis of VOCs and TPHg, an encore device will be used to extract approximately 5-grams of soil from the 6-inch sample sleeve (EPA Method 5035).

During drilling, a photo-ionization detector will be used to screen all soil samples collected from the borings for VOCs and for worker health and safety concerns. The PID will be calibrated with hexane (100 ppmV) in the field in the morning prior to the commencement of any field activities. The identified lithology (Unified Soil Classification System) along with the PID readings will be recorded on a boring log.

10.0 Soil Vapor Probe Installation and Sampling Protocol

Several borings will receive soil vapor probes that are used to measure and specify the type of VOCs present in soil gas. During drilling, at the desired depth, a 2-inch long vapor probe fitted with ¼-inch ID tubing will be placed within the outer core barrel and the barrel will be lifted out of the bore hole. A 1-foot thick sand pack will be placed above and below the probe followed by 6-inches of dry bentonite and then hydrated bentonite to the near surface. If multiple probes are placed in the same borehole, the same installation procedure will be used, but the deepest probe will be distinguished from the shallow by slightly longer tubing and labeling. The probes will be allowed to equilibrate for a minimum of 4-hours prior to sampling, and the probes will be purged and sampled in general accordance with the DTSC vapor intrusion guidance specifications (DTSC's Supplemental Guidance, Screening and Evaluating Vapor Intrusion, February 2020).

Each probe head will be attached to the sampling train assembly of Teflon tubing, valves, and fittings and connected to a purge pump. The pump will be used to evacuate the sealed system using an applied maximum vacuum of 100 inches of water column (in. WC). The vacuum on each probe will be monitored for 90 seconds with the sampling train system sealed. After the shut-in test is validated, the sampling train will be leak tested. Liquid isopropyl alcohol will be applied to a cloth and placed around all connections in the sampling train to evaluate whether the system is sealed from ambient air leaks. A detection of 10 times the reporting limit of this compound may suggest that ambient air leakage has occurred.

Each probe will be purged prior to sampling, and the purpose of purging is to remove stagnant air from the vapor sampling train to ensure representative samples are obtained. The probes will be purged of three purge volumes of soil gas (a purge volume includes the volume of tubing plus the void space of the sand pack around the probe) using an adjustable vacuum pump. The purge rate will be set at 200 mL/minute.

After purging three volumes through the system, soil gas samples will be collected in glass syringes from each probe by a technician operating a mobile lab from A&R Laboratories. Each sample will be analyzed for TPHg (EPA Method 8015M, methane (EPA Method 8015M), and/or VOCs (EPA Method 8260B). A greater volume of air from the sample will be used for the analysis to achieve detection limits for each compound comparable to the EPA Method TO-15 test, which should meet residential standards.

11.0 Groundwater Grab Sampling Protocol

During drilling, if groundwater is encountered, the inner rod will be extracted and fitted with a 4-foot long stainless steel screen at the end. This screen will be driven down into the saturated section in an attempt to retrieve a water sample. A 3/8-inch ID Teflon tube will be placed through the core barrel to the total depth. A removable bailer with a check valve will be attached to the bottom of the tubing, and the tube will be manually pumped to collect water into the tube. Two 40-ml vials, preserved with HCL, will be used to collect the water, and each vial will be labeled, sealed with an end cap, and chilled in a cooler pending shipment to a State certified laboratory for analysis.

12.0 Soil Sampling Drill Rigs

The truck mounted direct push (Geoprobe) rig that is planned to be used to perform the work will not be able to obtain the samples inside the warehouse space of the subject property building. The proximity of the shelving installed in the warehouse is too close for this rig to reach the sample locations. A mobile Geoprobe unit will need to be brought to the subject property in order to advance these borings. There is an additional fee of approximately $2,000.00 for labor and equipment to make this possible.

13.0 Cultural Resources Observation

APEI is prepared to have a Native American representative onsite to perform cultural resources observation during subsurface work. However, due to the following considerations, it is advised that this service be used during other subsurface disturbances that will be more impactful to the subject property:

- The total of all ten soil borings being advanced on the subject property will have a combined diameter of less than one square foot.
- When the subject property was developed, it is likely that the grading practice included the disturbance and recompaction of at least the top five feet of the entire subject property (deeper in areas below the building). The areas most likely to contain artifacts near the surface would have been extensively disturbed and damaged from past grading activities.
- The Professional Geologist will be inspecting the soil removed during sampling operations. If any artifacts are identified, work will stop and the Native American representative will be contacted for inspection.

