CEQA Initial Study

1.0 PROJECT INFORMATION AND BACKGROUND

Project Title: Tirsbeck Surplus Property and Right-of-Way Vacation and Local Coastal Program Amendment

Project Applicant: Alan Tirsbeck **Case No**: SV-21-0002, SP-21-0001, LCP-23-0001, and ED-23-0003

Project Location: 2000 Broadway (aka 2016-2018 Broadway), and 936 W Hawthorne Street (aka 900-912 W. Hawthorne Street)

APNs: 003-182-013 and -014 ("the Notch") within 003-182-005, and 003-182-010

Current Land Use/Zoning Designations:

- 2000 Broadway: General Service Commercial (GSC)/Service Commercial (CS)
- 936 W Hawthorne Street: General Industrial (GI)/General Industrial (MG)

Proposed Land Use/Zoning Designations for 936 W Hawthorne Street: General Service Commercial (GSC)/Service Commercial (CS)

Project Description: The applicant is requesting the City of Eureka surplus and convey a City-owned 20-foot x 30-foot (600 square foot [sf]) landlocked parcel (APN 003-182-013) to the adjoining property owner (Alan Tirsbeck; APN 003-182-005; 2000 Broadway), and vacate an alley easement over APNs 003-182-013 and -014. The two parcels together are known as "the Notch" and were created in the distant past for a 20-foot-wide public alley, which was never developed. Future development and use of the Notch will be combined with the surrounding larger 2000 Broadway parcel. Additionally, the applicant is proposing a Local Coastal Program (LCP) Amendment to change the Land Use Plan (LUP) (i.e. Coastal General Plan) and Implementation Plan (i.e. Coastal Zoning Code) land use and zoning designations on the parcel adjacent to and west of 2000 Broadway, 936 W. Hawthorne Street (APN 003-182-010). The LCP Amendment would change the land use and zoning designations at 936 W. Hawthorne Street from General Industrial (GI)/General Industrial (MG) to General Service Commercial (GSC)/Service Commercial (CS). 2000 Broadway currently has GSC/CS land use/zoning designations; therefore, changing the designations of 936 W. Hawthorne Street would allow the two adjoining parcels under the same ownership to have consistent land use and zoning designations which would allow for the redevelopment of both parcels with new commercial and/or residential uses not allowed on the W. Hawthorne Street parcel under the current industrial land use/zoning designations. Although there is no specific development project at this time, the entire 3.18-acre property could be redeveloped consistent with the allowed uses and development standards of the CS zoning designation, and the current intent is to redevelop 2000 Broadway and 936 W Hawthorne Street together with new retail and service commercial uses. This document analyzes the potential environmental impacts of commercial redevelopment of the entire property to the extent possible without knowledge of a specific future project. The document presents reasonable assumptions about the overall types and levels of activities involved with future commercial redevelopment, and uses those assumptions to describe potential environmental impacts. Where impacts could differ significantly depending on project-specific details, the document makes it clear subsequent environmental review will be required once a development project is identified.

Lead Agency: City of Eureka, 531 "K" Street, Eureka, CA 95501-1165

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Project Applicant's Name and Address: Alan Tirsbeck, 2016 Broadway, Eureka, CA 95501

Prepared by: Bruce Jacobsen, Project Manager, West & Associates (W&A), and Caitlin Castellano, Senior Planner, City of Eureka

Setting: 2000 Broadway and 936 W. Hawthorne Street (APNs 003-182-005, -010, -013 and -014) are located in Eureka, Humboldt County, California (herein known as the "Site"). The regional location of the Site is depicted on *Figure 1*. An aerial view of the Site appears in *Figure 2*, and a copy of the Assessor's Parcel Map showing the Site is on *Figure 3*. All figures appear in *Appendix A*. 2000 Broadway (including the Notch) is 1.27 acres in size and currently houses a commercial motor vehicle sales and repair facility (Eureka Auto Wholesale), and a retail store (Anglin Second Hand Store). 936 W. Hawthorne Street (directly west of 2000 Broadway) is 1.91 acres in size and currently utilized for outdoor storage (vehicles and shipping containers), and previously housed the Humboldt Paint Factory. *Figure 4 and Figure 5* depicts the current layout of the entire 3.18-acre Site. Other historic uses of the Site include De Bon Motor Co Trucks (diesel engines and industrial equipment), Akins Tractor co, and various retail stores. The Site adjoins the Broadway commercial corridor which also serves as Highway 101. The Site is served by existing utilities (sewer, water, power, telecommunications). The Site is comprised of split commercial and industrial zoned property in the Coastal Zone portion of southern Eureka, at the northwest corner of Broadway (Highway 101) and Hawthorne Street. *Figure 6* depicts split land use designations. 2000 Broadway is designated General Service Commercial (GSC) and 936 W Hawthorne is designated General Industrial (GI).

Surrounding Land Uses: GI-designated parcels are located to the north and west of 936 W Hawthorne (the parcel directly to the north is developed with a mini-storage facility and the parcels to the west are undeveloped with mapped wetland per the U.S. Fish and Wildlife Service's National Wetland Inventory), and GSC-designated parcels are located to the north and east of 2000 Broadway (across Broadway to the east is the Crisp Lounge cannabis business, and directly north is a Motel 6). A GSC-designated parcel is located to the south of the Site, across W. Hawthorne Street, where a hotel is under construction.

Purpose of Initial Study: This Initial Study CEQA compliance document presents an analysis of the potential environmental impacts resulting from the proposed Surplus Property and Summary Alley Vacation requests at 2000 Broadway, and the LCP Amendment request at 936 W Hawthorne Street ("Project"). The Initial Study includes an analysis of potential environmental impacts of future commercial redevelopment facilitated by the Project to the extent possible without knowledge of a specific future development project. Where impacts could differ significantly depending on project-specific details, the document makes it clear subsequent environmental review will be required once a redevelopment project is identified.

The surplus and vacation requests are based on the fact that the Notch (the 20-foot x 30-foot [600-sf] parcel and the associated alley easement), is of no practical value to the City of Eureka as it is not needed as originally anticipated in the 1920's when the Notch was created. Per a Historical Resources Report prepared by Raymond W. Hillman in 2018 (*Appendix C*), the easement gave vehicular access from Broadway to a series of structures on each side of the easement which were all removed by circa 1950. Subsequently, the Notch was never further developed and all of the land surrounding it is under the same ownership thereby negating the need for an access easement. The existence of the small City of Eureka-owned parcel and the alley easement over the other portion of the Notch was discovered when a title search of the Site was conducted on behalf of a group offering to purchase the Site from Mr. Tirsbeck; therefore, Mr. Tirsbeck requests, and the City

supports, conveying the small parcel to him and vacating the alley easement so that the Site can be redeveloped.

The requested LCP Amendment would allow for the redevelopment of the entire Site with new commercial and residential uses not currently allowed on the 936 W. Hawthorne Street parcel under its existing industrial land use/zoning designation. Table 1 below provides a comparison of the purposes and allowed uses in the industrial and commercial land use designations.

Table 1. Comparison of Land Use Designations

Land Use/Zoning Designations	Purposes(s)	Principal Uses(s)	Conditional Uses(s)
GI - General Industrial/ *(current designation of 936 W Hawthorne Street)*	To provide sites suitable for the development of general and heavy industrial uses, and emergency shelters.	General manufacturing, boiler works, concrete mixing and batching, chemical products manufacture, breweries and distilleries, meat products processing and packaging, and structural.	Processing of oil and gas, electrical generating and distribution facilities, animal and fish reduction plants, oil and pipelines, and offices.
GSC - General Service *(current designation for 2000 Broadway and proposed designation for 936 W Hawthorne Street)*	To provide appropriate located areas for retail and wholesale commercial establishments that offer commodities and services required by residents of the city and surrounding market area, and emergency shelters.	Retail stores, service establishments, amusement establishments, wholesale businesses, restaurants and soda fountains (not include drive-in establishments) and offices, and emergency shelters.	Drive-in theaters, drive-in restaurants, mobile home and trailer parks.

The corresponding General Industrial (MG) and Service Commercial (CS) zoning district use tables are included as *Appendix B*. The CS zoning district allows for a broad array of commercial uses, including retail stores, offices, service establishments, amusement establishments, and wholesale businesses. Residences are also principally permitted in the CS zoning district. In contrast to the CS zoning district, the MG zoning district does not allow residential uses, and the only commercial uses allowed are retail and wholesale stores with single occupant floor areas of 40,000 square feet or larger, and offices. Both zoning districts allow for light industrial uses; all uses principally permitted in the Limited Industrial (ML) zoning district are conditionally permitted in the CS zoning district and principally permitted in the MG zoning district. The MG zoning district also allows for a broad array of heavy industrial uses not allowed in the CS zoning district, including manufacturing, assembling, packaging, processing, and warehousing and storage of potentially hazardous materials (e.g., dumps, junk yards and wrecking yards). Table 2 below provides a comparison of the development standards in the MG and CS zoning districts; as shown, the two districts have the same zero setback and 1.2 floor area ratio, but the CS zoning district allows for 20 additional feet of building height.

Table 2. Comparison of Development Standards						
Zoning Designation	Min. Site Area	Min. Site Depth	Min. Site Length	Setbacks	Floor Area Limit-Percent of Site Area (Floor Area Ratio [FAR])	Max. Height (primary and accessory structures)
MG - General Industrial *(current designation of 936 W Hawthorne Street)*	6,000 sf	None	None	Front: 10' Side: 0' Rear: 0'	120% (1.2 FAR)	35 feet
CS - Service Commercial *(current designation for 2000 Broadway and proposed designation for 936 W Hawthorne Street)*	6,000 sf	60 feet	100 feet	Front: 0' Side: 0' Rear: 0'	120% (1.2 FAR)	55 feet

Under the CS development standards, full built-out with a maximum FAR of 1.2 and height of 55 feet on a 3.18-acre property could allow a five-story, 55-foot tall building with a 33,000-sf footprint, 166,000-sf of floor area and a large parking area. A three-story, 35-foot-tall building (which is the maximum height of the MG zoning district) meeting the maximum 1.2 FAR standard could allow a 55,300-sf building footprint with 166,000 sf of floor area and a large parking area. Maximum build-out with a one-story building would allow a building footprint encompassing the entire 3.18-acre (approximately 138,520-sf).

As described above, the current owner Mr. Tirsbeck is intending to redevelop the Site or sell the Site to someone else to redevelop. The intention is to redevelop the entire Site with commercial uses, but no specific project has been identified. After the land use and zoning change on the 936 W Hawthorne Street property, the current owner, or a buyer could also choose to redevelop the Site with residential or light industrial uses allowed in the CS zoning district, or with a mix of different use types (e.g. residential above commercial). It is also possible Mr. Tirsbeck will not redevelop or sell the Site for redevelopment and will continue to operate his Eureka Auto Wholesale business there, along with renting out other portions of the property to a variety of tenants with automotive towing and repair businesses and one who runs a thrift shop. This CEQA evaluation assumes commercial redevelopment of the site.

CEQA is triggered for any project that requires a discretionary permit from the City Approval of the 600-sf Surplus Property and Alley Vacation for the Notch within 2000 Broadway, and the LCP Amendment at 936 W Hawthorne Street are at the discretion of the City Council; therefore, this Initial Study is being submitted to address the CEQA evaluation requirement. The Project will not only change allowed uses and maximum building height on the 936 W Hawthorne Street property, but will remove barriers to future redevelopment of the entire Site. Therefore, this Initial Study analyzes potential environmental impacts of redevelopment of the entire Site with retail and service commercial uses to the extent possible without knowledge of a specific future project. Where impacts could differ significantly depending on project-specific details, the document makes it clear subsequent environmental review will be required once a redevelopment project is identified. Any future redevelopment project covering the entire Site would require a coastal development permit, and additional environmental review would be required.

As described in the Site Contamination and Remediation section below, underground storage fuel tanks (USTs) located at the Site were determined to have leaked when they were removed in 1989. As a result, a cleanup oversight case was opened by the Humboldt County Department of Environmental Health (HCDEH) and the Regional Water Quality Control Board (RWQCB). The case was opened when the property was owned by Mr. Fred C. Deo and is therefore listed on GeoTracker as the Fred C. Deo site. The leaking USTs were adjacent to one of the buildings on the Site known as the Humboldt Paint Factory building, so the case is also

referred to as the Humboldt Pant Factory remediation project.

Site Contamination and Remediation:

As outlined in the Final Remediation Report for the Site included in *Appendix D*, the Site has housed numerous light industrial and commercial uses over the past decades, primarily related to motor vehicle sales and service and various retail sales outlets. One of the buildings at the Site, known as the Humboldt Paint Factory (HPF) building (fronting W Hawthorne Street), was formerly used for paint manufacturing, sales and warehousing. Product leakage from one or more of the former underground fuel tanks just north of this building resulted in significant groundwater and soil contamination. Three underground fuel storage tanks were removed from the Site in 1989. There currently is no underground fuel storage at the Site. However, historic gasoline and diesel fuel leakage contaminated soil and groundwater. After the current owner, Mr. Tirsbeck, acquired the Site from the previous owner, Mr. Fred C. Deo, in 2003, he was required to continue addressing the remaining soil and groundwater contamination.

The initial remedial investigation report prepared by LACO Associates in November 1990 established that the main area impacted by petroleum compounds released from underground fuel tanks at the Site was underneath the HPF building. Past site assessment activities completed to evaluate the extent of soil and groundwater contamination included collecting soil samples from more than 50 locations and installing 15 groundwater monitoring wells during the period from 1990 to 2011. *Appendix A, Figures 4 and 5*, show the locations of the former USTs, the Notch, and all groundwater monitoring and remediation wells associated with these environmental investigations

A work plan to perform high vacuum dual phase extraction (HVDPE) pilot testing was submitted to the Humboldt County Department of Environmental Health (HCDEH), who was the lead regulatory agency for this case, and approved in April 2010. Two additional wells (MW-14 and MW-15) were installed inside the HPF building in 2011. These 4-inch wells were intended to serve as extraction wells for this HVDPE pilot testing and potential remediation program.

No activities were performed at the HPF building/site for several years. Groundwater monitoring completed in October 2015 demonstrated that significant contamination remained underneath the HPF building, with the sample from MW-13 containing 33,000 µg/L TPH-g and 2,000 µg/L benzene. HCDEH issued directive letters to Mr. Alan Tirsbeck (owner of the Site) in December 2015 and January 2016, requiring that a pilot test be performed using the wells inside the HPF building.

The 120-hour HVDPE pilot test at HPF was performed during February 2016. Field measurements and laboratory data collected during this pilot test demonstrated that the VOC mass extraction rate was initially close to 40 pounds per day and remained above 14 pounds per day for the duration of the test. Therefore, a full-scale remediation program was warranted to meet the requirements of the HCDEH directive letter, and extensive environmental remediation to address soil and groundwater contamination was performed from 2016 to 2022.

The HVDPE remediation program at HPF was performed from June through August 2016 in conformance with the HCDEH directive letter dated May 12, 2016. VOC extraction rates remained well above the established performance threshold of 10 pounds per day until the end of the program. The remediation system operated a total of 1,101 hours and removed an estimated 1,063 pounds of contaminant mass from the subsurface environment. No significant rebound in VOC extraction rate was observed when the system was restarted after being turned off for two weeks. HCDEH placed the case in verification monitoring and requested that at least one round of groundwater monitoring be performed to determine the impact of contaminant mass removal on groundwater concentrations in the source area and downgradient wells. Groundwater concentrations in most of the wells were acceptable, but the sample from MW-13 still had fairly

high concentrations of TPH-g and benzene.

In January 2018, regulatory oversight of this case transitioned from HCDEH to the Regional Water Quality Control Board, North Coast Region (RWQCB). A directive letter issued by the RWQCB in April 2018 specified that additional groundwater monitoring be performed and a soil vapor survey work plan be submitted to address remaining impediments to closure under the Low Threat Closure Policy (LTCP). Based on the concentrations of TPH-g and benzene reported in well MW-13, the RWQCB requested that additional remediation be performed to address residual contamination underneath this portion of the HPF building.

During the first quarter of 2018, a remedial system based on air sparging of groundwater coupled with dual phase extraction was installed inside the HPF building. After some delay arranging for a dedicated PG&E electrical service, the remediation system was started in late May 2018. The HPF remedial system operated effectively in 2018 and 2019. The system was expanded to the western inside portion of the HPF building (and outside/west of the HPF building) in November 2019. By December 2019, remedial goals were achieved inside the main/eastern portion of the HPF building (and outside/east of the HPF building) and remedial activities there were discontinued. Active remediation continued in the western portion of the Site and HPF building until February 28, 2020 when the remedial system was intentionally shut down to evaluate post-remediation groundwater concentrations. These results were favorable, so active remediation was discontinued at that time.

Soil vapor screening was performed at the HPF site (within and around/outside of the HPF building) in November 2020 to determine whether the dual phase extraction remediation program had effectively reduced concentrations of volatile organic compounds (VOCs) in the vadose zone (i.e. subsurface that extends from the surface to the groundwater table) to levels that were supportive of case closure. In this screening program, soil vapor samples were collected from five dual phase extraction wells installed in 2019, and the three monitoring wells previously installed inside the HPF building. The other purpose of this screening program was to see if the selected wells, which were designed as monitoring and extraction wells, could be configured to function as vapor sampling wells. If so, no dedicated soil vapor wells would need to be installed and the project could be completed in a more cost-effective manner. The soil vapor screening results were favorable, so it was concluded that additional dual phase extraction would not likely be required to achieve case closure and that the existing wells could be used to perform the soil vapor survey (SVS) at this Site.

Based on the success of the soil vapor screening program, a formal SVS was performed at the Site using the same eight monitoring and remediation wells that were sampled during the screening program. In June 2021, soil vapor samples were collected from the eight wells in accordance with the soil vapor sampling work plan addendum issued to and approved by the RWQCB in May 2021. Leak detection was accomplished using helium as a tracer gas to ensure that the wells were properly constructed and the sample train components did not leak. Vapor samples were collected after the well and sample train integrity were confirmed using the helium shroud method as described in the Advisory for Active Soil Gas Investigations (in the Final Remediation Report included as *Appendix D*). The concentrations of benzene, ethylbenzene and naphthalene reported in shallow soil vapor samples collected from these locations within the footprint of the former HPF building were all significantly less than the thresholds established in the LTCP for indoor air exposure at both commercial and residential sites and the current Tier 1 Environmental Screening Levels (ESLs). These sample results were generally lower than those reported during the soil vapor screening program conducted in November 2020. The HPF building had previously been leased to a tenant for vehicle and equipment storage. The property owner terminated this lease and had the tenant's equipment removed from the building in between the two sampling events. The owner then cut off extraction well piping at grade, leaving the wellheads exposed to the atmosphere. This accelerated the volatilization of soil vapors underneath the building slab by allowing the wells to vent directly to the atmosphere. This venting process, which occurred for several months between sampling events, resulted in the removal of residual vadose zone contamination from underneath the HPF building.

In October 2021, five vapor samples were collected from vapor pins installed within the building footprint at the locations shown on *Figure 5*. These sample results were compared with the thresholds shown in Appendix 4, Scenario 4 of the LTCP (see section 7.0 of the Final Remediation Report in *Appendix D* for a hyperlink to this data on GeoTracker), and the Tier 1 ESLs, to determine whether the concentrations of benzene, ethylbenzene, or naphthalene present an unacceptable risk of exposure, as described in the Petroleum Vapor Intrusion to Indoor Air section of the LTCP. At four of the five vapor pin locations, soil vapor data met all applicable thresholds. At the fifth location, midway between extraction wells EW-12 and EW-13, the concentrations of TPH-g and a few VOCs were greater than the LTCP thresholds, indicating that a small area of shallow contamination remained. Additional soil vapor extraction was performed in this area and new soil vapor samples were collected in the vicinity. Results from these samples collected in February 2022 were well below the applicable LTCP thresholds, so the RWQCB agreed to move forward with case closure.

Any UST case requires public notification, involving the distribution of a Case Closure Summary to neighboring property owners and residents and allowing for a 60-day public comment period. No comments were received during this period, which ended November 1, 2022. Subsequently W&A obtained a permit from HCDEH to properly destroy all monitoring and remediation wells associated with this project. This was the last step required to be performed in order for the RWQCB to issue a No Further Action (NFA) Letter for Case #1THU171 in accordance with criteria presented in the Low Threat Closure Policy (LTCP). All work has been completed and the NFA Letter was issued by the RWQCB on February 2, 2023. A copy of the NFA letter is included in *Appendix D*.

In summary, extensive environmental investigation at the HPF building site over many years largely defined the magnitude and extent of gasoline contamination in soil and groundwater. An extensive DPE/AS remediation project has been completed, and groundwater concentrations have been reduced to levels that are acceptable for case closure under the LTCP. After no comments were received during the 60-day public comment period, all wells were properly destroyed. The NFA Letter for Case #1THU171 has been issued by the RWQCB and the case is considered closed. All available documentation regarding the UST case is available on the State Water Recourse Control Board's GeoTracker website.

Although there may be detectable concentrations of residual gasoline compounds in soil and/or groundwater as a result of this release, the NCRWQCB concluded that they do not present a threat to human health or the environment under the current configuration and operation at the Site. Since this residual contamination could be disturbed and potentially expose workers or the public to elevated concentrations of gasoline compounds during ground disturbing activities associated the construction of any future redevelopment project, RWQCB requested that a Soil and Groundwater Management Plan (SGMP) be prepared for this Site.

A SGMP was prepared and is in place which details worker safety and special handling requirements of impacted soil and groundwater at the site if these materials are encountered during ground disturbing activities. A copy of the SGMP is included in *Appendix G*, of which Figure 3 within the SGMP illustrates areas where contamination is presently known to be present. The SGMP will be implemented for all construction activities that involve soil disturbance at the Site, and has been included as a Mitigation Measure in Section IX "Hazards and Hazardous Materials" of this document.

Permitting: The City of Eureka is the Lead Agency for the project and has discretionary authority over the project proposals, which include the following:

- Summary Alley Vacation for the Notch (SV-21-0002) and
- Surplus Property for the 600-sf City-owned parcel within the Notch (SP-21-0001) (before conveying any City-owned land, the City must complete Surplus Land Act requirements, and although the small proposed surplus property qualified for an exemption from the affordable housing first-right-of-refusal

provisions due to its size and location, it is located within the Coastal Zone and therefore must first be made available to resource agencies prior to conveying the land to the adjoining property owner (Alan Tirsbeck]).

- LCP Amendment (LCP-23-0001) to change the land use/zoning designations of 936 W Hawthorne Street.

Future redevelopment of the entire Site will require the following permits:

- Coastal Development Permit (appealable to Coastal Commission) for any demolition of existing structures, construction of new structures, or change in the density or intensity of use on 936 W Hawthorne and subsequent environmental review;
- 2000 Broadway is covered by the City's Categorical Exclusion Order E-88-2 which exempts principally permitted uses from the need to obtain a Coastal Development Permit. A Coastal Development Permit Exemption would be required and can only be issued if the proposed development conforms to the provisions of the City's certified LCP; if LCP consistency cannot be demonstrated, a Coastal Development Permit would be required;
- Conditional Use Permit, Coastal Development Permit, and Design Review for any new conditional uses at either 936 W Hawthorne or 2000 Broadway and subsequent environmental review (the need for a Conditional Use Permit triggers the need for a Coastal Development Permit regardless of whether the development would otherwise qualify for a Coastal Development Permit Exemption; Conditional Use Permits for new structural development also require Design Review);
- A parcel Merger of the Notch with 2000 Broadway which surrounds it, and potentially a Merger and/or Lot Line Adjustment if any future redevelopment project at the Site proposes to encroach over existing property lines associated with 936 W Hawthorne or 2000 Broadway;
- Flood Development Permit consistent with the City's Flood Hazard Area Regulations (Eureka Municipal Code [EMC] Chapter 153) for any new construction or substantial improvements to existing structures on the portion of the Site that is within the FEMA-mapped 100-year flood zone.
- Encroachment Permit for work within the W Hawthorne Street right-of-way;
- Building Permit(s) which requires conformance with the City's stormwater regulations, and
- Business License(s).

<u>Other Public Agencies whose approval is, or may be required (*e.g. permits, financing approval, or participation agreement*):</u>

- Certification of the LCP Amendment by the California Coastal Commission.
- Notification to North Coast Regional Water Quality Control Board (NCRWCB) to implement the Soil and Groundwater Management Plan for any ground disturbing activities (e.g. site contamination management).
- Construction Stormwater General Permit and Stormwater Pollution Prevention Plan from the State Water Resources Control Board.
- Encroachment Permit from the California Department of Transportation (Caltrans) for any work within the Broadway (Highway 101) right-of-way.

<u>Tribal Consultation</u>

Pursuant to Public Resources Code Section 21080.3.1, the City reached out to tribes traditionally and culturally affiliated with the geographic area of the Project on July 15, 2021, February 15, 2023, and September 29, 2023 because the Project evolved over time as the Surplus Land and Alley Vacation for the Notch on 2000 Broadway was initially proposed in 2021, and then the LCP Amendment to change the land use and zoning of 936 W Hawthorne Street was proposed in 2023 when the owner became interested in redeveloping the entire Site with new commercial uses (as opposed to just redeveloping 2000 Broadway). The City received responses from the Wiyot Tribe requesting a tribal cultural resource (TCR) survey be prepared prior to a

ground disturbing activity, monitored by a tribal representative (and the Blue Lake Rancheria THPO concurred). Additional details on tribal outreach and resulting mitigation measures are discussed in Section V. Cultural Resources. No Tribe indicated they would like to formally consult under AB 52.

2.0 SUMMARY OF POTENTIAL PROJECT IMPACTS

Below is a table that summarizes the impact potential for each category of impacts discussed and analyzed in this Initial Study on the following pages in Section 3.0 Environmental Analysis.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I.	Aesthetics		✓		
II.	Agriculture and Forestry Resources				✓
III.	Air Quality		✓		
IV.	Biological Resources		✓		
V.	Cultural Resources		✓		
VI.	Energy			✓	
VII.	Geology/Soils		✓		
VIII.	Greenhouse Gas Emissions			✓	
IX.	Hazards and Hazardous Materials		✓		
X.	Hydrology/Water Quality		✓		
XI.	Land Use/Planning			✓	
XII.	Mineral Resources				✓
XIII.	Noise		✓		
XIV.	Population/Housing			✓	
XV.	Public Services			✓	
XVI.	Recreation			✓	
XVII.	Transportation			✓	
XVIII.	Tribal Cultural Resources		✓		
XIX.	Utilities/Service Systems			✓	
XX.	Wildfire				✓
XXI.	Mandatory Findings of Significance		✓		

Determination: On the basis of this initial evaluation:

☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Caitlin Castellano, Senior Planner
City of Eureka

1/2/2024
Date

3.0 ENVIRONMENTAL ANALYSIS

I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				✓
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				✓
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?		✓		

SETTING: The Site, approximately 3 acres in size, is located at the northwest corner of Broadway and W. Hawthorne Street, in the southwestern portion of the City of Eureka. The surrounding area is developed primarily with commercial/light industrial uses interspersed with parcels of vacant land. The Site's western boundary is approximately 0.5 miles east of the North Bay Channel of Humboldt Bay. The property is bounded by commercial properties to the north, Broadway (Highway 101) to the east, a new hotel under construction to the south, and a vacant industrial-zoned parcel owned by the Humboldt Waste Management Authority (HWMA) to the west. Topography at the Site is relatively flat, with no discernable slope and surface elevations ranging from 9 to 15 feet NAVD88 based on 2019 LiDAR on the City's webGIS[1]. Much of the property is enclosed with fencing; there are two entrance driveways on the south side, along Hawthorne Street, and three entrance driveways along the east side, off Broadway, two of which are currently blocked by cable roping and for-sale vehicles.

DISCUSSION & FINDINGS:

a) For purposes of determining significance under CEQA, a scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Directly west of the site is the vacant HWMA parcel, then heading west is Felt Street, the northern-most portion of the Palco Marsh, the Eureka Waterfront Trail, a peninsula that includes the Del Norte Street Dog Park, and then Humboldt Bay. There are expansive publicly-accessible scenic views of Palco Marsh and Humboldt Bay from Felt Street, the Eureka Waterfront Trail, and the Del Norte Street Dog Park. There is little to no elevation gain between the Bay and the project site, and there is dense wetland vegetation including willow trees on the HWMA property that blocks views of the Site from the aforementioned coastal public vantage points, and blocks any bay or marsh views from the Site. W Hawthorne Street also provides a public view corridor to the Bay directly south of the Site which is not impacted by development at the Site. If vegetation on the HWMA property was lost or removed, construction activities and operation of the businesses resulting from a future redevelopment project at the Site would not impede any views that would not already be affected by the existing buildings at the property; because of the lack of elevation change between the site and the bay, a single-story building would block ground level views the same as a new 55-foot-tall building. Allowing additional building height (but not additional floor area) through the land use/zoning change would provide additional flexibility to avoid or minimize view impacts (a tall slender building could

result in less of a view impact than a shorter broader building with the same floor area). As a result, the Project, and any future redevelopment facilitated by the Project, is not expected to impact scenic vistas. **Conclusion: No impact**.

b) According to the California Scenic Highway Mapping System[2], there are no designated state scenic highways in the vicinity of the Site. Furthermore, the Site and surrounding area does not contain any landmark trees or rock outcroppings, or buildings of historical significance as outlined in the Historical Resources Report prepared by Raymond W. Hillman in 2018 (Appendix C). **Conclusion: No impact.**

c) The Site is not located in an urbanized area, per CEQA Guidelines Section 15387, because Eureka has a population of less than 50,000[3]. Thus, CEQA asks if the Project would substantially degrade the existing visual character or quality of public view of the site and its surroundings. The existing visual setting includes commercial and industrial buildings clusters around the Broadway corridor and extending towards the bay. A future redevelopment project with new commercial or mixed uses allowed by the CS zoning district would either represent an improvement to the overall visual character of the property and highway corridor or have no substantial impact in that regard. The Site's existing buildings have been unchanged for decades, with exteriors that are unremarkable to aesthetically displeasing. As described under (a) above, no impacts to public views are anticipated from future redevelopment of the site under the GSC/CS designations. Therefore, the Project, and any future redevelopment facilitated by the Project, will not substantially degrade the existing visual character or quality of public views of the site and its surroundings. **Conclusion: No impact.**

d) The Site is bounded primarily by existing commercial and light industrial businesses (except for the adjoining vacant industrial-zoned parcel to the west), all of which currently contain on-site lighting. There is also street lighting along the Broadway corridor. Night-time use of the Site will depend on the project selected, i.e. if a hotel is built on the property, there will be an increase in after-hours visitors that would require additional night-time lighting. Any future redevelopment project can only be approved if the project is found consistent with the policies of the certified Local Coastal Program, including extensive policies protecting environmentally sensitive habitat areas (ESHAs). As a result, new exterior lighting within 100 feet of the western boundary associated with future redevelopment of the Site would be evaluated for potential impacts on nearby sensitive habitat, and would be required to be sited and designed to avoid degradation of nearby sensitive habitat areas, including the wetlands directly west of the site on the HWMA property. Although the Local Coastal Program address lighting impacts on ESHA, it does not currently address other potential lighting impacts. As a result, redevelopment facilitated by the project could create a new source of substantial light or glare that could adversely affect views. To ensure potential impacts to views remain less than significant, Mitigation Measure Visual-1 sets limitations on all new exterior lighting fixtures installed at the site within 100 feet of the western boundary, requiring they are shielded, directed downward, and dark-sky compliant. Implementation of Mitigation Measure Visual-1 will reduce potential lighting impacts from future redevelopment facilitated by the Project to a less than significant level. Therefore, with mitigation, the Project, and any future redevelopment facilitated by the Project, will not create a new source of substantial light or glare, nor adversely affect day or nighttime views in the area, for the ESHA located near the western boundary. **Conclusion: Less Than Significant with Mitigation Incorporation.**

MITIGATION MEASURES:

Mitigation Measure Visual-1: Exterior Lighting Limitations.

All new exterior lighting fixtures installed at the Site within 100 feet of the western boundary shall (1) be fully shielded with fixtures or hoods, or recessed; (2) be directed downward, away from adjacent properties, environmentally sensitive habitat areas, and the public right-of way; and (3) meet the

International Dark Sky Association's requirements for reducing waste of ambient light ("dark sky compliant").

Sources

1) City of Eureka Web GIS Portal (https://arcgis-svr.ci.eureka.ca.gov/portal/apps/webappviewer/index.html?id=49037ddcf4474c6ba4bdb661ee203604)
2) California Scenic Highway Mapping System (https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways)
3) US Census QuickFacts 2020 (https://www.census.gov/quickfacts/eurekacitycalifornia)

II. AGRICULTURE & FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

SETTING: The Site is zoned "Service Commercial" (CS) and "General Industrial District" (MG), and in the General Plan designated as "General Service Commercial" (GSC) and "General Industrial" (GI). Those areas of the property not covered with existing buildings consist primarily of asphalt, concrete and packed gravel surfaces.

DISCUSSION & FINDINGS:

a) The Farmland Mapping and Monitoring Program of the California Resources Agency has not mapped farmland in Humboldt County[1]. According to County of Humboldt's Web GIS portal[2], the Site is not located on Prime Farmland, Unique Farmland or Farmland of Statewide Importance, and is not part of a Williamson Act contract. The Site is already developed with and surrounded by commercial and industrial uses and not zoned for agriculture or forest or timberland uses. The project seeks to change the MG/GI land use/zoning designations of 936 W Hawthorne Street (the western portion of the Site) to CS/GSC designations so the entire Site has the same CS/GSC designations to support a future redevelopment project on the property. All potential improvements and uses for the Site are compatible with the CS zoning and GSC land use classification (which are not intended for agricultural or farming) and are consistent with the historical and

intended commercial and light industrial uses of the property. Therefore, the proposed Project, and any future redevelopment facilitated by the Project, will not convert farmland. **Conclusion: No impact.**

b) The proposed Project and any future redevelopment facilitated by the Project will not conflict with any existing zoning for agricultural use, or a Williamson Act contract. **Conclusion: No impact.**

c) The proposed Project and any future redevelopment facilitated by the Project will not conflict with existing zoning for timber, forestland, or timberland production. **Conclusion: No impact.**

d) The proposed Project and any future redevelopment facilitated by the Project will not result in the loss or conversion of forestland to non-forest use; neither the project site nor surrounding parcels meet any criteria for forestland. **Conclusion: No impact.**

e) No farmland or forest land will be impacted as a result of the Project or any future redevelopment project at this Site; therefore, there will be no change in the availability or use of agriculturally viable land or forest or timberland areas. **Conclusion: No impact.**

MITIGATION MEASURES:
No mitigation required.

Sources

1) California Department of Conservation, 2018. California Dept. of Conservation Website (https://maps.conservation.ca.gov/dlrp/ciff/)
2) County of Humboldt Web GIS Portal (https://humboldtgov.org/1357/Web-GIS)

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?		✓		
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		✓		
c) Expose sensitive receptors to substantial pollutant concentrations?		✓		
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?			✓	

SETTING: The Site is located in Humboldt County, which lies within the North Coast Air Basin (NCAB) and is regulated by the North Coast Unified Air Quality Management District (NCUAQMD). Future redevelopment project activities facilitated by the Project would be subject to the authority of the NCUAQMD and the California Air Resources Board (CARB) (NCUAQMD[1]).

With respect to Air Quality - General, the City of Eureka's 2040 General Plan has established goals and policies to protect and improve air quality in the Eureka area[2]. Key policies include:

- 2040 General Plan Policy AQ-1.3: Require new discretionary developments to incorporate mitigation measures that utilize Best Management Practices and reduce emissions from both construction and operational activities, consistent with the North Coast Unified Air Quality Management District requirements and State regulations.

- 2040 General Plan Policy AQ-1.5: Require consultation and coordination with the North Coast Unified Air Quality Management District for any projects that may have a potential health risk or may expose the public to hazardous air pollutants, as well as determining compliance with adopted rules and regulations.

- 2040 General Plan Policy AQ-1.6: Require buffering of uses, facilities, and operations that may produce toxic or hazardous air pollutants and/or odors (e.g., commercial and industrial uses, highways, etc.) to provide an adequate distance from sensitive receptors (e.g., housing and schools), consistent with California Air Resources Board recommendations.

DISCUSSION & FINDINGS:

a) The NCUAQMD is listed as "attainment" or "unclassified" for all the federal and state ambient air quality standards except for the state 24-hour particulate (PM_{10}) standard, which relates to concentrations of suspended airborne particles that are 10 micrometers (microns) or less in size, such as fugitive dust from construction and agricultural activities, smoke from wood burning stoves (in winter months), road dust (in summer months), forest wildfires, and sea salts[3]. Because, in part, of the large number of wood stoves in Humboldt County, and the generally heavy surf and high winds common to the area of the project site, Humboldt County has routinely exceeded the state standard for PM_{10} air emissions. Future redevelopment facilitated by the Project would create PM_{10} emissions from construction activity and from vehicles coming and going to the Site during operation.

To address non-attainment for PM_{10}, the NCUAQMD prepared the Particulate Matter Attainment Plan, Draft Report, in May 1995 (Attainment Plan) (NCUAQMD)[4]. This Report includes a description of the planning area that includes the NCUAQMD, an emission inventory, general attainment goals, and a listing of cost-effective control strategies. The NCUAQMD's Attainment Plan established goals to reduce PM_{10} emissions and eliminate the number of days in which standards are exceeded. This plan presents available information about the nature and causes of PM_{10} standard exceedances and identifies cost-effective control measures to reduce PM_{10} emissions to levels necessary to meet California Ambient Air Quality Standards. However, the NCUAQMD states that the plan, "should be used cautiously as it is not a document that is required in order for the District to come into attainment for the state standard."

Compliance with applicable NCUAQMD PM_{10} rules is applied as the threshold of significance for the purposes of analysis. NCUAQMD Rule 104 Section D, Fugitive Dust Emissions, is applicable to any future redevelopment of the Site resulting from the Project. NCUAQMD Rule 104(D) prohibits the generation of unnecessary fugitive dust emissions and recommends that reasonable precautions should be taken to prevent particulate matter from becoming airborne. Fugitive dust emissions would vary from day to day during construction of any future redevelopment project, depending on the nature and magnitude of construction activity and local weather conditions. Unless controlled, fugitive dust emissions during construction of future redevelopment projects at the Site could have a potentially significant impact; therefore, Mitigation Measure Air-1 is incorporated to comply with NCUAQMD's Rule 104(D).

Operational impacts of future redevelopment facilitated by the Project will depend on the redevelopment project selected. The NCUAQMD's Attainment Plan includes three areas of recommended control strategies to meet their goals to reduce PM_{10} emissions by the earliest practicable date and eliminate the number of days in which PM_{10} standards are exceeded. These three areas are as follows: 1) Transportation, 2) Land Use, and 3) Burning.

1) Transportation. The Site is located in an area with commercial and industrial-zoned properties, and the Site is adjacent to US Highway 101 (Broadway) to the east, which provides easy access to and from the property for vehicular traffic. Any future redevelopment of the Site as a result of the Project would result in similar activities to activities already taking place at the Site and in the vicinity (i.e. commercial service and retail uses along US Highway 101) and therefore are not anticipated to increase the overall amount of transportation in the area. Additionally, the Site is located in proximity to the Eureka Waterfront Trail (a California Coastal Trail)'s Del Norte Street access point and is on the Humboldt Transit Authority's Redwood Transit System (RTS) bus route serving communities from Scotia to Trinidad, the Eureka Transit Gold Route serving downtown Eureka, Bayview, Pine Hill, Bayshore Mall, Harris Street, and E Street, and the Southern Humboldt Intercity Route which serves southern Humboldt communities Redcrest, Weott, Meyers Flat, Miranda, Phillipsville, Redway, Garberville, and Benbow north to Rio Dell, Fortuna, and Eureka, including the College of the Redwoods campus. As a result, there are opportunities for future Site users to access the site without a personal vehicle.

2) Land Use. Those areas of the property not covered with existing buildings consist primarily of asphalt, concrete and packed gravel surfaces, essentially making the Site a paved commercial property which generates insignificant PM_{10} when compared with traffic on unpaved rural roads. The commercial uses associated with redevelopment of the Site in the future as a result of the Project are not expected to generate more PM_{10} than that by current and/or previous property uses. A future project would involve redeveloping the Site with commercial uses allowed under the General Service Commercial (GSC)/Service Commercial (CS) land use/zoning designations on an existing developed property which currently has split commercial (GSC/CS)/industrial (GI/MG) land use/zoning designations (which have the same maximum building FAR standards) and is currently used for automobile sales, repair and storage, and retail sales, and the industrial-zoned portion was previously used as a paint factory. By removing the GI/MG designations at 936 W Hawthorne, the Project would prevent heavy industrial uses currently allowed on the western

portion of the Site, including industrial uses with potentially objectionable externalities like toxic or hazardous air pollutants and/or odors. The new GSC/CS designations provide for appropriately located areas for retail and wholesale commercial establishments that offer commodities and services required by the residents of the City and its surrounding market area, which is appropriate for the Site as it adjoins US Highway 101 (Broadway) and any future redevelopment of the Site under the CS zoning district development standards as a result of the Project is not anticipated to result in a cumulatively considerable net increase of any criteria pollutant.