14.0 References

Phase I Environmental Site Assessment, Industrial Property, 27 South Patera Lane, Goleta, California, 93117, All Phase Environmental, Inc., September 7, 2016.

Surface and Subsurface Geology of the Santa Barbara-Goleta Metropolitan Area, Santa Barbara County, California, Daniel J. Olson, October 1982.

Web Soil Survey, National Resources Conservation Service, September 3, 2015, http://websoilsurvey.nrcs.usda.gov/Appendix.

Second Half 2014 Groundwater Monitoring Report, The Source Group, Inc., January 16, 2015.

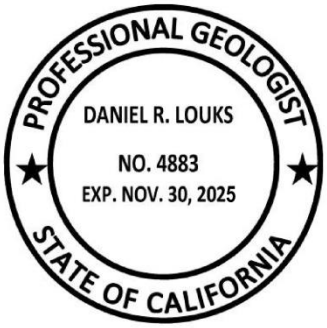
15.0 Environmental Professionals' Signatures

The undersigned certifies that the professional services have been conducted, our findings obtained, and our recommendations have been prepared in accordance with customary principles and practices in the field of environmental science and engineering. APEI has acted in good faith and has no relationship with sellers, buyers or agents of the subject property. There have been no conflicts of interest involved in the drawing of conclusions, which have been based solely on materials reviewed and visual inspections conducted by APEI.

Prepared by:

Douglas B. Kochanowski, CHMM, CAC
Environmental Professional, Senior Environmental Scientist, and Biologist

Reviewed by:



Daniel R. Louks, P.G.

16.0 Qualifications of Environmental Professionals

Doug Kochanowski
Environmental Professional, Senior Environmental Scientist, and Biologist
CHMM (#9970), CAC (#99-2699)

***Professional Experience*:**

Mr. Kochanowski has been performing Phase I Environmental Site Assessments (ESAs) since 1988 and is considered an industry expert. The environmental consulting profession was in its infancy when he performed his first ESA. Over the past three decades, Mr. Kochanowski has performed ESAs on almost every type of real property in over ten different states and in Europe. This includes military bases, medical facilitate, high-rise office buildings, learning institutions, factories, shopping malls and plazas, gasoline stations, industrial parks, manufacturing facilities, vacant land, agricultural land, housing tracks, multifamily developments, and government facilities. His wide array of experience has made him a key component for conducting complex ESAs and his expertise is sought after by a wide variety of clients and other consulting firms. His practical approach and comprehensive knowledge of the ASTM standards result in ESAs that are accurate, comprehensive, and address environmental issues with a common-sense approach.

Mr. Kochanowski's environmental portfolio also includes experience conducting a variety of additional services that include soil, groundwater, and soil vapor testing, modeling, landfill leachate testing, indoor air sampling, lead-based paint sampling, and conducting human health risk assessments. He has managed several large IDT contracts for the European District Corps of Engineers, working at over twenty bases in Germany and Spain. Projects included remediation design, soil and groundwater sampling, landfill leachate testing, asbestos surveys, air monitoring, and radon testing.

For as long as Mr. Kochanowski has been writing ESAs he has also been performing asbestos testing and consulting. He is a California Certified Asbestos Consultant and is NIOSH 582 Certified to analyze Polarized Light Microscopy (PLM) samples. Mr. Kochanowski performs asbestos surveys, develops removal specifications and drawings, writes Operations and Management (O&M) Plans, and conducts contractor observation and air monitoring during abatement projects. His asbestos experience includes schools, nuclear facilities, universities, airports, hospitals, military bases, shopping malls, high-rise office buildings, industrial complexes, port facilities, apartments and single-family homes. Mr. Kochanowski was the Manager and Facility Security Officer (FSO) for a high-profile asbestos survey, air monitoring and abatement project of the White House, Washington D.C. His AHERA survey experience includes inspecting over eight million square feet of building space for school districts in California, Kansas, New Mexico and Tennessee.