3) Burning. Future redevelopment project activities as a result of the Project are not anticipated to include any burning of material for disposal or heating purposes.

Because the generation of PM_{10} emissions resulting from the operation of a future redevelopment project will depend on the development selected, additional project-specific analysis will be required in the future. Given that the Project is rezoning property in a manner that removes the potential for future heavy industrial uses, and given any project-specific impacts of future redevelopment on PM_{10} emissions will be identified and mitigated through the Coastal Development Permit process and subsequent environmental review, the Project will not conflict with or obstruct implementation of the NCUAQMD Attainment Plan for PM_{10}. With implementation of Mitigation Measure Air-1, future redevelopment facilitated by the Project would implement fugitive dust (PM_{10}) controls during construction and would not conflict with applicable air quality plans. Therefore, the Project's impacts will be reduced to a less-than-significant level with mitigation. **Conclusion: Less Than Significant with Mitigation Incorporation.**

b) As noted above, Humboldt County has been designated as being in "non-attainment" for PM_{10} air emissions, and is designated attainment for all other state and federal standards. Potential Project impacts on PM_{10} air emissions are discussed under part (a), above. The change from GI/MG land use/zoning designations to GSC/CS designations will not increase the potential for emissions-generating uses at the Site. To reduce fugitive dust generation during any future construction activities facilitated by the Project, standard dust control measures have been included as Mitigation Measure Air-1. Once construction has been completed, no dust is anticipated to be generated as commercial activities at the Site will occur on impervious, hardpack surfaces such as asphalt and concrete. However, because the operational impacts of future redevelopment on criteria pollutants will depend on the development selected, additional project-specific analysis will be required in the future. In addition, any future redevelopment of the Site as a whole will require a Coastal Development Permit (CDP); therefore, additional air quality impacts resulting from the operations of any future redevelopment project would be identified and mitigated through the CDP and subsequent CEQA review.

As a result, the Project will not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state air quality standard. **Conclusion: Less Than Significant with Mitigation Incorporation.**

c) Sensitive Receptors as defined by the NCUAQMD are any Class I Area (National Parks and Wilderness) and/or any other areas deemed sensitive by the Air Pollution Control Officer (APCO) including, but not limited to preschools and daycare centers, K-12 schools, senior retirement housing, and hospitals. The vacant lots west of the Site are zoned industrial but have mapped seasonal wetland and are not considered a sensitive receptor from the APCO perspective. There are no APCO-designated sensitive receptors within at least a 1,000-foot radius of the Site. Additionally, there are groups of people more affected by air pollution than others. CARB has identified the following persons are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities,

elementary schools, and parks. The nearest potential sensitive receptor is Del Norte Street Park, located more than 2,000 feet (0.4 miles) west of the Site, as well as Alice Birney Elementary School, located approximately 0.8 miles from the Site, and the Winzler Children's Center (a pre-school), also located approximately 2,000 feet (0.4 miles) from the Site (as crow flies). Both of the schools are located south and slightly west of the site, at a higher elevation than the Site. The Site's proximity to the Pacific Ocean contributes significant air exchange and the prevailing wind direction (from the northwest) would be expected to transport any fugitive emissions from the Site away from Del Norte Street Park, but may transport them toward the Winzler Children's Center.

There is the potential for fugitive dust emissions to impact sensitive receptors during construction of future redevelopment of the Site facilitated by the Project. To reduce fugitive dust generation during any future demolition, excavation, or earthmoving construction activities at the Site, standard dust control measures have been included as Mitigation Measure Air-1. Due to the distance to the nearest potential receptor, and with the implementation of Mitigation Measure Air-1, the Project, and any future redevelopment facilitated by the Project, would not result in any construction-phase adverse impacts to nearby sensitive receptors.

This Initial Study assumes future redevelopment facilitated by the Project will be commercial uses, but the CS-zoning could also allow new residential uses (i.e., new sensitive receptors) at the Site. The Site is adjacent to Broadway. Based on the Humboldt County Association of Governments' Eureka Broadway Multimodal Corridor Plan[5], this section of Broadway serves up to 35,000 vehicles per day, or 1,458 vehicles per hour. Traffic along Broadway could result in health impacts for future residents, and therefore additional mitigation may be necessary to reduce exposure if any future redevelopment introduces sensitive receptors to the site (e.g., standards for filtration in new residential units). Because impacts of future redevelopment on sensitive receptors will depend on the development selected, additional project-specific analysis will be required in the future. Any project-specific impacts of future redevelopment will be identified and mitigated through the Coastal Development Permit process and subsequent environmental review. As a result, the Project will not result in an impact on sensitive receptors. **Conclusion: Less Than Significant with Mitigation Incorporation.**

d) A future redevelopment project is not anticipated to result in any construction technique that would generate odors that could reasonably be considered objectionable by the general public. Regarding future operational impacts, the change from GI/MG land use/zoning designations to GSC/CS designations removes the potential for certain odor-generating uses at the Site, such as waste processing and disposal, but other odor-generating uses would continue to be allowed, such as cannabis growing and manufacturing (although Eureka Municipal Code 158[6] includes regulations preventing cannabis odors from being detectable outside of a building containing a cannabis use). Because the potential of future redevelopment to generate odors will depend on the development selected, additional project-specific analysis will be required in the future. Any future redevelopment project that could generate adverse odors outside of the Site would be required to include odor control mechanisms. Odor controls are achievable through various types of engineering controls; wastes generated would be stored in secured containers before being subsequently disposed. Any future redevelopment project would also consider other factors that can affect odor dispersion such as facility siting (setback), prevalent wind direction, wind speed (atmospheric meteorology), and surrounding site topography. Further, as noted above, the Site's proximity to the Pacific Ocean and prevailing wind direction would be expected to defuse any fugitive odors that may be emitted from the Site. Lastly, a future redevelopment project and it's uses will require a CDP, and therefore, additional project-specific air quality impacts would be identified and mitigated through the CDP and subsequent CEQA review. Therefore, the Project will not result in other emissions including odors adversely affecting a substantial number of people. **Conclusion: Less than significant impact.**

MITIGATION MEASURES:

Mitigation Measure Air-1: Measures to Reduce Air Pollution.

To reduce fugitive dust generation during any demolition, excavation, or earthmoving construction activities at the Site, the following dust control measures shall be implemented by the construction contractors during construction activity associated with future redevelopment:

- Water all exposed surfaces in active construction areas as necessary to minimize dust generation and use erosion control measures to prevent water runoff containing silt and debris from entering the storm drain system;
- Cover trucks hauling soil, sand, and other loose material;
- Pave, water, or apply non-toxic soil stabilizers on unpaved access roads and parking areas;
- Sweep paved access roads and parking areas daily; and
- Sweep streets daily if visible material is carried onto adjacent public streets.

Sources

1) NCUAQMD Website (https://www.ncuaqmd.org/planning-ceqa)
2) City of Eureka General Plan, 20181997. Section 6, Natural Resources, Air Quality – General (https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=)
3) US EPA, 2018. Report on the Environment "Particulate Matter Emissions" (https://cfpub.epa.gov/roe/indicator.cfm?i=19)
4) NCUAQMD Attainment Plan (https://ncuaqmd.specialdistrict.org/files/6f1ad639b/NCUAQMD+Attainment+Plan+5-95.pdf
5) HCAOG, 2021, Eureka Broadway Multimodal Corridor Plan (https://www.hcaog.net/sites/default/files/eureka_broadway_multimodal_corridor_final_report.pdf)
6) City of Eureka Municipal Code Chapter 156: Cannabis (https://codelibrary.amlegal.com/codes/eureka/latest/eureka_ca/0-0-0-67276)

IV. **BIOLOGICAL RESOURCES**. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			✓	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		✓		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		✓		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

SETTING:

The City of Eureka's Coastal Land Use Plan (LUP)[1] is the foundational policy document for areas of the City located in the Coastal Zone. It establishes farsighted policy that forms the basis for and defines the framework by which the City's physical and economic resources in the Coastal Zone are to be developed, managed, and utilized. Particularly relevant to this Section 4.4 evaluation are established Goals and Policies of Section 6: Natural Resources of the LUP related to development in close proximity to wetlands and other environmentally sensitive habitat areas, which are largely repeated within the Title 10, Chapter 5 (Coastal Zoning Code) of the Eureka Municipal Code (EMC)[2].

- LUP Policy 6.A.3: The City shall maintain and, where feasible, restore biological productivity and the quality of coastal waters, streams, wetlands, and estuaries appropriate to maintain optimum populations of aquatic organisms and for the protection of human health through, among other means, minimizing adverse effects of wastewater and stormwater discharges and entrainment, controlling the quantity and quality of runoff, preventing depletion of groundwater supplies and substantial interference with surface water flow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

- LUP Policy 6.A.6 and EMC §10-5.2942.3 declares the following environmentally sensitive habitat areas (ESHA) within the City of Eureka's coastal zone:
  a) Rivers, creeks, sloughs, gulches and associated riparian habitats, including, but not limited to Eureka Slough, Fay Slough, Cut-Off Slough, Freshwater Slough, Cooper

Slough, Second Sloughs, Third Slough, Martin Slough, Ryan Slough, Swain Slough, and Elk River.

b) Wetlands and estuaries, including that portion of Humboldt Bay within the City's jurisdiction, riparian areas, and vegetated dunes.
c) Indian Island, Daby Island, and Woodley Island wildlife area.
d) Other unique habitat areas, such as waterbird rookeries, and habitat for all rare or endangered species on State or Federal lists.
e) Grazed or farmed wetlands (i.e., diked former tidelands).

- LUP Policy 6.A.7 and EMC §10-5.2942.4: Within the Coastal Zone, the City shall ensure that environmentally sensitive habitat areas are protected against any significant disruption of habitat values, and that only uses dependent on such resources shall be allowed within such areas. The City shall require that development in areas adjacent to environmentally sensitive habitat areas be sited and designed to prevent impacts which would significantly degrade such areas and be compatible with the continuance of such habitat areas.

- LUP Policy 6.A.8 and EMC §10-5.2942.5: Within the Coastal Zone prior to the approval of a development, the City shall require that all development on lots or parcels designated NR (Natural Resources) on the Land Use Diagram or within 250 feet of such designation, or development potentially affecting an environmentally sensitive habitat area, shall be found to be in conformity with the applicable habitat protection policies of the General Plan. All development plans, drainage plans, and grading plans submitted as part of an application shall show the precise location of the habitat(s) potentially affected by the proposed project and the manner in which they will be protected, enhanced, or restored.

- LUP Policy 6.A.19 and EMC §10-5.2942.15: The City shall require establishment of a buffer for permitted development adjacent to all environmentally sensitive areas. The minimum width of a buffer shall be 100 feet, unless the applicant for the development demonstrates on the basis of site-specific information, the type and size of the proposed development, and/ or proposed mitigation (such as planting of vegetation) that will achieve the purposes(s) of the buffer, that a smaller buffer will protect the resources of the habitat area. As necessary to protect the environmentally sensitive area, the City may require a buffer greater than 100 feet. The buffer shall be measured horizontally from the edge of the environmental sensitive area nearest the proposed development to the edge of the development nearest to the environmentally sensitive area. Maps and supplemental information submitted as part of the application shall be used to specifically define these boundaries.

- LUP Policy 6.A.20 and EMC §10-5.2942.16: To protect urban wetlands against physical intrusion, the City shall require that wetland buffer areas incorporate attractively designed and strategically located barriers and informational signs.

DISCUSSION & FINDINGS:

a) Publicly available Critical Habitat GIS data[3] was reviewed from United States Fish & Wildlife Service (USFWS) for threatened and endangered species, and the California Natural Diversity Database (CNDDB)[4] for candidate, sensitive, and special status species. The following species are potentially located within the general vicinity of the greater Eureka area:

Species Name	Common Name

Pink Sand-Verbena	Dicots
Ardea alba	Great Egret
Ardea herodias	Great Blue Heron
Bombus occidentalis	Western Bumble Bee
Castilleja ambigua var. humboldtiensis	Humboldt Bay Owl's-Clover
Charadrius alexandrinus nivosus	Western Snowy Plover
Chloropyron maritimum ssp. palustre	Point Reyes Salty Bird's-Beak
Coturnicops noveboracensis	Yellow Rail
Egretta thula	Snowy Egret
Entosphenus tridentatus	Pacific Lamprey
Erysimum menziesii	Menzies' Wallflower
Gilia millefoliata	Dark-Eyed Gilia
Layia carnosa	Beach Layia
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh
Nycticorax	Black-Crowned Night Heron
Oncorhynchus clarkii	Coast Cutthroat Trout
Oncorhynchus kisutch pop. 2	Coho Salmon - Southern Oregon / Northern California ESU
Oncorhynchus mykiss irideus pop. 16	Steelhead - Northern California DPS
Pandion haliaetus	Osprey
Rana aurora	Northern Red-Legged Frog
Sidalcea malachroides	Maple-Leaved Checkerbloom
Spergularia canadensis var. occidentalis	Western Sand-Spurrey

Existing conditions at the Site consist of four commercial structures along with asphalt, concrete and packed gravel surfaces which cover a majority of the property. The Site is fully developed and does not contain suitable habitat for any species identified as a candidate, sensitive, or special status species. The nearest mapped critical habitats include tidewater goby habitat approximately 7,000 feet (1.3 miles) away from the Site, and snowy plover habitat approximately 12,600 feet (2.4 miles) away. The emergent wetlands on the HWMA property directly to the west of the Site, and Palco Marsh and Humboldt Bay further west, provide suitable habitat for various special status species. Any future redevelopment of the site will be required to comply with LUP Policy 6.A.19 and EMC §10-5.2942.15 which require establishment of a physical buffer between development and nearby ESHAs, including wetlands, wide enough to protect the resources of the habitat area. In addition, LUP Policy 6.A.20 and EMC §10-5.2942.16 prevent future encroachment into ESHA on the adjacent property by requiring wetland buffer areas to incorporate attractively designed and strategically located barriers and informational signs. The Local Coastal Program (LCP) ESHA protection policies cited above, as well as Mitigation Measure Visual-1, will also ensure any newly proposed exterior lighting resulting from future redevelopment will not impact nearby ESHA.

In addition, any future redevelopment of the Site as a result of the Project would be required to avoid water quality and hydrological impacts on nearby wetlands during construction and post-construction activities consistent with the City's Urban Storm Water Quality Management and Discharge Control Ordinance and MS4 permit[5]. The Site is 3.18 acres in size and any construction project disturbing one or more acres of land is regulated by the Construction General Permit (CGP) and requires a Stormwater Pollution Prevention Plan to demonstrate compliance with the CGP. Because the Site is near sensitive habitat, even if less than one acre of ground disturbance were proposed, the City would require an Erosion and Sediment Control Plan to avoid and minimize construction-phase impacts. Regarding post-construction stormwater management, projects that create or replace 5,000 square feet or more of impervious surface, including redevelopment projects, require a post-construction Stormwater Control Plan consistent with the low-impact-development (LID) standards included in the Humboldt LID manual[6]. Even projects that

replace between 2,500 and 5,000 square feet of impervious surface require a minimum of one Site Design Measure such as a vegetated swale and must meet a calculated runoff reduction standard. Because the site is covered in impervious surfaces now without any LID features, redevelopment will result in an improvement in stormwater management over current conditions, avoiding impacts to nearby habitat areas.

Future redevelopment of the Site facilitated by the Project is likely to involve landscaping (the Coastal Zoning Code requires perimeter landscaping around parking lots, and, as described above, LID features will be required and may include plantings). The Coastal Zoning Code does not address potential impacts of landscaping on surrounding habitat, such as issues with planting invasive species that can spread and colonize nearby sensitive habitat. To ensure future landscaping at the Site does not adversely impact nearby sensitive habitat, Mitigation Measure Bio-1 sets limitations on new landscaping planted at the Site, prohibiting the planting of invasive species, prohibiting bare soil in landscaped areas, and requiring only the planting of species native to Eureka within 100 feet of the western Site boundary. Implementation of Mitigation Measure Bio-1 will reduce potential landscaping impacts from future redevelopment facilitated by the Project to a less than significant level.

Although there are no trees or other vegetation on the Site that could harbor birds, nesting and migratory birds may be present in the vegetation on the HWMA property directly to the west of the Site, and if so, could be impacted by the noise and vibration of future construction activities at the Site. Mitigation Measure Bio-2 therefore requires avoidance of noise- or vibration-generating construction activities within 100 feet of the western perimeter of the property during the bird nesting season, and if avoidance is not feasible, requires pre-construction surveys within 100 feet of construction limits, and the implementation of the mitigation measures if an active nest is encountered to prevent nest abandonment. Implementation of Mitigation Measure Bio-2 would reduce potential impacts to special status and nesting bird species to a less-than-significant level.

For all these reasons, no impact to a candidate, sensitive, or special status species is anticipated from the Project or from redevelopment facilitated by the Project. **Conclusion: Less than significant impact with mitigation.**

b) The Site is fully developed and contains no riparian habitat or sensitive natural communities identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. The closest sensitive natural community identified in the Local Coastal Program is Parco Marsh, which provides coastal salt marsh habitat to waterfowl and fish. The Site is over 700 feet east of the marsh, and any future redevelopment project will need to prepare a construction-phase erosion control plan and post-construction stormwater control plan consistent with the City's Urban Storm Water Quality Management and Discharge Control Ordinance and MS4 permit standards as described above, which will mitigate any potential stormwater impacts from the Site running off onto W Hawthorne Street or the adjoining vacant industrial zoned property to the west, and then connecting to Palco Marsh. **Conclusion: Less than significant impact.**

c) The Site is fully developed and contains no wetlands. The vacant industrial-zoned land (comprised of four assessor's parcel numbers) directly west of the Site and owned by HWMA is considered a seasonal wetland. According to the National Wetlands Inventory[7], this 1.56-acre Freshwater Emergent Wetland habitat is classified as a PEM 1C.

Classification Code PEM 1C is defined as follows:

- System Palustrine (P): The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but

with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.

- Class Emergent (EM): Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.
- Subclass Persistent (1): Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in the Estuarine and Palustrine systems.
- Water Regime Seasonally Flooded (C): Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

During heavy rains, stormwater from Broadway (Highway 101) runs onto the Site, flowing across the area currently dedicated to used car and truck sales, and then runs onto the vacant parcel (with mapped seasonal wetland) to the west via two drainage ditches. Stormwater falling directly on the Site also flows through the two drainage ditches and onto the vacant lot. Recently, the Regional Water Quality Control Board (RWQCB) received a complaint from HWMA, owner of the vacant lot. The complaint alleged that petroleum hydrocarbon contamination from the Site was being transported onto the vacant lot via the two drainage ditches. The RWQCB issued an Investigative Order in response to this complaint, requesting that a study be performed to determine if this allegation is true. The Site owner hired LACO Associates to perform the requested study, which involved collecting stormwater runoff samples during three distinct rainfall events and analyzing these samples for the following:

- Total Suspended Solids (TSS) by Method SM 2540-D
- pH and turbidity (field measurements)
- Oil & Grease by EPA Method 1664A
- Volatile organic compounds (VOCs) by EPA Method 8260

This study was completed in April 2023 after collecting representative samples from the two drainage ditches during three distinct storm events. With one inconsequential exception, no VOCs were detected in any of the six stormwater runoff samples collected during this study. The exception was a detectable concentration of toluene in one sample, reported at 0.6 µg/L (parts per billion, or ppb). The primary maximum contaminant level (MCL) (i.e., drinking water standard) for toluene is 150 µg/L, so this result is less than 1% of the drinking water standard and barely above the method detection limit of 0.5 µg/L for toluene. TPH-gasoline (TPH-g) was not detected in any of six samples (minimum detection limit of 50 µg/L). The reported results for Oil & Grease also confirmed that petroleum contamination in runoff from the Site onto the vacant parcel is not causing any degradation of the seasonal wetland on the vacant parcels west of the Site. A copy of the LACO Associates report describing the stormwater study and its results is included in *Appendix E*.

As described under (a) and (b) above, any redevelopment project would be required to be designed to meet MS4 permit requirements, which will result in an improvement to the stormwater management program at the Site over existing conditions. In fact, the prior interested purchaser of the Site commissioned a study in 2018 to evaluate the potential impact of a redevelopment project on the nearby seasonal wetlands (considered ESHA) and recommend measures that could be implemented to minimize or eliminate this impact. This study, performed by Natural Resources Management (NRM) Corporation of Eureka, concluded, "Current state regulations regarding on-site storm water infiltration would require the proposed development design to include vegetated infiltration features (such as bioswales) to manage storm

water runoff. If such features are positioned adjacent to the ESHA, they would provide more than adequate mitigation for potential development impacts and could mitigate non-point source pollutants being carried into the ESHA via storm water runoff." Therefore, a local company with expertise in protecting environmentally sensitive habitat areas concluded that incorporating bioswales and/or other stormwater features in the design of a future redevelopment project would constitute an improvement over the current operation that has been in place for decades. A copy of the NRM Report titled "Supplemental Application: Request for Reduced Buffer" is included in *Appendix F*.

As described here and under (a) above, with the resource protection standards of the LCP (e.g., minimum buffer distances), the requirements of the City's Urban Storm Water Quality Management and Discharge Control Ordinance and MS4 permit and the State Construction General Permit, and the lighting, landscaping, and bird nesting mitigation measures (Visual-1, Bio-1 and Bio-2) included in this Initial Study, the Project, and any future redevelopment facilitated by the Project, will not have a substantial adverse effect on the adjacent freshwater emergent wetland or on other down-watershed wetlands like those in Palco Marsh. **Conclusion: Less than significant impact with mitigation.**

d) Wildlife corridors are defined as regions that connect wildlife habitat by providing a stable path through otherwise inaccessible regions (due to human presence, steep topography, or logging). The Site is developed and located within a developed urban area and is not located within or adjacent to any waterways or gulch greenways that act as wildlife corridors through the City. Wildlife corridors are delineated in publicly available GIS Biological Resources data from Humboldt County[8]. The nearest mapped wildlife corridor (Migratory Deer Winter Range) is located approximately 16 miles from the Site, and the Site is more than 2,000 feet away from a fish-bearing waterway (North Bay Channel of Humboldt Bay). Thus the Project, and any future redevelopment facilitated by the Project, will not interfere with the movement of fish or wildlife. **Conclusion: No impact.**

e) The City's LUP provides policies to protect biological resources in the Coastal Zone. There are no trees or other biological resources on the Site, and any future redevelopment project would not degrade or significantly impact Natural Resources as outlined in Section 6: Natural Resources of the LUP, such as altering surface water features; diking, filling or dredging wetlands; encroaching on environmentally sensitive areas; or degrading natural vegetation buffer areas that protect riparian habitats. Any future redevelopment facilitated by the Project will be reviewed for consistency with the Local Coastal Program and will only receive a Coastal Development Permit authorization if consistent with the biological resource protection policies of the City's LUP, including LUP Policy 6.A.19 which requires buffering to protect nearby habitat areas. In addition, the requirements of the City's Urban Storm Water Quality Management and Discharge Control Ordinance and MS4 permit and the State Construction General Permit, and the requirements of the lighting, landscaping, and bird nesting mitigation measures (Visual-1, Bio-1 and Bio-2) included in this Initial Study, ensure the Project, and any future redevelopment facilitated by the Project, will not conflict with the biological resource protection policies of the certified LCP. **Conclusion: Less than significant impact with mitigation.**

f) No Habitat Conservation Plans, Natural Community Conservation Plans, or any other local, regional, or State Habitat Conservation Plans have been adopted in the area, and therefore the Project, and any future redevelopment facilitated by the Project, will not conflict with any Habitat Conservation Plans. **Conclusion: No impact.**

<u>MITIGATION MEASURES:</u>

Mitigation Measure Bio-1: Limitations on Site Landscaping.

No plant species listed as problematic and/or invasive by the California Native Plant Society, the California

Invasive Plant Council, or by the State of California shall be planted at the Site. Landscaped areas shall be fully covered with no bare soil exposed; any landscaping areas not covered by vegetation shall be covered by mulch, bark chip, crushed rock, pebbles, stone, or similar non-plant materials (i.e., no bare ground). Any vegetation planted within 100 feet of the western perimeter of the Site shall be species native to the Eureka area as listed by the California Native Plant Society.

Mitigation Measure Bio-2: Avoidance and Minimization Measures to Protect Special Status and Nesting Birds.

Avoid any noise- or vibration-generating construction activities within 100 feet of the western perimeter of the property between mid-March and mid-August, when birds may be nesting on the adjacent property. If construction is to take place within 100 feet of the western perimeter of the Site during the nesting season (March 15 to August 15 for most birds), a qualified biologist shall conduct a pre-construction survey for nesting bird pairs, nests, and eggs within 100 feet of the construction limits. If an active nest is encountered, species-specific measures shall be prepared by a qualified biologist in consultation with the USFWS or CDFW, as applicable, and implemented to prevent abandonment of the active nest.

Sources

1) City of Eureka 1997. Coastal General Plan (https://www.eurekaca.gov/DocumentCenter/View/1224/Appendix-B---Coastal-Land-Use-Policy-PDF)
2) Eureka Municipal Code Chapter 5: [Coastal] Zoning Code (https://www.eurekaca.gov/DocumentCenter/View/1189/Coastal-Zoning-Code-PDF?bidId=)
3) USFWS Critical Habitat GIS data (https://www.fisheries.noaa.gov/resource/map/national-esa-critical-habitat-mapper)
4) CNDDB Maps and Data (https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data)
5) City of Eureka Stormwater (https://www.eurekaca.gov/307/Stormwater)
6) Humboldt LID manual (https://humboldtgov.org/2486/Stormwater-Program)
7) USFWS National Wetlands Inventory (https://www.fws.gov/wetlands/)
8) Humboldt County GIS Data Download, Biologic Resource Areas (https://humboldtgov.org/276/GIS-Data-Download)

V. CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of an historical resource pursuant to §15064.5?				✓
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		✓		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		✓		

SETTING, DISCUSSION & FINDINGS:

Tribal Consultation:

On July 15, 2021, a referral was circulated for a project at 2000 Broadway (aka 2036 Broadway; APN 003-182-005) proposing to surplus a City-owned, 600-square foot (20' x 30'), landlocked parcel and vacate an alley easement on APNs 003-182-013 and -014 (known as the "the Notch"). Since future redevelopment of the site will include ground disturbing activities, a second referral was sent on February 15, 2023 clarifying the purpose of the proposed surplus and alley vacation is to allow the property owner the ability to sell the entire property, comprised of APNs 003-182-005, -010, -013 and -014 (known as 2000 Broadway and 936 W. Hawthorne Street); and, although no specific project is proposed at this time, the entire property could be redeveloped with new uses, such as a hotel, drive-through restaurant, mixed-use development, or other similar uses. Additionally, separate AB 52 and California Government Code (CGC) §65352 Notification referrals were sent to the local tribes on September 28, 2013 for further review and comment on the proposed Local Coastal Program (LCP) Amendment to change the land use and zoning designations at 936 W Hawthorne Street from General Industrial (GI)/General Industrial (MG) to General Service Commercial (GSC)/Service Commercial (CS).

Tribal Response:

The Wiyot Tribe THPO indicated the Site is located in proximity to known sensitive sites; therefore, the Wiyot Tribe THPO requested (and the Blue Lake Rancheria THPO concurred) a tribal cultural resource (TCR) survey be prepared prior to any ground disturbing activity, monitored by a tribal representative. If TCRs are found during the survey with a monitor, the applicant/owner will work with the tribes to support the return or protection of found TCRs, and a monitor will be present for all ground disturbing activities. In addition, regardless of whether TCRs are found, inadvertent discovery protocol will be followed for any future ground disturbing activities. These requests are included as Mitigation Measures Cultural-1, Cultural-2, and Cultural-3 further described below.

a) A structure must be treated as a historic resource if it is listed in, or determined to be eligible for listing in, the California Register of Historic Resources. Historical significance may be inferred from any of the following factors:

1) Association with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2) Association with the lives of persons important to local, California, or national history.
3) Embodiment of the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4) Embodiment, or a likelihood thereof, of information important to the prehistory or history of the local area, California, or the nation.

The Site is not located within a designated local, state or national Historic District, and the Site and existing

structures are not listed on the National Register of Historic Places[1], the California Register of Historic Resources[2], or Local Register of Historic Places[3]. Due to the age of the existing buildings on the Site, a Historical Resource Report (*Appendix C*) was prepared by Raymond W Hillman of Pride Enterprises Historical Consulting in 2018. The report concluded that while "all of the buildings were constructed during the great timber boom after World War II…The businesses [that occupied the buildings and Site] were just a small part of hundreds of others serving the needs of this exceedingly prosperous era and by themselves have no further distinction… [and therefore] …have no historical significance." Thus the Project, and any redevelopment facilitated by the Project, will not cause a substantial adverse change in the significant of a historic resource. **Conclusion: No impact.**

b) There are no known archaeological resources identified within the Site; however, as described above, due to the potential sensitivity of the Site, Mitigation Measure Cultural-1 requires a tribal cultural resource (TCR) survey monitored by a Wiyot tribal representative be prepared prior to any ground disturbing activity, and, if TRCs are found during the survey, Mitigation Measure Cultural-3 requires a monitor to be present for all ground disturbing activities. In addition, regardless of whether TCRs are found, Mitigation Measure Cultural-2 requires the City's standard inadvertent discovery protocol be followed during any future ground disturbing activities.. Thus, with mitigation, the Project, and any redevelopment facilitated by the Project, will not cause a substantial adverse change in the significant of an archaeological resource. **Conclusion: Less than significant impact with mitigation incorporated**.

c) Significant excavation, trenching and other ground disturbance and development activities have taken place at the Site in the past. It would be expected that any human remains present at the Site would be buried under several feet of existing fill, and because ground disturbing activities to significant depths are unlikely, it is unlikely that remains will be encountered during any future construction. However, since ground disturbance is anticipated for any future redevelopment project facilitated by the Project, it is possible that work will uncover remains. Implementation of Mitigation Measure Cultural-2 would reduce the potential impact to archaeological resources or human remains by requiring procedures that shall be taken in the event of inadvertent discovery. Therefore, implementation of Mitigation Measure Cultural-2 described above and listed below would reduce potential impacts of the Project, and any future redevelopment facilitated by the Project, to a level of less than significant because a plan would be implemented to address discovery of unanticipated human remains during any ground disturbing activities to preserve and/or record those resources consistent with appropriate laws and requirements. **Conclusion: Less than significant with mitigation incorporated**.

MITIGATION MEASURES:

Mitigation Measure Cultural-1: Tribal Cultural Resource Survey with Wiyot Tribe Monitor.

A tribal cultural resource (TCR) survey shall be prepared prior to any ground disturbing activity at the Site, and shall be monitored by a tribal representative. If TCRs are found during the survey with a monitor, the applicant/owner will work with the tribes to support the return or protection of found TCRs, and a monitor will be present for all ground disturbing activities at the Site as outlined in Mitigation Measure Cultural-3. In addition, regardless of whether TCRs are found, inadvertent discovery protocol will be followed for all ground disturbing activities at the Site, as outlined in Mitigation Measure Cultural-2.

Mitigation Measure Cultural-2: Inadvertent Discovery Protocol During Ground Disturbance.

Inadvertent discovery protocol will be followed for any future ground disturbing activities at the Site, as outlined below:

1. If archaeological resources are encountered during construction activities, all onsite work shall cease in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist will be retained to evaluate and assess the significance of the discovery, and develop and implement

an avoidance or mitigation plan, as appropriate. For discoveries known or likely to be associated with native American heritage (prehistoric sites and select historic period sites), the Tribal Historic Preservation Officers for the Bear River Band, Blue Lake Rancheria, and Wiyot Tribe are to be contacted immediately to evaluate the discovery and, in consultation with the project proponent, City of Eureka, and consulting archaeologist, develop a treatment plan in any instance where significant impacts cannot be avoided. Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, shellfish or faunal remains, and human burials. Historic archaeological discoveries may include 19th century building foundations; structure remains; or concentrations of artifacts made of glass, ceramic, metal or other materials found in buried pits, old wells or privies.

2. If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified paleontologist can assess the nature and importance of the find and, if necessary, develop appropriate treatment measures in conformance with Society of Vertebrate Paleontology standards, and in consultation with the City of Eureka.

3. In the event of discovery or recognition of any human remains during construction activities, the landowner or person responsible for excavation would be required to comply with the State Health and Safety Code Section (§) 7050.5. Construction activities within 100 feet of the find shall cease until the Humboldt County Coroner has been contacted at 707-445-7242 to determine that no investigation of the cause of death is required. If the remains are determined to be, or potentially be, Native American, the landowner or person responsible for excavation would be required to comply with Public Resources Code (PRC) §5097.98. In part, PRC §5097.98 requires that the Native American Heritage Commission (NAHC) shall be contacted within 24 hours if it is determined that the remains are Native American. The NAHC would then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the landowner or the person responsible for the excavation work for the appropriate means of treating the human remains and any associated grave goods within 48 hours of being granted access to the site. Additional provisions of Public Resources Code §5097.98 shall be complied with as may be required.

Mitigation Measure Cultural-3: Post TCR Survey Ground Disturbing Activities Requiring Wiyot Tribe Monitor. If TCRs are found during the survey with a monitor (See Mitigation Measure Cultural-1), the applicant/owner will work with the tribes to support the return or protection of found TCRs, and a monitor will be present for all future ground disturbing activities at the Site as follows:

1. All ground disturbing project activities shall be monitored by a Tribal Representative, who shall maintain daily field notes and have the authority to temporarily halt work at a potential "find" location to allow for resource assessment and treatment, in consultation with the City, three Wiyot area THPOs (Blue Lake, Bear River, Wiyot) and the applicant's representative.

2. Costs for monitoring, reporting and, if needed, a consulting archaeologist who shall consult, develop and implement a rapid response inadvertent discovery data recovery excavation plan, plus analyses of recovered constituents and reporting of potentially significant discovery(ies), shall be borne by the Applicant.

3. A monitoring contract between the Applicant and monitoring tribe shall be fully executed prior to beginning any ground disturbing activities. A copy of the fully executed monitoring contract shall be

provided to Development Services – Planning prior to issuance of a building permit for ground disturbance. The contract with the monitoring tribe shall include the requirement for the applicant to provide at least 48-hour notice to the monitoring tribe of the need for a monitor to be on site.

Sources

1) National Register of Historic Places (https://www.nps.gov/subjects/nationalregister/database-research.htm)
2) California Register of Historic Resources (https://ohp.parks.ca.gov/?page_id=21238)
3) Local [Eureka] Register of Historic Places (https://www.eurekaca.gov/DocumentCenter/View/3357/Local-Register-of-Historic-Places-sorted-by-APN)

VI. **ENERGY**. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environment impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			✓	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

SETTING:

The Site is serviced by existing Pacific Gas and Electric (PG&E) electrical and natural gas lines.

DISCUSSION:

a) When a specific redevelopment project is identified, all construction and regular operation activities at the Site will be conducted in a manner consistent with Title 24 of the California Code of Regulations (and enumerated in Eureka Municipal Code (EMC) §150.120 [Energy Conservation])[1] which contains energy conservation standards applicable to residential and non-residential buildings throughout California. The design process and multiple layers of regulatory authority and inspections throughout the permitting process will ensure that the Site complies at all times with building energy efficiency standards outlined in Title 24 regarding the use of energy resources. Temporary energy use in connection with future construction would entail consumption of diesel fuel and gasoline by construction equipment and by the transportation of construction materials, supplies and construction personnel. Given the construction period and implementation of State regulations regarding vehicle emission and fuels standards, such as the Low Carbon Fuel Standard and anti-idling regulations, energy use related to construction would not be wasteful or inefficient. Energy would also be required to sustain future Site operations, such as for building power and heating, and for employee/customer vehicle trips to and from the site. The CS zoning district allows for a broad array of uses with a broad array of energy demands; for example, certain allowed commercial uses could generate significantly more vehicle trips than other commercial uses. Because operational impacts on energy consumption will depend on the redevelopment project selected, additional project-specific analysis will be required in the future. Any future redevelopment project encompassing the entire Site will require a Coastal Development Permit (CDP); therefore, additional project-specific energy impacts would be identified and mitigated through the CDP and subsequent CEQA review. For all these reasons, the Project will not result in significant impacts due to wasteful, inefficient, or unnecessary consumption of energy resources. **Conclusion: Less than significant impact**.

b) The City's 2040 General Plan has a goal (Goal U-5)[2] of increased renewable energy provision and overall energy efficiency and conservation throughout the City, with eleven implementing policies, including policies focused on new development (e.g., Policy U-5.5: encourage new development to install renewable energy systems and facilities; Policy U-5.3: engage with property owners and developers early in the design process to incorporate energy saving strategies into appropriate projects; and Policy U-5.4: encourage building orientations and landscape designs that promote the use of natural lighting, take advantage of passive summer cooling and winter solar access, and incorporate other techniques to reduce energy demands). The State also has a number of plans for renewable energy and energy efficiency, the majority of which would not be directly applicable to the Project or future redevelopment facilitated by the Project. As described above, future redevelopment would minimize energy consumption in accordance with EMC §150.120 (Energy Conservation), which requires compliance with Title 24. A future redevelopment project could in fact contribute to increasing energy efficiency over current Site operations if, for example, electric vehicle

charging stations and/or solar panels are installed at the Site, which would very likely be required by Title 24 and the California Building Code. However, how future development relates to state and local plans for renewable energy and energy efficiency will depend on the project selected. Therefore, additional project-specific analysis will be required in the future, and will occur during the Coastal Development Permitting process and subsequent environmental review. Thus, the Project will not conflict with or obstruct plans for renewable energy or energy efficiency. **Conclusion: No impact**.

MITIGATION MEASURES:
No mitigation required.

Sources
1) City of Eureka, Chapter 150.120: Energy Conservation (https://codelibrary.amlegal.com/codes/eureka/latest/eureka_ca/0-0-0-39007)
2) 2040 General Plan Goal U-5: Energy: https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=)

VII. GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?		✓		
iii) Seismic-related ground failure, including liquefaction?		✓		
iv) Landslides?				✓
b) Result in substantial soil erosion or the loss of topsoil?			✓	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		✓		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				✓
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		

SETTING: The Site and the entire North Coast of California are located within a seismically active region situated approximately 35 miles northeast of the Mendocino Triple Junction, which is the convergence of three tectonic plates (North American, Gorda, and Cascade Plates), and two major fault systems: the San Andreas Fault, and the Cascadia Subduction Zone[1]. The nearest fault zone to the Site is the Little Salmon Fault Zone, the northernmost boundary of which is mapped approximately 1.9 miles to the southwest (as the crow flies)[1]. Other seismic zones include: the Mad River Fault Zone (approximately 7.2 miles to the north), the San Andreas Fault (approximately 35 miles to the southwest), and the Cascadia Subduction Zone (approximately 70 miles to the west)[1]. The bedrock in the area is characterized as the Franciscan Complex, which is an accretionary wedge from the Cascadia Subduction Zone comprised of resistant blocks of metamorphosed greywacke sandstone, basalts, limestone, shales, and cherts in a highly sheared argillaceous matrix.

The Site is located along the southern portion of Broadway (Highway 101) in Eureka, California. Topography at the Site is relatively flat, with no discernable slope (with the max slope being approximately 1-2%) and surface elevations ranging from 9 to 15 feet NAVD88 based on 2019 LiDAR on the City's WebGIS[1]. Existing Site conditions consist of four commercial structures along with asphalt, concrete and packed gravel surfaces which cover a majority of the parcel. Available information from the County of Humboldt indicates that the Site is located within an "Area of Potential Liquefaction." The Site is categorized as "Relatively Stable" in regards to seismic safety due to the limited extent of topography in the area.

The Site has undergone substantial geologic and hydrogeologic characterization as part of historical environmental investigative and remedial activities. Further details are described in Section IX. "Hazards and

Hazardous Materials." The depositional environment of the project site is an overlapping stratigraphy of alluvial deposits and bay sediments. Previous environmental investigations at the Site have identified that shallow sediments ranging from poorly graded fine grain material to well graded coarse-grained material lie beneath a layer of imported fill. As noted above, a majority of the Site is covered in pavement, buildings and other impervious surfaces.