Mr. Kochanowski has teaching experience including conducting OSHA 1910.120 HAZWOPR, Confined Space Entry, and asbestos awareness classes.

He has served as Secretary on the Board of Directors and was a founding father for the SoCal ACHMM chapter. In the past, he has served on the technical committee for a Local Emergency Planning Commission (LEPC) and was elected Secretary on the Board of Directors for the Rhine-Main Post of the Society of American Military Engineers (SAME).

***Education*:**

Bachelor of Science, Biology, San Diego State University, 1987.
Continuing Education; Strategies for Conducting Meaningful Microbial IAQ Investigations/American Indoor Air Quality Council

***Registrations and Certifications*:**

CHMM, Master Level; Secretary of the SoCal ACHMM Chapter
California Certified Asbestos Consultant (#09-2699)
NIOSH 582 Accredited Sampling and Evaluation Airborne Asbestos
Certified, OSHA 40Hr Trained 1910.120/Site Supervisor
Certified TRGS 519 Under German Hazardous Materials Regulations
AHERA Certified Asbestos Inspector, Management Planner, Designer, and Abatement Supervisor
Certified Radiation Worker
Confined Space Entry Certified

Daniel R. Louks
California Professional Geologist

Education

M.S. Candidate, Applied Geophysics, California State University, Northridge, Ca.
B.S. Geology, University of California, Los Angeles, Ca, 1983.

Professional Affiliations

California Professional Geologist
California Professional Civil Engineer

Professional Experience

Mr. Louks has worked as an Engineer and Hydrogeologist, responsible for the design, planning, budgeting, and operations of all environmental and hydrogeological related projects. He provides environmental engineering and consulting services with expertise. Project experience includes injection of oxidants and electron donor materials within the saturated zone for the chemical and biologic decomposition of halogenated solvents and petroleum compounds. Mr. Louks has experience with the operation of vapor and dual-phase extraction systems for the physical removal of volatile solvents and petroleum compounds.

Mr. Louks has worked as a Senior Geologist responsible for the design, implementation, budgeting, and operations of environmental and geological projects. He has participated in the development and management of financial operations associated with hydrogeological groups.

Mr. Louks has developed and managed hydrogeologic service groups. He was responsible for the design, implementation, budgeting, and operations of environmental related projects. Mr. Louks participated in the development and management of financial operations associated with a hydrogeological group. He has been responsible for the design, implementation, and operations of bioreclamation projects.

Publications

Maggio, A., Louks, D., 1989, Determining the Feasibility and Design Parameters for In-Situ Biodegradation of Gasoline in a Shallow Aquifer, The Proceedings of the Third National Outdoor Action Conference on Aquifer Restoration, Groundwater Monitoring and Geophysical methods: National Water Well Association, Dublin, OH, pp. 521-534.