DISCUSSION & FINDINGS:

a.i) Based upon a review of the Alquist-Priolo Earthquake Fault Zoning Map,[1] there are no known Alquist Priolo Fault Zones in the vicinity of the Site; therefore, the Project and any future redevelopment facilitated by the Project would have no impact with regard to the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map. Due to the distance to the nearest known active fault zone (the Little Salmon Fault Zone approximately 1.9 miles to the southwest), the Site has a low potential for a surface fault rupture. No impact related to fault rupture would result. **Conclusion: No impact.**

a.ii) The entire City of Eureka is susceptible to strong seismic shaking that could cause major damage, including at the Site. However, the Project, and any future redevelopment facilitated by the Project, would not increase the risk of strong seismic ground shaking or exposure to strong seismic ground shaking above existing conditions. Any future redevelopment would be designed and constructed in conformance with the California Building Code regulations, which include seismic standards, and would likely be more resilient than the existing buildings which were built to older seismic standards. Mitigation Measure Geo-1 requires a site-specific geotechnical report be prepared by a qualified expert prior to the construction of new buildings at the Site, and requires the incorporation of the report's recommendations into Final Building Plans to the satisfaction of Development Services – Building. With the incorporation of Mitigation Measure Geo-1, the Project, and any future redevelopment facilitated by the Project, will not directly or indirectly cause substantial adverse effects related to strong seismic ground shaking. **Conclusion: Less Than Significant with Mitigation Incorporation.**

a.iii) Liquefaction of sediment occurs when its shear strength is lost as a result of an increase in pore water pressure in response to cyclic loading. As such, liquefaction is a potentially damaging response to seismic shaking. Young, poorly consolidated, poorly graded sandy soils are prone to undergo liquefaction during strong earthquakes. The Site is located within an area that is prone to "Potential Liquefaction" as detailed on the Humboldt County's Central Humboldt County Seismic Safety Map and "Relatively Stable" on the Humboldt County Web GIS Portal[1]. Previous environmental investigations at the Site have identified that shallow sediments range from poorly graded, fine grain material to well graded, coarse-grained material, underlying an upper layer of fill material. These sediments at the Site could be subjected to liquefaction due to seismic shaking. Any future redevelopment facilitated by the Project would be built to California Building Code requirements, and, with the imposition of Mitigation Measure Geo-1, would be based on the recommendations of a site-specific geotechnical report prepared by a qualified professional. Comparatively, the existing buildings onsite are aging and built to older seismic standards. Therefore, the Project, and future redevelopment facilitated by the Project, will not increase the risk of liquefaction or exposure to liquefaction. **Conclusion: Less Than Significant with Mitigation Incorporation.**

a.iv) Landslides generally occur on relatively steep slopes and/or on slopes underlain by weak sediments. The Site is relatively flat, with the max slope being approximately 1-2%. Based on the current Site conditions, the slope stability for the Site is stable under static and seismic conditions. No evidence of recent or active landslides has been observed or published near the Site. Thus, landslides within or near the Site are unlikely to occur, and the potential for landslide occurrence is not increased by the Project, or by future redevelopment facilitated by the Project. **Conclusion: No impact.**

b) A majority of the Site is covered by asphalt, concrete and/or packed gravel. Any future redevelopment facilitated by the Project may involve grading and/or excavations for building footings, utility trenching, drainage swales, etc. The Site is 3.18 acres in size and any construction project disturbing one or more acres of land is regulated by the Construction General Permit (CGP) and requires a Stormwater Pollution Prevention Plan to demonstrate compliance with the CGP. Because the Site is near sensitive habitat, even if less than one acre of ground disturbance were proposed, the City would require an Erosion and Sediment Control Plan to avoid and minimize construction-phase impacts. Erosion control measures would include but not be limited to silt fences, straw wattles, and soil stabilization controls. As such, the Project and any future redevelopment facilitated by the Project will not result in significant erosion or loss of topsoil. **Conclusion: Less than significant impact.**

c) The Site is located on a geologic unit/undifferentiated soil[1] that is susceptible to liquefaction. However, as discussed in Section a.iii above, the Site area is relatively flat and has been designated as "Relatively Stable."[1] As discussed above, with the implementation of California Building Code requirements and Mitigation Measure Geo-1, the Project and future redevelopment facilitated by the Project would not increase the threat of on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. **Conclusion: Less Than Significant with Mitigation Incorporation.**

d) Expansive soils represent a significant structural hazard to buildings, especially where seasonal fluctuations in soil moisture occur. Existing development in the vicinity of the Site shows no evidence to suggest that expansive soils are locally present and detrimentally affecting foundations, slabs, or pavement. Additionally, the extensive characterization of shallow sediments at the Site due to environmental investigation have not identified expansive soils. **Conclusion: No impact**.

e) The Site is serviced by existing City of Eureka municipal sewage disposal and water supply facilities. Therefore, any future redevelopment project will not have septic tanks or other alternative wastewater disposal systems. **Conclusion: No impact.**

f) There are no known unique paleontological resources or unique geologic features at the Site. Mitigation Measure Cultural-2 (Inadvertent Discovery Protocol During Ground Disturbance) described in the "Cultural Resources" Section V.b) will be followed if any paleontological resources are uncovered during ground disturbing activities for any future redevelopment project. As a result, the Project and any future redevelopment facilitated by the Project will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. **Conclusion: : Less Than Significant with Mitigation Incorporation.**

MITIGATION MEASURES:

Mitigation Measure Geo-1: Site-Specific Geotechnical Investigation.

Prior to the construction of new buildings at the Site, a geotechnical report shall be prepared by a certified engineering geologist and/or civil engineer documenting the results of an investigation of the site for geologic hazards and recommending mitigation measures to reduce the risk of identified hazards to acceptable levels consistent with the state and local building codes. The geotechnical report shall be submitted to Development Services – Building for review and approval and the Final Building Plans shall incorporate the recommendations of the approved report.

Sources

1) County of Humboldt GIS Portal Website (https://webgis.co.humboldt.ca.us/HCEGIS2.0/)

VIII. GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?				✓

SETTING:

According to the Governor's Office of Planning and Research (OPR)[1], the impacts of climate change pose an immediate and growing threat to California's economy, environment, and to public health. Cities and counties will continue to experience the effects of climate change in various ways, including increased likelihood of droughts, flooding, wildfires, heat waves and severe weather. In Eureka, climate change impacts of particular concern are coastal erosion, flooding, and habitat modification. According to the IPCC, strong and sustained reductions in greenhouse gas emissions would limit climate change.

As defined in Assembly Bill (AB) 32[2], greenhouse gases (GHGs) include but are not limited to: carbon dioxide (CO2), methane (CH4), nitrous oxide (NOx), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF6). Global warming potential (GWP) is a measure of how much a given mass of GHG is estimated to contribute to global warming and is devised to enable comparison of the warming effects of different gases. It is a relative scale that compares the gas in question to that of the same mass of carbon dioxide. Carbon dioxide equivalency (CO2e) is a quantity that describes, for a given GHG, the amount of CO2 that will have the same GWP when measured over a specified timescale generally reported in metric tons/year of CO2e.

Given the global nature of climate change resulting from GHG emissions, GHG emission impacts are inherently cumulative in nature. The determination of whether a project's GHG emissions impacts are significant depends on whether emissions would be a cumulatively considerable contribution to the significant cumulative impact. Threshold of significance criteria for determining whether a project's GHG emissions are significant, either project specifically or cumulatively, is set forth in CEQA Guidelines §§ 15064(h)(3), 15064.4, 15130(b)(1)(B) and (d), and 15183.5[3], all of which may be used individually, collectively or in combination with one another in making such a determination.

DISCUSSION & FINDINGS:

a) Changing the land use and zoning designations at 936 W Hawthorne Street from General Industrial (GI)/General Industrial (MG) to General Service Commercial (GSC)/Service Commercial (CS) does not have a clear impact on future GHG emissions generation. Some of the heavy industrial uses allowed in the MG zoning district may require significant energy to operate, or may involve operations that emit GHG emissions (i.e., stationary sources of emissions), and the MG zoning district[4] allows for retail and wholesale stores with single occupant floor areas of 40,000 square feet or larger, like Costco, which could generate a large amount of vehicle trips from customers and deliveries. However, the CS zoning district also allows a wide array of light industrial uses and large retail and wholesale stores, and various other commercial uses that could generate significantly more vehicle trips from customers in comparison to an industrial use. The CS zoning district also allows for residential and mixed-use development, which could conversely reduce vehicle miles traveled by providing housing in an area high in goods and services.

Construction activities and site improvements associated with any future redevelopment of the Site would produce GHG emissions over a short time, including from construction equipment and vehicle exhaust, worker commuting trips and supply delivery trips. Heavy equipment operation produces GHG emissions mainly in the form of carbon dioxide with small amounts of methane and nitrous oxide. Additionally, the operation of a future redevelopment project would generate GHG emissions from vehicle trips from customers, workers and deliveries (vehicular miles traveled [VMT]), and from gas and electric consumption in buildings resulting from heating, cooling, lighting, equipment and appliance use.

Any future redevelopment project facilitated by the Project wouldn't likely significantly increase operations emissions of the Site from the current commercial service retail uses, or historic industrial and heavy commercial uses including truck and auto repair and painting, paint manufacturing and sales, print shop, construction and roofing and various retail sales outlets, auto towing and recovery, and concrete batching. However, the CS zoning district allows for a broad array of uses with a broad array of GHG emissions potential. Because operational impacts on GHG emissions will depend on the redevelopment project selected, additional project-specific analysis will be required in the future, and mitigations may be necessary, such as purchasing 100% renewable energy for onsite electricity, or providing bus passes to employees to encourage reduced VMT. Any future redevelopment project encompassing the entire Site will require a Coastal Development Permit (CDP); therefore, additional project-specific GHG emissions impacts would be identified and mitigated through the CDP and subsequent CEQA review. As a result, the Project will not result in the generation of GHG emissions that may have a significant impact on the environment. **Conclusion: Less than significant**.

b) The North Coast Unified Air Quality Management District (NCUAQMD), the City of Eureka, nor Humboldt County have adopted any threshold of significance for measuring the impact of GHG emissions generated by a proposed project. However, Humboldt County and the incorporated cities of Humboldt (including Eureka) are in the process of developing a regional plan for reducing GHG emissions 40% below 1990 emissions levels by 2030, known as the Humboldt Regional Climate Action Plan. The County of Humboldt released a draft of the Humboldt Regional Climate Action Plan in April 2022[5] . GHG reduction strategies in the plan include, but, are not limited to, replacing gas-powered vehicles with electric and other renewable fuel vehicles, building more accessible communities (i.e. promote infill and active transportation and mass transit, and increase density in existing urban areas to reduce VMT between destinations [work, home, store, etc.]), and transitioning form the use of fossil fuels in buildings and commercial and industrial process (i.e. electrifying buildings).

Any future redevelopment project at the Site would likely implement some of the County's 2022 Draft Climate Action Plan GHG reduction strategies because the Site is a brownfield site, located in an existing urban area (Eureka is the population center, economic hub, and county seat for Humboldt County), adjacent to Broadway (Highway 101) and the Redwood Transit System (RTS)[6] bus route serving communities from Scotia to Trinidad, and in close proximity to biking trails[7]. Any future redevelopment project encompassing the entire Site with new commercial uses facilitated by the Project will require a CDP; therefore, additional project-specific GHG impacts would be identified and mitigated through the CDP and subsequent CEQA review at that time. As a result, the Project will not conflict with any policies or plans adopted for the purpose of reducing GHG emissions. **Conclusion: No impact**.

MITIGATION MEASURES:
No mitigation required.

Sources

1) OPR, 2018. Technical Advisory on Evaluating Transportation Impacts In CEQA

(https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf)
2) AB 32 Global Warming Solutions Act of 2006 (https://ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006)
3) CEQA Guidelines (https://www.califaep.org/docs/CEQA_Handbook_2023_final.pdf)
4) Eureka Municipal Code, Title 10, Chapter 5 (Coastal Zoning Code) (https://www.eurekaca.gov/DocumentCenter/View/1189/Coastal-Zoning-Code-PDF?bidId=)
5) Draft Humboldt Regional Climate Action Plan, 2022 (https://humboldtgov.org/DocumentCenter/View/106404/Humboldt-Regional-CAP----Public-Review-Draft-4-7-22-PDF)
6) Redwood Transit System (https://hta.org/agencies/redwood-transit-system/)
7) Humboldt County Bike Routes (https://humboldtgov.org/3403/Bike-Routes)

IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		✓		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		✓		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		✓		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✓
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

DISCUSSION & FINDINGS

a) and b). A hazardous material is any material that poses a significant hazard to human health, safety, or the environment, such as substances that are flammable, corrosive, reactive, oxidizers, combustible, toxic or radioactive. These include substances that require a Material Safety Data Sheet (MSDS), which is information provided by the manufacturer about the chemical's properties, hazards, safe handling practices and other technical and scientific information. The California Fire Code includes specific requirements for the storage, handling, and use of hazardous materials, including compressed gases, flammable/combustible liquids, and flammable gases and solids. In addition, businesses that handle hazardous materials over threshold amounts (55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases) are required to submit a Hazardous Materials Business Plan (HMBP) to the Humboldt County Department of Health and Human Services – Division of Environmental Health (HCDEH), Hazardous Materials Unit[1] and submit the HMBP electronically to the California Environmental Reporting System (CERS).

Any future use of hazardous materials at the Site would be subject to California Environmental Protection Agency (Cal/EPA) hazardous materials regulations consolidated under the State's Unified Program[2] enforced by the Department of Toxic Substances Control (DTSC), the State Water Resources Control Board (SWRCB), NCRWQCB, NCUAQMD, and the Department of Resources Recycling and Recovery (CalRecycle). The Cal/EPA administers the Unified Program via local Certified Unified Program Agencies (CUPAs). The CUPA for Humboldt County is HCDEH. The HCDEH Hazardous Materials Unit has jurisdiction over the Project area and is tasked with local CUPA inspections and compliance.

Worker exposure to hazardous materials is regulated by the California Department of Industrial Relations,

Division of Occupational Safety and Health (Cal/OSHA)[3] and requires worker safety protections. Cal/OSHA enforces hazard communication regulations that require worker training and hazard information (signage/postings) compliance. In addition, hazard communication compliance includes procedures for identifying and labeling hazardous substances, communicating information related to hazardous substances storage, handling, and transportation and preparation of health and safety plans to protect employees.

One of the main purposes of the MG zoning district is to reserve appropriately located areas for hazardous industrial uses that would not be appropriate to locate near residences because of the potential for fire, explosion, noxious fumes, and other hazards, such as motor vehicle wrecking yards, paper mills, paint manufacture, petroleum products storage, etc. Rezoning 936 W Hawthorne from MG to CS will remove the potential for a variety of hazardous heavy industrial uses from being developed at the Site. However, the CS zoning district would continue to allow a broad array of commercial and light-industrial uses that have the potential to include hazardous materials, such as automobile repairs, service stations, and storage yards for commercial vehicles.

During construction activities for any future redevelopment project, materials that are generally regarded as hazardous, such as gasoline, diesel fuel, hydraulic fluids and paint will be used. These materials are routinely used during construction, are not acutely hazardous and usually would be used in small quantities. Hazardous materials storage, handling, transportation, and disposal must comply with an interconnected matrix of local, State, and Federal laws; and with appropriate storage, handling, transport and disposal practices in compliance with those laws, there is a relatively low potential for an accidental release of hazardous materials during construction activities.

As discussed in other sections of this report, either a Stormwater Pollution Prevention Plan (for projects disturbing one or more acres of land) or an Erosion and Sediment Control Plan will be required to avoid and minimize construction-phase impacts. The plan would be required to address materials management during construction to avoid release of pollution into the environment, including proper material delivery and storage, spill prevention and control, and management of concrete and other wastes.

Future redevelopment of the Site facilitated by the Project is likely to involve demolition of one or more of the existing buildings, which are old enough to have the potential to contain asbestos and lead-based paint. Mitigation Measure Haz-1 ensures an asbestos and lead-based paint survey is conducted prior to demolition, and if asbestos or lead-based paint is identified, mitigation measures are put in place to avoid unhealthy conditions for the construction workers and to ensure proper disposal.

Because of the established regulatory framework and requisite construction protocols, and with the implementation of Mitigation Measure Haz-1, future construction and demolition facilitated by the Project is not anticipated to create a significant hazard to the public or the environment from hazardous materials.

Following construction, operation of a future redevelopment project may require ongoing storage, handling, transportation and disposal of hazardous materials, depending on the future uses of the Site. As a result, additional project-specific analysis will be required in the future, with any potential operational impacts identified and mitigated through the Coastal Development Permit process and subsequent environmental review. Thus, with the implementation of mitigation measures, the Project will not create a significant hazard related to the transport, use, disposal or release of hazardous materials. **Conclusion: Less Than Significant with Mitigation Incorporation.**

c) The Site is not located within a quarter mile of an existing or proposed school and, as such, the Project, and any future redevelopment facilitated by the Project, would not result in any increased risk of exposure

to existing or planned schools. The nearest schools are Alice Birney Elementary School, located approximately 0.8 miles from the Site, and Winzler Children's Center (a pre-school), located approximately 2,000 feet away (2/5 or 0.4 mile) as the crow flies. Therefore, no impacts related to the emission or handling of hazardous, or acutely hazardous materials, within 1/4 mile of an existing or proposed school, are expected. **Conclusion: No impact.**

d) The Site is listed on the SWRCB's GeoTracker website[4] as a former LUST site. A fairly detailed description of the activities performed to address fuel contamination at the Site is presented in Section I of this Initial Study, in the section titled "Site Contamination and Remediation."

Appendix A, Figure 4, shows the locations of the former USTs, the Notch, and all groundwater monitoring and remediation wells associated with these environmental investigations. *Appendix D* includes copies of the NFA Letter and the Final Remediation Report for this case.

A copy of the SGMP is included in *Appendix G*, of which Figure 3 illustrates areas where contamination is presently known to be present. The SGMP also specifies what to do if impacted soil and groundwater is encountered while working at other locations not identified in Figure 3. Adherence to the SGMP for any ground disturbing activities is included as Mitigation Measure Haz-2 (described below). With the implementation of Mitigation Measure Haz-2, the Project, and any future redevelopment facilitated by the Project, would not create a significant hazard to the public or the environment related to soil and groundwater contamination. **Conclusion: Less than significant with mitigation incorporation**.

e) The Site is located approximately 1.4 miles northeast of the City of Eureka Municipal Airport, which is identified as the Samoa Airfield and is a City of Eureka owned public airport. Available data from the County of Humboldt's Web GIS Portal[5] indicates that the project site is not within an "Airport Compatibility Zone." With exception of emergency circumstances, the location of the Site relative to Samoa Airstrip will not result in any safety hazards to people using or working at the Site. Any future buildings must not exceed the 55-foot height limit in the CS zoning district which will not obstruct air traffic or cause any other conflicting use; and, any future redevelopment project will not impact airport use, airport operations, or aircraft safety, and will also not result in an airport-related safety hazard for people residing or working in the area. **Conclusion: No impact.**

f) The Site lies within a tsunami hazard zone according to the Tsunami Inundation Map on the County of Humboldt's Web GIS Portal[5]. The County of Humboldt has developed an Emergency Operations Plan[6], a guidance document which addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and human-caused disasters in or affecting Humboldt County. The Pacific Tsunami Warning Center in Ewa Beach, Hawaii, is staffed full-time by scientists, who quickly collect and analyze incoming tsunami data and then decide whether to issue a tsunami warning. In the event of a tsunami warning, the City of Eureka staff Emergency Operations employees are trained in disaster preparedness including broadcasting an emergency tsunami warning (and sirens) and giving direction to the public on actions they should take in the event of a tsunami.

Future redevelopment of the Site facilitated by the Project may result in additional people living in, working in, and/or visiting the tsunami hazard zone. Tsunami risk can best be minimized through timely evacuation from the tsunami hazard zone. Mitigation Measure Haz-3 requires the preparation and implementation of a Tsunami Evacuation Plan for any new structures intended for human occupancy at the Site, consistent with areawide evacuation plans, to ensure occupants are aware of the tsunami threat, warning signals, and evacuation route. With the implementation of Mitigation Measure Haz-3, the Project, and any future redevelopment facilitated by the Project, will not impair implementation of or physically interfere with an

adopted emergency response or evacuation plan.
Conclusion: **Less than significant with mitigation incorporation**.

g) The presence of vegetation at the Site is minimal, and the types of vegetation present are not prone to extensive or severe wildfire activity, and consists mainly of ruderal grasses. The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These Fire Hazard Severity Zones (FHSZ) influence how people construct buildings and protect property to reduce risk associated with wildland fires. The Site is located in a local responsibility area (LRA) according to the County of Humboldt's Web GIS Portal[5] meaning an area where local governments have financial responsibility for wildland fire protection. The Site is in the "LRA Unzoned" and "Other Unzoned" zones, meaning that the Site is in an area that has low potential for wildland fire[6]. Therefore, the Project, and any future redevelopment facilitated by the Project, will not expose people or structures to a significant risk of wildland fires. **Conclusion: No impact**.