17.0 List of Appendix Sections

APPENDIX A Drawings

APPENDIX B Geophysical Investigation Report

APPENDIX C Photographs

APPENDIX A

Drawings

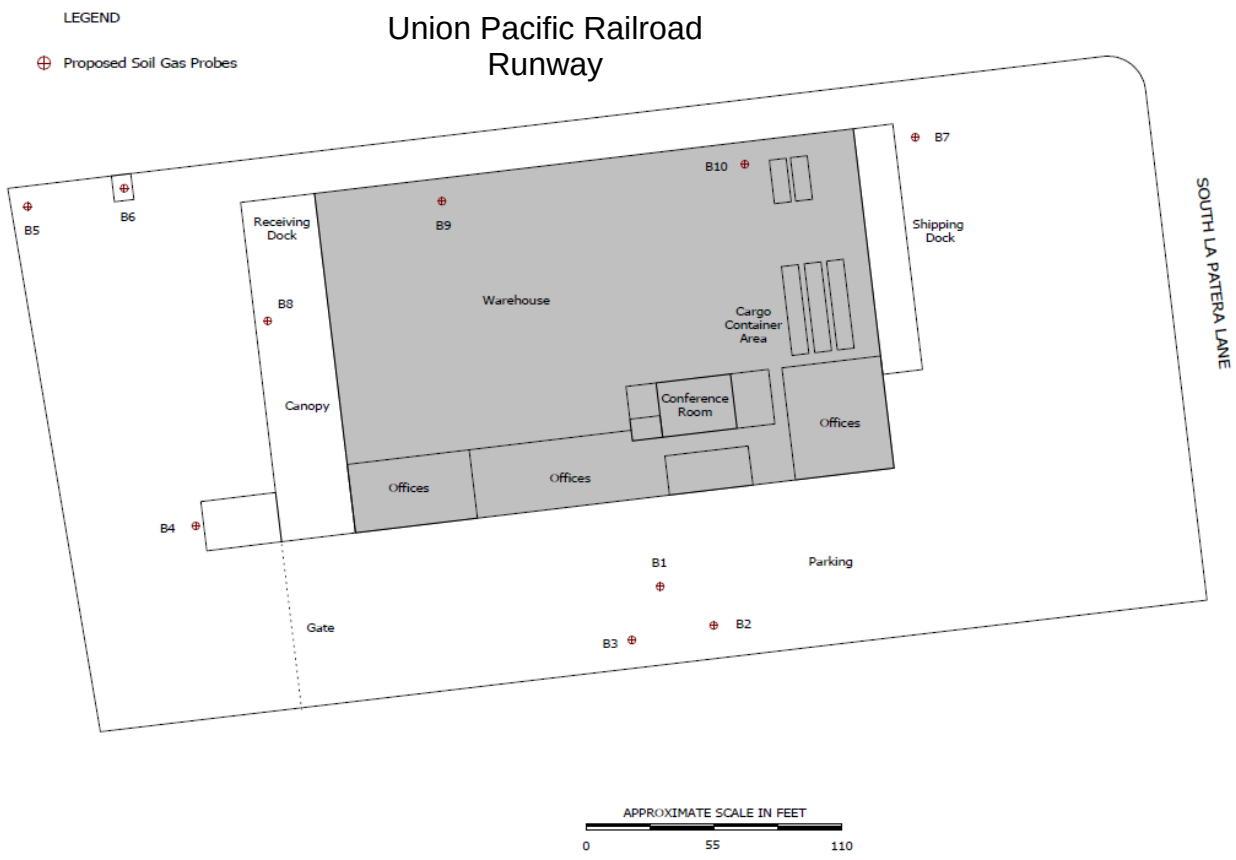


Figure 1: Proposed Boring Location Plan
Date: December 19, 2023
Scale: None
Project: Goleta Train Depot
Project Number: 14242.00

All Phase Environmental, Inc.

APPENDIX B

Geophysical Investigation Report

APPENDIX D

Photographs

GPR investigation of floor drain in main warehouse.

GPR investigation of pipes in the floor in the southwest corner of the west warehouse space.

GPR investigation of pipes in the floor in the southeast corner of the west warehouse space.

Boring locations B1, B2, and B3.

Boring locations B4.

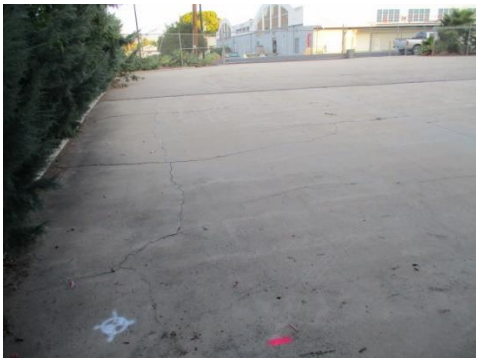
Boring locations B4.

Boring locations B5.

Boring locations B5.

Boring locations B6.

Boring locations B6.

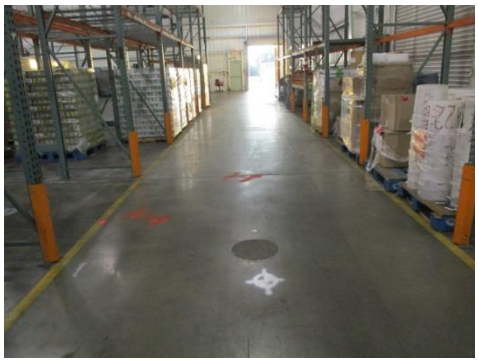


Boring locations B7.

Boring locations B7.

Boring locations B8.

Boring locations B8.



Boring locations B9.

Boring locations B9.

Boring locations B10.

Boring locations B10.