MITIGATION MEASURES:

Mitigation Measure Haz-1: Addressing Potential Asbestos and Lead-Based Paint in Demolition.
An asbestos and lead-based paint survey shall be performed on existing buildings at the Site prior to their demolition. If lead-based paints are identified, then federal and state construction worker health and safety regulations related to lead-based paint shall be implemented during demolition, including California Occupational Safety and Health Administration (Cal/OSHA) regulations and California Department of Health Services Lead Work Practice Standards. If asbestos-containing materials or lead are determined to be present, the materials shall be abated by a certified abatement contractor in accordance with applicable regulations, limitations, and notification requirements. All demolished material containing lead or asbestos must be disposed as recommended by the abatement contractor and in accordance with local, State, and Federal regulations.

Mitigation Measure Haz-2: Soil and Groundwater Management Plan.
All future ground disturbing activities at the Site will adhere to the requirements listed in the Soil and Groundwater Management Plan (SGMP). The SGMP addresses potential health and safety concerns, outlines appropriate notification, worker training and materials handling procedures, and provides information and procedures for site workers performing subsurface work at the Site in the event contaminated soil or groundwater is encountered.

Mitigation Measure Haz-3: Tsunami Evacuation Plan.
Tsunami Evacuation Plan shall be prepared for any new structure intended for human occupancy at the Site demonstrating the tsunami threat, warning signs and evacuation route will be adequately communicated to occupants of the structure, and procedures will be in place for the safe evacuation of all occupants in the event of a tsunami. The plan must be prepared prior to occupancy and include (1) a Tsunami Evacuation Route Map for the project site informed by community-wide emergency response plans, showing egress direction(s) and expected assembly area(s) for safe evacuation; (2) hazard risk notification procedures, including details on where placards, flyers, or other materials will be posted at conspicuous locations within the structure, provided in English and Spanish, explaining tsunami risks, the need for evacuation if strong earthquake motion is felt or alarms are sounded, and the location of evacuation routes; and (3) training/instruction materials, as necessary, to ensure the plan will be implemented and enforced for the life of the development.

Sources
1) Humboldt County Department of Health and Human Services – Division of Environmental Health Hazardous Materials Unit (https://humboldtgov.org/684/Hazardous-Materials-Unit)
2) State's Unified Program (https://calepa.ca.gov/cupa/)
3) Cal/OSHA (https://www.dir.ca.gov/dosh/)

4) SWRCB's GeoTracker (https://geotracker.waterboards.ca.gov/)
5) County of Humboldt's Web Portal (https://webgis.co.humboldt.ca.us/HCEGIS2.0/)
6) County of Humboldt, 2015. Emergency Operations Plan
(https://humboldtgov.org/DocumentCenter/View/51861/Humboldt-County-Emergency-Operations- Plan-2015))

X. HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		✓		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;			✓	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			✓	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			✓	
iv) impede or redirect flood flows?			✓	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			✓	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

SETTING: The Site is located in the Eureka Plain watershed[1], which ultimately drains into Humboldt Bay. There are no wetlands, streams, ponds or other watercourses or features located on the Site, but the Site is located directly east of a property that contains a seasonal wetland as described in detail above in Section IV. "Biological Resources". Elevation at the Site is 9 to 15 feet NAVD88 based on 2019 LiDAR on the City's webGIS[2]. Groundwater underlying the Site is encountered at 1 to 5 feet below ground surface (bgs).

DISCUSSION & FINDINGS:

a) Any future redevelopment project will involve grading and excavation, including for new building foundations, utility trenching, and potentially for new drainage swales. Future grading and trenching will not produce a significant impact on water resources as any future redevelopment project will be required to submit and implement either a Stormwater Pollution Prevention Plan (if one or more acres of land will be disturbed) or an Erosion and Sediment Control Plan (for smaller areas of disturbance) to address erosion control, sediment control, off-site tracking control, wind erosion control, non-storm water management control, and waste management and materials pollution control during construction. Also, the Soil and Groundwater Management Plan (SGMP) as discussed in Section IX. "Hazardous Materials", must be followed (Mitigation Measure Haz-2: SGMP), and a post-construction Stormwater Control Plan (SCP) will be required to retain and manage all stormwater onsite consistent with the low-impact-development (LID) standards included in the Humboldt LID manual. As a result, the Project, and any future redevelopment facilitated by the Project, will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **Conclusion: Less than significant impact with mitigation**.

b) A significant portion of the Site is already developed with impermeable surfaces, and neither construction nor operation of any future redevelopment project will require the use of local groundwater, as the Site is, and will be required to remain, connected to the City's water-supply system. Any water used during or post-construction would be taken from the City of Eureka's municipal water supply. No significant impact to groundwater recharge from infiltration will take place because the total area of impervious surfaces at the Site will either remain roughly the same or decrease as the result of implementation of LID features associated with a required post-construction Stormwater Control Plan. As a result, the Project, and any future redevelopment facilitated by the Project, will not decrease water supplies, interfere with groundwater recharge, or impeded sustainable groundwater management of the basin. **Conclusion: No impact**.

c) There are no waterways located at the Site, except for a small drainage ditch, which will be removed if/when the Site is redeveloped. Any future redevelopment facilitated by the Project is likely to reduce the total impervious surface area at the Site and positively affect Site drainage, as described above, because redevelopment will trigger the need for a post-construction Stormwater Control Plan to retain and manage all stormwater onsite consistent with the LID standards in the Humboldt LID manual. As a result, the Project, and any future redevelopment facilitated by the Project, will not significantly increase the rate or amount of surface runoff or create or contribute runoff water which would exceed the capacity of stormwater drainage systems or provide substantial additional sources of polluted runoff (c.ii and c.iii). As discussed in other sections of this report, either a Stormwater Pollution Prevention Plan (for projects disturbing one or more acres of land) or an Erosion and Sediment Control Plan will also be required to avoid and minimize construction-phase impacts. Adherence to the required construction-phase erosion and sediment control plan and post-construction stormwater management plan will result in avoidance of substantial erosion or siltation on- or off-site (c.i).

A portion of the Site is within the FEMA Flood Hazard Zone[3], and any new structures or substantial improvements to existing structures within the Flood Hazard Zone will require a Flood Development Permit and must be found in conformance with the City's flood hazard regulations (Eureka Municipal Code [EMC] Chapter 153)[4], including standards that ensure encroachments into the floodplain do not impede or alter the flow capacity of the floodplain. As a result, the Project, and any future redevelopment facilitated by the Project, will not impede or redirect flood flows (c.iv). **Conclusion: Less than significant impact**.

d) The Site is within a region that could be impacted by a tsunami per the California Tsunami Maps prepared by the California Geological Survey and Governor's Office of Emergency Services on the California Department of Conservation's webiste[5], and a portion of the Site is within the FEMA Flood Hazard Zone with a base flood elevation of 10 feet (NAVD88)[3]. As a result, future redevelopment facilitated by the Project could risk release of pollutants due to project inundation, depending on what potential pollutants are stored onsite and how they are stored. Because risk will depend on the nature of future use of the Site, project-specific analysis will be required in the future. Any new structures or substantial improvements to existing structures within the Flood Hazard Zone will require a Flood Development Permit and must be consistent with the City's floodplain regulations (Chapter 153 of the EMC)[4], which require siting and design to minimize to minimize the risk of flood damage, including standards for anchoring, elevating, and floodproofing. Additionally, any future redevelopment of the entire Site will require Coastal Development Permit authorization, triggering evaluation of the project's compliance with the Local Coastal Program, including Goal 7.D which calls for the minimization of "risk of life, injury, damage to property, and economic and social dislocations resulting from flood hazards." Because of this future permitting and subsequent CEQA review, the Project, and any redevelopment facilitated by the Project, will not result in significant risk.

Conclusion: Less than significant impact.

e) The relevant water quality control plan is the NCRWQCB's Basin Plan[6], which establishes thresholds for key water resource protection objectives for both surface waters and groundwater. The Eureka Plain Basin does not have a groundwater management plan, groundwater ordinances, or basin adjudications. Any future redevelopment facilitated by the Project would not involve the use of groundwater resources and would not impact the quantity or quality of groundwater availability in the Eureka Plain Basin. The Site is largely covered in impervious surfaces now, and redevelopment would trigger compliance with the City's MS4 Permit, which requires the incorporation of low-impact-development features into project design to support stormwater containment and infiltration onsite. Adherence to regulatory requirements will ensure a conflict with the Basin Plan does not occur. **Conclusion: No impact.**

MITIGATION MEASURES:

See Mitigation Measure Haz-2: SGMP in Section IX. "Hazardous Materials"

Sources

1) Eureka Plain watershed (https://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_info/eureka_plain/)
2) City's WebGIS (https://arcgis-svr.ci.eureka.ca.gov/portal/apps/webappviewer/index.html?id=49037ddcf4474c6ba4bdb661ee203604)
3) FEMA Flood Hazard Zone (https://msc.fema.gov/portal/search#searchresultsanchor)
4) Eureka Municipal Code Chapter 153: Flood Hazard Area Regulations (https://codelibrary.amlegal.com/codes/eureka/latest/eureka_ca/0-0-0-39596)
5) California Tsunami Maps (https://www.conservation.ca.gov/cgs/tsunami/maps)
6) NCRWQCB's Basin Plan (https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/)

XI. LAND USE/PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			✓	

SETTING:

The Site adjoins a major commercial corridor, Broadway (Highway 101), is developed with existing commercial uses (and previously housed light industrial uses, such as paint manufacturing), and is surrounded by existing commercial and light industrial uses (such as a hotel and a mini storage facility) except for directly west of the site, which is vacant industrial-zoned property with mapped wetlands.

DISCUSSION & FINDINGS:

a) The Site is currently in commercial use and is located within an area designated for commercial and industrial uses. Changing the land use and zoning at 936 W Hawthorne Street from industrial to commercial will allow the entire Site to have consistent designations to allow it to be redeveloped with new commercial retail and service uses which are more compatible with the exiting development on the Broadway commercial corridor. No public access across the Site currently exists and the Project, and any redevelopment facilitated by the Project, will not divide an established community. **Conclusion: No impact.**

b) Applicable land use plans, policies and regulations covering the Site include the City of Eureka Local Coastal Program[1], the 2040 General Plan[2], and the Eureka Municipal Code (EMC)[3]. The eastern portion of the Site is currently designated/zoned General Service Commercial (GSC)/Service Commercial (CS), and the western portion of the Site is currently designated/zoned General Industrial (GI)/General Industrial (MG). The purpose of the project is to facilitate the redevelopment of the entire Site adjoining Broadway (Highway 101) with new commercial uses to help revitalize this portion of Broadway and to provide goods and services for residents and visitors. In order to do that, the project seeks to change the industrial land use/zoning designation on the west portion of the Site (936 W. Hawthorne Street) to commercial to match the east portion of the Site (2000 Broadway), and request's the Notch be vacated, and the City-owned portion of the Notch be transfer to the surrounding property owner (Alan Tirsbeck) so the site can be redeveloped. EMC §10-5.3007[3] provides that a retail center or other similar project constitutes a principally permitted use; other potential uses could require a Minor or Conditional Use Permit; and, per EMC §10-5.2401(c)[3], a Coastal Development Permit (CDP) is required for any projects requiring a use permit or for any development that can't be statutorily or categorically exempted per EMC §§10-29303 and 10-29304.1[3]. Additionally, many allowed uses in the MG industrial zoning designation can be allowed with a Conditional Use Permit in the CS zoning designation. 2000 Broadway is within the City's Categorical Exclusion Zone, which could exempt construction activities from requiring a CDP if the new use is principally permitted; but, 936 W Hawthorne Street it not; therefore, future redevelopment of the entire Site will require a CDP. Any project-specific components which may conflict with the Local Coastal Program or the EMC will be identified and mitigated through the subsequent permitting and environmental review. Furthermore, as most historical development activity on-site occurred without the benefit of environmental oversight in accordance with current rigorous standards, any future redevelopment project will likely improve the environmental stewardship of the property. Thus the Project, and any future redevelopment facilitated by the Project, will not cause a significant impact due to a conflict with a land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **Conclusion: No significant impact.**

MITIGATION MEASURES:
No mitigation required.

Sources:
1) City of Eureka Local Coastal Program (https://www.eurekaca.gov/DocumentCenter/View/1224/Appendix-B---Coastal-Land-Use-Policy-PDF)
2) 2040 General Plan (https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=)
3) Eureka Municipal Code, Title 10, Chapter 5 (Coastal Zoning Code)
(https://www.eurekaca.gov/DocumentCenter/View/1189/Coastal-Zoning-Code-PDF?bidId=)

XII. MINERAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓

SETTING:

The mineral resource production in Humboldt County is primarily limited to sand, gravel, and other base aggregate. The State Surface Mining and Reclamation Action (SMARA) of 1975[1] is a State policy for the reclamation of mineral lands. The County of Humboldt Web GIS Portal includes parcels containing mineral resources as reported by SMARA. The Site is not displayed on the GIS portal[2], nor are any neighboring parcels.

DISCUSSION & FINDINGS:

a and b). No mineral resources and no mineral resource extraction currently occur within or near the Site. The Project, and any future redevelopment facilitated by the Project, would not affect the availability of a known mineral resource that would be of value to the region, nor would it result in the loss of availability of a locally important mineral resource recovery site delineated on a specific, general plan, or other land use plan because there are no important mineral resources identified in the City's General Plan or Local Coastal Program. Additionally, the Site has undergone numerous subsurface investigations, which detail the geologic conditions at the Site. None of these investigations have determined that the Site contains any mineral resources. Thus the Project, and any future redevelopment facilitated by the Project, will not impact mineral resources. **Conclusion: No impact.**

MITIGATION MEASURES:

No mitigation required.

Sources

1) SMARA, 1975. SMARA Website (https://humboldtgov.org/DocumentCenter/View/353/Surface-Mining-and-Reclamation-Act-of-1975-PDF?bidId=)
2) Humboldt GIS Portal (https://webgis.co.humboldt.ca.us/HCEGIS2.0/)

XIII. NOISE. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		✓		
b) Result in the generation of excessive ground borne vibration or ground borne noise levels?			✓	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓

SETTING:

The Site is located in an existing commercial/industrial area of Eureka. All adjacent parcels except the vacant lot west of the Site are commercial in nature and Broadway/Highway 101 borders the Site to the east. The nearest residential area is approximately 500 feet east of the Site, across Broadway.

The 2040 General Plan[1] establishes exterior and interior noise standards for various types of land uses (Figure N-2 and Table N-3), and daytime and nighttime noise level performance standards for stationary noise sources. The 2040 General Plan also includes Goal N-1 which calls for "economic vitality while limiting residential and business exposure to harmful noise and vibration." There are 14 associated policies, including the following applicable policies:

- Policy N-1.3: Consider the compatibility of new development with the existing noise environment when reviewing discretionary proposals.

- Policy N-1.4: Require development of new noise-sensitive land uses (such as hospitals, convalescent homes, schools, churches, and wildlife habitat) that are proposed in areas exposed to existing or projected exterior noise levels in Figure N-2 or interior noise levels exceeding the levels specified in Table N-3 or the performance standards of Table N-4 to mitigate noise impacts.

- Policy N-1.5: Require new stationary noise sources to mitigate noise impacts on noise-sensitive uses in which exterior level noises exceed the standards in Table N-4.

- Policy N-1.6: Emphasize site planning and project design for all development requiring noise mitigation measures. Consider noise barriers only following the integration of all other practical design-related noise mitigation measures into the project.

- Policy N-1.7: Require development of noise-sensitive uses proposed in areas subject to frequent, high-noise events (such as aircraft overflights, or truck traffic) to adequately evaluate and mitigate the potential for noise-related impacts. Implement mitigation to ensure noise-related annoyance, sleep disruption, speech interference, and other similar effects are minimized using metrics and

methodologies appropriate to the effect(s) to be assessed and avoided. See Figure N-2.

- Policy N-1.8: Acoustical Analysis. Require an acoustical analysis as part of the environmental review process for development of noise-sensitive land uses proposed in noise contour areas that are above the acceptable noise standard or for new development in noise contours shown in Table N-2 that produce noise above those standards identified in Figure N-1. This analysis shall meet the following requirements:
  a. Be the financial responsibility of the applicant.
  b. Be prepared by a qualified person experienced in the field of acoustics.
  c. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
  d. Estimate projected future (20-year) noise levels in terms of the Standards of Tables N-1 and N-2, and compare those levels to the adopted policies of the Noise Element.
  e. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
  f. Estimate interior and exterior noise exposure after the prescribed mitigation measures have been implemented.

- Policy N-1.9: Mixed Use Development. Require new mixed use developments and other uses that generate high noise levels to locate potentially incompatible noise sources away from the residential portion of the development where feasible and desirable.

- Policy N-1.10: High Noise Generating Uses. Locate new industrial uses or other high noise generating uses away from noise-sensitive land uses and minimize excessive noise through project design features that include noise control and landscape buffers. (RDR)

- Policy N-1.11: Roadway Mitigation Measures. Include noise mitigation measures in the design of any improvements along existing streets and highways. When feasible, measures should consider natural buffers or the use of setbacks between roadways and adjoining noise sensitive uses.

- Policy N-1.13: Construction Noise. Minimize construction-related noise and vibration by limiting construction activities within 500 feet of noise-sensitive uses to between 7:00 a.m. to 7:00 p.m., unless further restricted through permitting.

Policy N-1.14: Vibration. Require an assessment of vibration-induced construction activities and development near highways and rail lines, in close proximity to historic buildings and archaeological sites, to ensure no damage occurs.

DISCUSSION & FINDINGS:

a) Any future redevelopment facilitated by the Project will generate a temporary increase in noise during construction activities through the use of various tools, generators, and construction vehicles. 2040 General Plan Policy N-1.13 requires construction-related activities within 500 feet of noise-sensitive uses to be limited to the hours of 7:00 a.m. and 7:00 p.m. Noise-sensitive uses within 500 feet of the Site include the Motel 6 and Broadway Motel to the north, the newly constructed hotel and Serenity Inn to the south, and residences on Progress Avenue and Fairfield Street to the southeast. Mitigation Measure Noise-1 has been added to limit construction noise consistent with 2040 General Plan Policy N-1.13. With the incorporation

of Mitigation Measure Noise-1, any future demolition and construction facilitated by the Project will not result in substantial noise impacts.

Once a new business(es) is up and running, noise generation would depend on the Site's design and uses. Many uses allowed in the CS zoning district would neither be significant noise-generators nor noise-sensitive, such as many commercial uses (e.g., offices) where noise would be limited to the sounds generated by workers, customers, and delivery vehicles; the operation of building heating and cooling systems, and occasional landscaping and maintenance activities. However, certain commercial and light industrial uses allowed in the CS zoning district could be high noise-generating uses, while other commercial and residential uses allowed by the zoning would be noise-sensitive. In either case, the 2040 General Plan policies would require evaluation of potential noise-related impacts, and acoustical mitigation to address any identified impacts to ensure compliance with the City's noise standards. Table N-1 in the 2040 General Plan includes traffic noise levels for various roadway segments across Eureka. The table indicates that Broadway noise in the vicinity of the Site results in 68 L_{dn} from 50 feet. Given the 2040 General Plan establishes a normally acceptable exterior noise exposure limit of 65 L_{dn} and an interior noise exposure limit of 45 L_{dn} for certain noise-sensitive permitted uses in the CS zoning district, such as multi-family residences and transient lodging, mitigation would likely be required if such uses were proposed in the future. Because noise impacts of future redevelopment will depend on the development selected, additional project-specific analysis will be required in the future. Any project-specific impacts of future redevelopment will be identified and mitigated through the Coastal Development Permit process and subsequent environmental review. As a result, the Project will not result in the generation of a substantial increase in ambient noise levels in excess of the City's noise standards. **Conclusion: Less Than Significant with Mitigation Incorporation**.

b) While any future redevelopment project will generate ground-borne vibration and noise levels during construction activities by mean of power tools, construction machinery, and generators, it is not anticipated the vibrations will exceed 0.7 inches per second Peak Particle Velocity (PPV) which is classified by a human response as "disturbing" in CalTrans' 2020 Transportation and Construction Vibration Guidance Manual[2]. A study by the Federal Transportation Administration in 2018 (presented in the CalTrans Vibration Manual) quantified the PPV a person would experience at 25 feet from the source: Vibratory roller – 0.210 PPV, Large bulldozer – 0.089 PPV, Jackhammer – 0.035 PPV. The use of jackhammers, bulldozers, and vibratory rollers may be required for construction of a future redevelopment project but they will be temporary, and any project-specific noise impacts will be identified and mitigated during the Coastal Development Permit process when a specific project is identified. Thus, the Project will not result in the generation of excessive ground borne vibration or noise levels. **Conclusion: Less than significant impact.**

c) The Site is not located within an airport land use plan area or in the vicinity of a private airstrip. It is located approximately two miles from the City of Eureka Municipal Airport, which is identified as the Samoa Airfield and owned by the City of Eureka, and over approximately 3.5 miles southwest of Murray Field, a public use airport. Because of the extremely low aircraft traffic volumes at these airports and the type of aircraft served (e.g., small commuter planes; no commercial aircraft), and because the Site is not located within their takeoff or landing approaches, exposure to noise from the airports in the Project Area is insignificant, and any future redevelopment project facilitated by the Project will not expose people working or residing in the Project Area to cumulative excessive noise levels as a result of proximity to these airports. **Conclusion: No impact.**

MITIGATION MEASURES:

Mitigation Measure Noise-1: Construction Noise Control.

The operation of tools and equipment used in association with any future construction, repair, alteration, or demolition at the Site shall be limited to between the hours of 7:00 a.m. and 7:00 p.m., unless further restricted by any required permit.

Sources:

1) City of Eureka 2040 General Plan (https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=)

2) California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual, April 2020 (https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf)

XIV. POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure)?			✓	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓

SETTING: The City of Eureka includes 9.4 square miles (6,016 acres) of land (with 447 developable acres of land designated for general commercial in the 2040 General Plan), and had an estimated population of 26,129 people in 2022[1]. The 3.18-acre Site is located in an established commercial and industrial area of Eureka that has been used for many decades in a variety of commercial and industrial endeavors. The Site has housed numerous light industrial and commercial enterprises over the past decades, and is currently primarily used for motor vehicle sales and service, and houses a second-hand retail store fronting Broadway (Highway 101). One of the buildings at the Site, known as the Humboldt Paint Factory building, was formerly used for paint manufacturing, sales and warehousing. Except for the vacant industrial-zoned lots to the west with mapped wetland, developed commercial and industrial properties surround the Site.

DISCUSSION & FINDINGS:

a) The Site is currently developed with a variety of uses and could be redeveloped now under current zoning with new businesses. By removing barriers to development of the Notch, and by rezoning a portion of the Site so that the entire property is zoned consistently, the Project facilitates redevelopment of the entire 3.18-acre Site under one owner, which could allow for a larger project to be developed, with a potential net increase in employees and/or the addition of housing. Given the relatively small size of the site (less than 1% of developable CS-zoned land), and given future employees may be hired from the local labor force already living within the greater community and any future residents may also already live in the area, the Project, and any future redevelopment facilitated by the Project, will not likely induce substantial population growth. **Conclusion: Less than significant impact**.

b) Any future redevelopment project would not result in the elimination of any existing housing as no housing exists on-site. Therefore the Project, and any future redevelopment facilitated by the Project, will not displace existing housing or people. **Conclusion: No impact**.

MITIGATION MEASURES:

No mitigation required.

Sources

1) US Census QuickFacts 2020 (https://www.census.gov/quickfacts/eurekacitycalifornia)

XV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?			✓	
b) Police protection?			✓	
c) Schools?			✓	
d) Parks?			✓	
e) Other public facilities?				✓

SETTING:

The Site is located within the City of Eureka limits with fire protection provided by the Humboldt Bay Fire Department, and police protection by the City of Eureka and California Highway Patrol (CHP), who could be assisted by the Humboldt County Sheriff's office (if needed). The Site adjoins the Broadway (Highway 101) commercial corridor in an established commercial and industrial zoned area of the City. The nearest schools are a preschool (Winzler Children's Center) at approximately 0.4 miles, and an elementary school (Alice Burney) at approximately 0.8 miles from the Site (as the crow flies). Additionally, the nearest park is the Del Norte Street Dog Park which is approximately 1,500 feet (0.33 miles) southwest of the Site.

The 2040 General Plan Environmental Impact Report (EIR)[1] analyzed buildout Citywide through 2040, including an anticipated 406,400 and 230,679 additional square feet of commercial space in General Commercial and General Industrial designated areas, respectively, as well as an anticipated 1,290 new residential units in mixed-use areas of the City, including areas designated General Commercial. The EIR found less than significant impacts to fire, police, schools, parks and other public facilities.

DISCUSSION & FINDINGS:

a) The 2040 General Plan EIR anticipates response times and Insurance Services Office (ISO) ratings will remain at current or above target level throughout the current 20-year plan period (through 2040) accounting for projected growth as described above. Given that the existing buildings at the Site are aging and any new buildings would be constructed consistent with current fire code standards, future redevelopment facilitated by the Project is not anticipated to increase the risk of fire and thus demand for fire service at the Site. Any fires at the Site are likely to be within the typical range of service calls, and the Site is centrally located and easily accessible from Broadway and W Hawthorne, within close distance of Humboldt Bay Fire Stations 1 (533 C St; 1.2 miles away) and 3 (2905 Ocean Ave; 0.8 miles away). Therefore, the Project, and any future redevelopment facilitated by the Project, will not result in substantial adverse physical impacts associated with the provision of fire protection. **Conclusion: Less than significant impact.**

b) The 2040 General Plan EIR analyzed future growth through 2040 in accordance with buildout of the General Plan and found that Police service ratios are expected to remain at current or above target level throughout the planning period. Changing the land use and zoning of 936 W Hawthorne Street from industrial to commercial facilitate a larger redevelopment project on the entire Site consistent with the uses and development standards of the CS zoning district. Such a redevelopment project would modernize the existing commercial property, and, except for emergencies, would not place any additional demand on police or fire services. The Site is currently secured by an existing perimeter fence and contains numerous surveillance cameras, and any future redevelopment project may construct, install, and maintain various security measures

such as additional security fencing, surveillance cameras, exterior lighting, etc., during the revitalization process and throughout future operations at the Site. Therefore, the Project, and any future redevelopment facilitated by the Project, will not result in substantial adverse physical impacts associated with the provision of police protection. **Conclusion: Less than significant impact**.

c) The Site is located within a commercial-zoned area of Eureka and the nearest public school (Alice Birney Elementary School) is approximately 0.8 miles (as the crow flies) from the Site. This Initial Study assumes future redevelopment facilitated by the Project would be commercial in nature, but the Site could be developed with multi-family residences under the CS zoning. If residences were developed at the Site in the future, they would be served by Alice Birney Elementary, Winship Middle and Eureka High. Given parking, open space, and other development standards, the potential number of new residences that could be accommodated on the Site, either alone or in combination with commercial uses, would not be substantial enough to have a significant impact on performance objectives for schools. Therefore, the Project, and any future redevelopment facilitated by the Project, will not result in substantial adverse physical impacts associated with school facility demand. **Conclusion: Less than significant impact**.

d) According to the 2040 General Plan EIR, the City has a ratio of community and neighborhood park space to residents of approximately 4.9 acres per 1,000 residents, which is well-above City standards. The nearest parks and recreational facilities to the project site are the Del Norte Street Park, the Del Norte Street Public Pier, and the Eureka Waterfront Trail through Palco Marsh. These and other nearby facilities are currently underutilized and would actually benefit from increased sanctioned use. The Project would not directly or indirectly result in the need for new parks, or expansion of the existing park system as it would facilitate the redevelopment of a brownfield site (previously developed land) as opposed to developing a "greenfield" site (land which has never been developed). This Initial Study assumes future redevelopment facilitated by the Project would be commercial in nature, but the Site could be developed with multi-family residences under the CS zoning. Given parking, open space, and other development standards, the potential number of new residences that could be accommodated on the Site, either alone or in combination with commercial uses, will not be substantial enough to have a significant impact on park and recreational facility use. **Conclusion: Less than significant impact**.

e) Since the Site is already developed, any future redevelopment project would not directly or indirectly induce significant population growth and subsequently will not have an impact on the demand for public facilities, such as public health services or library services. **Conclusion: No impact**.

MITIGATION MEASURES: No mitigation required.

Sources

1) City of Eureka, 2040 General Plan Environmental Impact Report (https://www.eurekaca.gov/806/2040-General-Plan-Update-Preparation)

XVI. RECREATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

SETTING:

The Site adjoins the Broadway commercial corridor which has been used for many decades in a variety of commercial and industrial endeavors. The Site has housed numerous light industrial and commercial enterprises over the past decades, primarily related to motor vehicle sales and service and various retail businesses.

DISCUSSION & FINDINGS:

a) See analysis under subpart (d) of Section XV. "Public Services" above. The Project, and any future redevelopment facilitated by the Project, would not increase the use of existing parks and recreational facilities such that substantial physical deterioration will occur or be accelerated. **Conclusion: Less than significant impact.**

b) Future redevelopment facilitated by the Project could include recreational facilities allowed by the CS zoning district, but construction of recreational facilities at this brownfield, infill location consistent with this environmental document and future permitting will not have an adverse physical effect on the environment. **Conclusion: No impact**.

MITIGATION MEASURES:

No mitigation required.

XVII. **TRANSPORTATION**. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			✓	
b) Conflict or be inconsistent with CEQA guidelines section 15064.3 (b)?			✓	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			✓	
d) Result in inadequate emergency access?			✓	

SETTING:

The Site is situated adjacent to Broadway (Highway 101), a north-south highway stretching nearly the entire length of California and continuing north to the State of Washington. Near the Site, Broadway is composed of two southbound lanes, two northbound lanes and a two-way left turn lane, and a traffic light at W Hawthorne Street and Broadway. Based on the Humboldt County Association of Governments' (HCAOG) Eureka Broadway Multimodal Corridor Plan[1], this section of Broadway serves up to 35,000 vehicles per day, or 1,458 vehicles per hour. Pedestrian sidewalks are present along Broadway, and the Redwood Transit System's route runs along Broadway and operates seven days a week, connecting to communities as far south as Scotia and as far north as Trinidad. Although there are no designated bike lanes on this portion of Broadway, a bike route is planned on W Hawthorne Street (a local east/west street) from Fairfield Street (located east of the Site) to Felt Street (located west of the Site) and connecting with the Waterfront Trail (an existing Class 1 Bikeway located west of the Site and running approximately 7.3 miles along Eureka's shoreline).

The Site is accessed by three driveways from Broadway and three driveways from W Hawthorne Street, and the eastern half of the Site's frontage along W Hawthorne Street has pedestrian sidewalks. Future redevelopment of the Site will trigger requirements to install sidewalk where it doesn't exist and bring existing sidewalk up to City standards. Future redevelopment will also trigger requirements for electric vehicle (EV) and EV-ready parking spaces at the Site.

DISCUSSION & FINDINGS:

a) and b). Eureka is the economic hub of Humboldt County and the densest city in rural Humboldt County with 2,780.2 persons/square mile[2] (Census Quick Facts). Because of the proximity of jobs and services to housing in Eureka, the Office of Planning and Research's Site Check[3] tool maps Eureka's household's per capita vehicle miles traveled (VMT) as at least 15% below the regional average. Infill redevelopment along Broadway, a key north-south transit corridor, aligns with state, regional and local plans for growth through infill in proximity to transit. The nearest bus stops are located approximately 150 feet from the Site on both the east and west side of Broadway, on the north and south sides of W Hawthorne Street. A future redevelopment project at the Site would not include any components that would remove or change the location of any existing or proposed sidewalk, bicycle lane, or public transportation facility, and would be required to install sidewalk along the Site's W Hawthorne Street frontage where it is missing. As a result, future users of the Site could access the Site via transit, bike or foot, in addition to car.

Caltrans provided referral comments on the proposed alley vacation requesting the three existing driveways/access points from Broadway be removed when the Site is redeveloped in the future so that access is from W Hawthorne Street and not Broadway to reduce potential for pedestrian and bicyclist conflicts with automobiles. Caltrans also recommended future redevelopment of the Site incorporate active transportation elements (ped/bike), other transportation options (transit or hotel shuttle) and zero emission infrastructure to help reduce the number of trips generated and lower VMT, consistent with the Eureka Broadway Multimodal Plan.

The impacts of future redevelopment on the circulation system and VMT will depend on a number of factors including what use(s) are proposed and how many trips those uses generate; how internal Site circulation and external access is designed; and how the project is designed and operated to encourage or discourage different modes of transportation. Because impacts of future redevelopment on the circulation system and VMT will depend on the development selected, additional project-specific analysis will be required in the future. Any project-specific transportation impacts will be identified and mitigated during the Coastal Development Permit (CDP) and subsequent environmental review process, which could include, for example, the removal of the existing driveways on Broadway and/or preparation of a traffic impact study to ensure internal circulation and access do not conflict with City or Caltrans goals and policies at that time. As a result, the Project will not conflict with State, regional and local plans for the circulation system nor result in a significant increase in VMT inconsistent with CEQA guidelines §15064.3(b). **Conclusion: Less than significant impact.**

c) All activities associated with any future redevelopment project would occur entirely on the Site and would not result in any changes to road geometry. How many people and how people access and move around the Site could change with redevelopment, which could either make access more or less hazardous over existing conditions; as a result, additional project-specific analysis will be required in the future. Any internal circulation and/or modifications to existing ingress/egress driveways on Broadway and W Hawthorne Street to support any future redevelopment project will be reviewed and approved by Caltrans and City of Eureka Public Works – Engineering respectively, through the CDP and the building permit and/or encroachment permit process (such as removing the access points/driveways to Broadway as previously requested by Caltrans). Therefore, the Project will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). **Conclusion: Less than significant impact**.

d) Broadway is a major emergency route for all first responder activities. Certain uses allowed in the CS zoning district could potentially block the flow of traffic along Broadway if not properly designed (e.g., a drive-through restaurant with inadequate onsite queuing space resulting in vehicles queuing on Broadway). Because the potential for future redevelopment to affect emergency access along Broadway will depend on project design and operation, additional project-specific analysis will be required in the future. The CDP (and associated subsequent environmental review), and the building permit and/or encroachment permit process will ensure any proposed changes to internal circulation or the existing driveways will be designed to ensure adequate access for emergency vehicles along Broadway and to the Site per all applicable state and local laws. As a result, the Project will not result in inadequate emergency access. **Conclusion: Less than significant impact.**

MITIGATION MEASURES:
No mitigation required.

Sources

1) HCAOG, 2021, Eureka Broadway Multimodal Corridor Plan (https://www.hcaog.net/sites/default/files/eureka_broadway_multimodal_corridor_final_report.pdf)
2) US Census QuickFacts 2020 (https://www.census.gov/quickfacts/eurekacitycalifornia)
3) Office of Planning and Research's Site Check (https://sitecheck.opr.ca.gov/)

XVIII. **TRIBAL CULTURAL RESOURCES**. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		✓		
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✓		

DISCUSSION & FINDINGS:

a. and b.) CEQA requires lead agencies to determine if a proposed project would have a significant effect on tribal cultural resources. The CEQA Guidelines define tribal cultural resources as: (1) a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe that is listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources as defined in Public Resources Code §5020.1(k); or (2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code §5024.1(c), and considering the significance of the resource to a California Native American Tribe.

The Project evolved over time since the surplus land and alley vacation for the Notch on 2000 Broadway was initially proposed in 2021, and then the Local Coastal Program Amendment to change the land use and zoning of 936 W Hawthorne Street was proposed in 2023 when the owner became interested in redeveloping the entire Site with new commercial uses (as opposed to just redeveloping 2000 Broadway). Therefore, three referrals were sent to the Bear River Band, Blue Lake Rancheria and the Wiyot Tribe for review and comment as the project evolved. As described in Section V. "Cultural Resources", the Wiyot Tribe THPO indicated the Site is near known sensitive sites; therefore, Mitigation Measure Cultural-1 requires a tribal cultural resource (TCR) survey monitored by a tribal representative be prepared prior to any ground disturbing activity, and, if TRCs are found during the survey, Mitigation Measure Cultural-3 requires a monitor to be present for all ground disturbing activities. In addition, regardless of whether TCRs are found, Mitigation Measure Cultural-2 requires the City's standard inadvertent discovery protocol be followed during any future ground disturbing activities. With the implementation of the aforementioned mitigation measures, the Project, and any future redevelopment facilitated by the Project, will not cause a substantial adverse change in the significance of a TCR. **Conclusion: Less than significant with mitigation incorporated**.

MITIGATION MEASURES:

See Section V. "Cultural Resources" for Mitigation Measure Cultural-1 (TCR Survey with Monitor Prior to Ground Disturbing Activities), Mitigation Measure Cultural-2 (Inadvertent Discovery Protocol During

Ground Disturbance), and Mitigation Measure Cultural-3 (Ground Disturbing Activities Requiring Wiyot Tribe Monitor).

XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			✓	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			✓	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			✓	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			✓	

SETTING:

The Site is located in an established commercial and industrial area of Eureka that has been used for a variety of commercial and industrial endeavors for decades. The Site has housed numerous light industrial (paint manufacturing) and commercial enterprises over the past decades, primarily related to motor vehicle sales and service and retail stores (second-hand goods). All utilities (water, sewer, power and telecommunications) required to operate commercial businesses have been in place for many years.

DISCUSSION & FINDINGS:

a) Limited trenching to connect any new structures to existing municipal water and sewage disposal facilities, natural gas lines and/or telecommunications lines may be required as part of any future redevelopment project. This utility trenching would take place over existing impervious areas and will not cause any significant environmental effects as long as the Soil and Groundwater Management Plan described in Section IX. "Hazardous Materials" and erosion control measures described in Section X.(c) "Hydrology and Water Quality" are followed. Thus the Project, and any redevelopment facilitated by the Project, will not result in significant environmental effects related to the relocation or construction of new or expanded utilities. **Conclusion: Less than significant impact**.

b) The City purchases its water supply from the Humboldt Bay Municipal Water District (HBMWD) which is sourced from the Mad River watershed and Ruth Lake. According to the City of Eureka 2015 Urban Water Management Plan[1], the City has a peak rate allocation of 1,883 Million Gallons per Day (MGD) from HBMWD (Freshwater Environmental Services, 2016). The 2015 demand was 1,034 MGD, or 55 percent of the City's allocation. In 2030, the projected demand is anticipated to be approximately 1,562 MGD, with the 2035 projection being 1,614 MGD. This is a difference of 321 MGD and 269 MGD, respectively. Although no specific redevelopment project has been identified, any future use will likely be comparable to existing uses at the Site in terms of water demand, and the data shows that the City has more than enough water

supply to meet demand during normal, dry, and multiple dry years. Therefore, the City has sufficient capacity available to reasonably serve a future redevelopment project on this brownfield site with commercial uses in the foreseeable future during normal, dry, and multiple dry years; therefore, a less than significant impact will result from the Project and from any redevelopment facilitated by the Project. **Conclusion: Less than significant Impact.**

c) The on-site sewer lateral ties into a 6-inch City of Eureka gravity main that underlies the sidewalk on the west side of Broadway. The City of Eureka's Elk River Wastewater Treatment Plant (ERWTP) provides wastewater services for the City of Eureka[2]. According to the ERWTP 2017 Annual Report[3], the wastewater treatment plant has a permitted capacity of 8.6 MGD. The ERWTP has an average flow rate of 4.75 MGD and was designed to treat peak dry weather flows of 9.5 MGD[2]. Peak wet weather flow design and permitted capacity is 32.2 MGD. Wastewater generated by a future redevelopment project would likely be consistent with existing and/or historic uses at the Site and other adjacent commercial uses. Therefore, the proposed Project would not result in a determination that there is not enough capacity to process the wastewater generated by any future redevelopment project in addition to existing commitments. A less than significant impact will occur from the Project and from any redevelopment facilitated by the Project. **Conclusion: Less than significant impact.**

d) and e). The solid waste providers in the area are Recology and the Humboldt Waste Management Authority (HWMA). Any future redevelopment project will generate solid waste during both construction and operation. Solid waste is collected by Recology or the HWMA, which is taken to the HWMA transfer station approximately 250 feet west of the Site, on the south side of W. Hawthorne Street. The waste is then transferred to the Anderson Landfill in Anderson, California, and the Dry Creek Landfill in Medford, Oregon[2]. The Anderson Landfill has a daily permitted disposal of approximately 1,018 tons per day, and a remaining capacity of about eight million tons. Under current conditions, the Anderson Landfill is not expected to close until 2036. The Dry Creek Landfill has a remaining capacity of approximately 50 million tons. The Dry Creek Landfill has been estimated to have the remaining disposal capacity to provide for its current service area for another 75 to 100 years.

Solid waste generated by a future redevelopment project would be consistent with existing and/or historic uses at the Site and other adjacent commercial uses. Based on the remaining capacities at the Anderson and Dry Creek Landfills, these landfills would have sufficient capacity to serve any future redevelopment project's solid waste disposal needs. Therefore, a less than significant impact will result from the Project, and any future redevelopment facilitated by the Project. **Conclusion: Less than significant Impact.**

MITIGATION MEASURES:
No mitigation required.

Sources
1) Freshwater Environmental Services, 2016. 2015 Urban Water Management Plan for the City of Eureka, CA (https://www.eurekaca.gov/DocumentCenter/View/370/Urban-Water-Management-Plan-PDF)
2) City of Eureka Municipal Service Review. Dated January 25, 2014 (https://humboldtlafco.org/wp-content/uploads/Eureka-Adopted-MSR_1-15-14.pdf)
3) ERWTP 2017 Annual Report (https://www.eurekaca.gov/ArchiveCenter/ViewFile/Item/56)

XX. **WILDFIRE**. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

SETTING:

The Site is located within an urbanized and developed area of the City of Eureka. The California Department of Forestry and Fire Protection (Calfire) maps fire hazard severity zones in state (SRA) and local (LRA) responsibility areas for fire protection. The SRA area does not extend into the City limits[1]. The LRA fire severity map designates some areas within the City limits as moderate to high fire hazard severity zones, as shown on 2040 General Plan[2] Figure HS-4. The project site itself is not in a mapped fire hazard zone. The Palco Marsh open space area is the nearest mapped fire hazard zone, and is mapped as a Moderate Fire Hazard Severity Zone.

DISCUSSION & FINDINGS:

a) through d). The Site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The Site is within an urbanized area, is generally flat, and there are no site characteristics which would contribute to an increased risk of fires. Any future redevelopment project will be designed to meet current building code standards for fire safety. No aspect of the Project, or any future redevelopment facilitated by the Project, will lead to an increased potential for risk of wildfire. **Conclusion: No impact**.

MITIGATION MEASURES:

No mitigation required.

Sources

1) Calfire SRC Fire Hazard Severity Zones, Humboldt County (https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps-2022)
2) City of Eureka, 2040 General Plan (https://www.eurekaca.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=)

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).			✓	
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?		✓		

DISCUSSION & FINDINGS:

a) The Site has been highly disturbed by past commercial and industrial uses that have modified the existing property features with a majority of the property being covered with hardscape (asphalt, concrete and packed gravel) and buildings. Implementation of any future redevelopment project would not significantly degrade the quality of the environment because the Site has been extensively altered by prior development associated with the historical uses of the property (including motor vehicle repair and sales, paint manufacturing, and various other small commercial retail and service businesses). Potential impacts to biological, cultural, and tribal cultural resources resulting from a future redevelopment project are addressed in Section IV, Section V, and Section XVIII, respectively. With implementation of the recommended mitigation measures identified in this Initial Study, the potential for the Project, and any future redevelopment activities facilitated by the Project, to degrade the quality of the environment, including wildlife species or their habitat, plant or animal communities, or important examples of California history or prehistory relating to tribal cultural resources, will be reduced to less-than-significant levels. **Conclusion: Less than significant with mitigation incorporated**.

b) Cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines § 15355). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. As discussed throughout this document, the proposed Surplus Property, Alley Vacation, and land use/ zoning reclassification (LCP Amendment) could facilitate future redevelopment of the entire Site under one owner. Where feasible, the effects of future redevelopment have been analyzed and mitigated in this Initial Study. Some future impacts will be project-specific (e.g., operational impacts on air quality, energy, VMT GHGs, noise and vibrations) and thus cannot be analyzed at this time, but any future redevelopment project encompassing the entire Site will require a coastal development permit and additional environmental review.

Caltrans has published a Project Initiation Report for Broadway in the vicinity of the Site (Post Miles 76 to 77.2) to investigate two alternatives to addressing safety and operational concerns for both motorized and non-motorized users. Both alternatives propose similar treatments in the vicinity of the Site that would improve safety, connectivity, and accessibility for non-motorized users and transit users, including through the addition of buffered bike lanes, additional street trees and pedestrian-scaled lighting, improved pedestrian crossing at the intersection of Hawthorn and Broadway, and the removal of driveways. If funded and implemented, this Project will improve bicycle, pedestrian and transit connectivity to the Site and therefore reduce potential impacts of future redevelopment related to energy, air quality and VMT.

The area surrounding the Site is largely buildout and, as a result, future changes will largely be the result of gradual redevelopment of existing developed parcels (i.e., brownfield, infill sites). These changes are likely to be distributed broadly and incrementally along Broadway and throughout the area, and will likely have a positive impact on the environment by bringing development up to current standards and in line with the City, Region and State's current goals, policies, regulations and programs.

For these reasons and because the proposed Project would not result in significant impacts after mitigation, the proposed Project will not add appreciably to any existing or foreseeable future significant cumulative impact. Incremental impacts, if any, would be very small, and the cumulative impact will be less than significant. **Conclusion: Less than significant impact.**

c) This Initial Study reviewed potential impacts involving each of the issues included in the environmental checklist as it relates to the Project, and any future redevelopment facilitated by the Project. As concluded in these assessments, any future redevelopment project would not result in any significant impacts related to these issues or include any development that would result in any direct or indirect impacts on humans with the implementation of appropriate mitigation measures, and when a specific redevelopment project encompassing the entire Site is identified in the future, a Coastal Development Permit will be required and additional environmental review to identify project-specific impacts will be identified and mitigated as needed at that time. With implementation of mitigation measures as discussed herein and with subsequent environmental review, any future redevelopment project is not expected to result in any substantial adverse direct or indirect effects on human beings. Therefore, with implementation of the mitigation measures listed herein, Project impacts will be less than significant. **Conclusion: Less than significant with mitigation incorporated**.

MITIGATION MEASURES:
See Section 4.0 for a summary of the recommended mitigation measures.

4.0 MITIGATION MEASURES, MONITORING AND REPORTING PROGRAM

This Initial Study for the proposed Surplus Property and Summary Alley Vacation requests at 2000 Broadway, and the Local Coastal Program Amendment request at 936 W Hawthorne Street ("Project") in Eureka, California was prepared in accordance with the California Environmental Quality Act (CEQA) guidelines. The Initial Study includes an analysis of potential environmental impacts of the Project, and commercial redevelopment facilitated by the Project to the extent possible without knowledge of a specific future development project. Where impacts could differ significantly depending on project-specific details, the document makes it clear subsequent environmental review will be required once a redevelopment project is identified. The Initial Study indicates that the potential adverse environmental impacts resulting from the Project, in terms of aesthetics, air quality, biological resources, cultural resources, geology/soils, hazardous materials, water quality, noise, and tribal cultural resources, could be reduced to below levels of significance or minimized with the implementation of mitigation measures. Operational impacts related to air quality, energy, VMT, GHGs, noise and vibrations or other environmental factors which could not be sufficiently analyzed due to not having a specific redevelopment project identified at this time, will be analyzed during subsequent permitting and environmental review. §21081.6 of the Public Resources Code (PRC) and CEQA Guidelines §15097 require the Lead Agency for each project which is subject to CEQA to monitor performance of the mitigation measures included in any environmental document to ensure that implementation does, in fact, take place.

The PRC requires the Lead Agency to adopt a monitoring and reporting program that is designed to ensure compliance during project implementation. In accordance with PRC §21081.6 and CEQA Guidelines §15097, the following Mitigation Monitoring Reporting Program has been prepared and will be implemented for any future redevelopment project at the Site, and will be incorporated into any future permitting and subsequent environmental review.

Implementation timing and method of verification for each mitigation measure is included below the mitigation measure.

Mitigation Measure Visual-1: Exterior Lighting Limitations.

All new exterior lighting fixtures installed at the Site within 100 feet of the western boundary shall (1) be fully shielded with fixtures or hoods, or recessed; (2) be directed downward, away from adjacent properties, environmentally sensitive habitat areas, and the public right-of way; and (3) meet the International Dark Sky Association's requirements for reducing waste of ambient light ("dark sky compliant").

Implementation of this measure will occur prior to issuance of any construction permits associated with redevelopment of the Site resulting from the Project. Proposed exterior lighting fixtures shall be incorporated into construction plans, and compliance of proposed lighting fixtures with this mitigation measure will be verified by City of Eureka staff in Development Services – Planning prior to final building permit approval.

Mitigation Measure Air-1: Measures to Reduce Air Pollution.

To reduce fugitive dust generation during any demolition, excavation, or earthmoving construction activities at the Site, the following dust control measures shall be implemented by the construction contractors during construction activity associated with future redevelopment:

- Water all exposed surfaces in active construction areas as necessary to minimize dust generation and use erosion control measures to prevent water runoff containing silt and debris from entering the storm drain system;
- Cover trucks hauling soil, sand, and other loose material;

- Pave, water, or apply non-toxic soil stabilizers on unpaved access roads and parking areas;
- Sweep paved access roads and parking areas daily; and
- Sweep streets daily if visible material is carried onto adjacent public streets.

Implementation of this measure will occur during any construction activities associated with redevelopment of the Site resulting from the Project, and will be overseen by the construction superintendent. City of Eureka staff will verify the requirements are included in construction plans and specifications.

Mitigation Measure Bio-1: Limitations on Site Landscaping.
No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be planted at the Site. Landscaped areas shall be fully covered with no bare soil exposed; any landscaping areas not covered by vegetation shall be covered by mulch, bark chip, crushed rock, pebbles, stone, or similar non-plant materials (i.e., no bare ground). Any vegetation planted within 100 feet of the western perimeter of the Site shall be species native to the Eureka area as listed by the California Native Plant Society.

Implementation of this measure will occur prior to issuance of any construction permits associated with redevelopment of the Site resulting from the Project. Proposed landscaping shall be incorporated into construction plans and specifications, and compliance of proposed landscaping with this mitigation measure will be verified by City of Eureka staff in Development Services – Planning prior to final building permit approval.

Mitigation Measure Bio-2: Avoidance and Minimization Measures to Protect Special Status and Nesting Birds.
Avoid any noise- or vibration-generating construction activities within 100 feet of the western perimeter of the property between mid-March and mid-August, when birds may be nesting on the adjacent property. If construction is to take place within 100 feet of the western perimeter of the Site during the nesting season (March 15 to August 15 for most birds), a qualified biologist shall conduct a pre-construction survey for nesting bird pairs, nests, and eggs within 100 feet of the construction limits. If an active nest is encountered, species-specific measures shall be prepared by a qualified biologist in consultation with the USFWS or CDFW, as applicable, and implemented to prevent abandonment of the active nest.

Implementation of this measure will occur prior to initiation of any demolition or construction activities within 100 feet of the western perimeter of the property and associated with redevelopment of the Site resulting from the Project, and be implemented by the project applicant during construction. City of Eureka staff will verify protection measures are included in construction plans and specifications, and will verify completion and documentation of surveys by a qualified biologist, if necessary.

Mitigation Measure Cultural-1: Tribal Cultural Resource Survey with Wiyot Tribe Monitor.
A tribal cultural resource (TCR) survey shall be prepared prior to any ground disturbing activity at the Site, and shall be monitored by a tribal representative. If TCRs are found during the survey with a monitor, the applicant/owner will work with the tribes to support the return or protection of found TCRs, and a monitor will be present for all ground disturbing activities at the Site as outlined in Mitigation Measure Cultural-3. In addition, regardless of whether TCRs are found, inadvertent discovery protocol will be followed for all ground disturbing activities at the Site, as outlined in Mitigation Measure Cultural-2.

Implementation of this measure will occur prior to any ground disturbing activities associated with a future redevelopment of the Site resulting from the Project, and will be overseen by the archeologist retained for this purpose, as well as by a representative from the Wiyot Tribe; and completion of this mitigation measure will be

verified by City of Eureka staff in Development Services – Planning by requiring documentation of the survey prior to issuance of construction permits.

Mitigation Measure Cultural-2: Inadvertent Discovery Protocol During Ground Disturbance.
Inadvertent discovery protocol will be followed for any future ground disturbing activities at the Site, as outlined below:

1. If archaeological resources are encountered during construction activities, all onsite work shall cease in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist will be retained to evaluate and assess the significance of the discovery, and develop and implement an avoidance or mitigation plan, as appropriate. For discoveries known or likely to be associated with native American heritage (prehistoric sites and select historic period sites), the Tribal Historic Preservation Officers for the Bear River Band, Blue Lake Rancheria, and Wiyot Tribe are to be contacted immediately to evaluate the discovery and, in consultation with the project proponent, City of Eureka, and consulting archaeologist, develop a treatment plan in any instance where significant impacts cannot be avoided. Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, shellfish or faunal remains, and human burials. Historic archaeological discoveries may include 19th century building foundations; structure remains; or concentrations of artifacts made of glass, ceramic, metal or other materials found in buried pits, old wells or privies.

2. If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified paleontologist can assess the nature and importance of the find and, if necessary, develop appropriate treatment measures in conformance with Society of Vertebrate Paleontology standards, and in consultation with the City of Eureka.

3. In the event of discovery or recognition of any human remains during construction activities, the landowner or person responsible for excavation would be required to comply with the State Health and Safety Code Section (§)7050.5. Construction activities within 100 feet of the find shall cease until the Humboldt County Coroner has been contacted at 707-445-7242 to determine that no investigation of the cause of death is required. If the remains are determined to be, or potentially be, Native American, the landowner or person responsible for excavation would be required to comply with Public Resources Code (PRC) §5097.98. In part, PRC §5097.98 requires that the Native American Heritage Commission (NAHC) shall be contacted within 24 hours if it is determined that the remains are Native American. The NAHC would then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the landowner or the person responsible for the excavation work for the appropriate means of treating the human remains and any associated grave goods within 48 hours of being granted access to the site. Additional provisions of PRC §5097.98 shall be complied with as may be required.

Implementation of this measure will occur during ground disturbing activities, and will be overseen by the construction superintendent who will inform workers about the measure and verify adherence to protocols and notifications if inadvertent discovery occurs. City of Eureka staff will verify (1) inclusion of inadvertent discovery requirements in final plans and specifications, (2) completion of protocols as detailed in Mitigation Measure Cultural-2 upon notification of inadvertent discovery, and (3) development of a treatment plan as necessary.

Mitigation Measure Cultural-3: Post TCR Survey Ground Disturbing Activities Requiring Wiyot Tribe Monitor.
If TCRs are found during the survey with a monitor (See Mitigation Measure Cultural-1), the applicant/owner

will work with the tribes to support the return or protection of found TCRs, and a monitor will be present for all future ground disturbing activities at the Site as follows:

1. All ground disturbing project activities shall be monitored by a Tribal Representative, who shall maintain daily field notes and have the authority to temporarily halt work at a potential "find" location to allow for resource assessment and treatment, in consultation with the City, three Wiyot area THPOs (Blue Lake, Bear River, Wiyot) and the applicant's representative.

2. Costs for monitoring, reporting and, if needed, a consulting archaeologist who shall consult, develop and implement a rapid response inadvertent discovery data recovery excavation plan, plus analyses of recovered constituents and reporting of potentially significant discovery(ies), shall be borne by the Applicant.

3. A monitoring contract between the Applicant and monitoring tribe shall be fully executed prior to beginning any ground disturbing activities. A copy of the fully executed monitoring contract shall be provided to Development Services – Planning prior to issuance of a building permit for ground disturbance. The contract with the monitoring tribe shall include the requirement for the applicant to provide at least 48-hour notice to the monitoring tribe of the need for a monitor to be on site.

Implementation of this measure will occur prior to and during any ground disturbing activities and after the TCR Survey is completed as required by Mitigation Measure Cultural-1 above, and will be overseen by a tribal representative. City of Eureka staff in Development Services – Planning will verify a contract has been obtained with a tribal monitor and monitoring protocols have been incorporated into final construction plans and specifications.

Mitigation Measure Geo-1: Site-Specific Geotechnical Investigation.
Prior to the construction of new buildings at the Site, a geotechnical report shall be prepared by a certified engineering geologist and/or civil engineer documenting the results of an investigation of the site for geologic hazards and recommending mitigation measures to reduce the risk of identified hazards to acceptable levels consistent with the state and local building codes. The geotechnical report shall be submitted to Development Services – Building for review and approval and the Final Building Plans shall incorporate the recommendations of the approved report.

Implementation of this measure will occur prior to issuance of any construction permits associated with redevelopment of the Site resulting from the Project. Completion of this mitigation measure will be verified by City of Eureka staff in Development Services – Building by requiring documentation of the geotechnical investigation and by reviewing incorporation of its recommendations into the construction plans and specifications prior to issuance of construction permits.

Mitigation Measure Haz-1: Addressing Potential Asbestos and Lead-Based Paint in Demolition.
An asbestos and lead-based paint survey shall be performed on existing buildings at the Site prior to their demolition. If lead-based paints are identified, then federal and state construction worker health and safety regulations related to lead-based paint shall be implemented during demolition, including California Occupational Safety and Health Administration (Cal/OSHA) regulations and California Department of Health Services Lead Work Practice Standards. If asbestos-containing materials or lead are determined to be present, the materials shall be abated by a certified abatement contractor in accordance with applicable regulations, limitations, and

notification requirements. All demolished material containing lead or asbestos must be disposed as recommended by the abatement contractor and in accordance with local, State, and Federal regulations.

Implementation of this measure will occur prior to issuance of any demolition permit associated with redevelopment of the Site resulting from the Project. Completion of this mitigation measure will be verified by City of Eureka staff in Development Services – Building by requiring documentation of the asbestos and lead-based paint survey and verifying incorporation of any resulting abatement protocols into construction plans and specifications prior to issuance of construction permits.

Mitigation Measure Haz-2: Soil and Groundwater Management Plan.
All future ground disturbing activities at the Site will adhere to the requirements listed in the Soil and Groundwater Management Plan (SGMP). The SGMP addresses potential health and safety concerns, outlines appropriate notification, worker training and materials handling procedures, and provides information and procedures for site workers performing subsurface work at the Site in the event contaminated soil or groundwater is encountered.

Implementation of this measure will be overseen by the construction superintendent whenever grading or trenching activities are being performed on the Site. City of Eureka staff will verify the requirements of the SGMP are included in final construction plans and specifications.

Mitigation Measure Haz-3: Tsunami Evacuation Plan.
Tsunami Evacuation Plan shall be prepared for any new structure intended for human occupancy at the Site demonstrating the tsunami threat, warning signs and evacuation route will be adequately communicated to occupants of the structure, and procedures will be in place for the safe evacuation of all occupants in the event of a tsunami. The plan must be prepared prior to occupancy and include (1) a Tsunami Evacuation Route Map for the project site informed by community-wide emergency response plans, showing egress direction(s) and expected assembly area(s) for safe evacuation; (2) hazard risk notification procedures, including details on where placards, flyers, or other materials will be posted at conspicuous locations within the structure, provided in English and Spanish, explaining tsunami risks, the need for evacuation if strong earthquake motion is felt or alarms are sounded, and the location of evacuation routes; and (3) training/instruction materials, as necessary, to ensure the plan will be implemented and enforced for the life of the development.

Implementation of this measure will occur prior to the issuance of certificate of occupancy for any new structures intended for human occupancy associated with redevelopment of the Site resulting from the Project. Completion of this mitigation measure will be verified by City of Eureka staff in Development Services – Planning by requiring documentation of the tsunami evacuation plan prior to issuance of certificate of occupancy.

Mitigation Measure Noise-1: Construction Noise Control.
The operation of tools and equipment used in association with any future construction, repair, alteration, or demolition at the Site shall be limited to between the hours of 7:00 a.m. and 7:00 p.m., unless further restricted by any required permit.

Implementation of this measure will occur during any construction activities associated with redevelopment of the Site resulting from the Project, and will be overseen by the by the construction superintendent. City of Eureka staff will verify the construction window limitations are included in final construction plans and specifications.

5.0 APPENDICES

Appendix A – Figures

Figure 1 – Regional Location Map

Figure 2 – Aerial Site Map

Figure 3 – Accessor's Parcel Map

Figure 4 – Remediation Site Plan

Figure 5 – Humboldt Paint Factory Building Remediation Site Plan

Figure 6 – Land Use Designations Map

Appendix B – Allowed Land Uses Comparison Table

Appendix C – Historical Resources Report

Appendix D – RWQCB No Further Action Letter, and Final Remediation Report

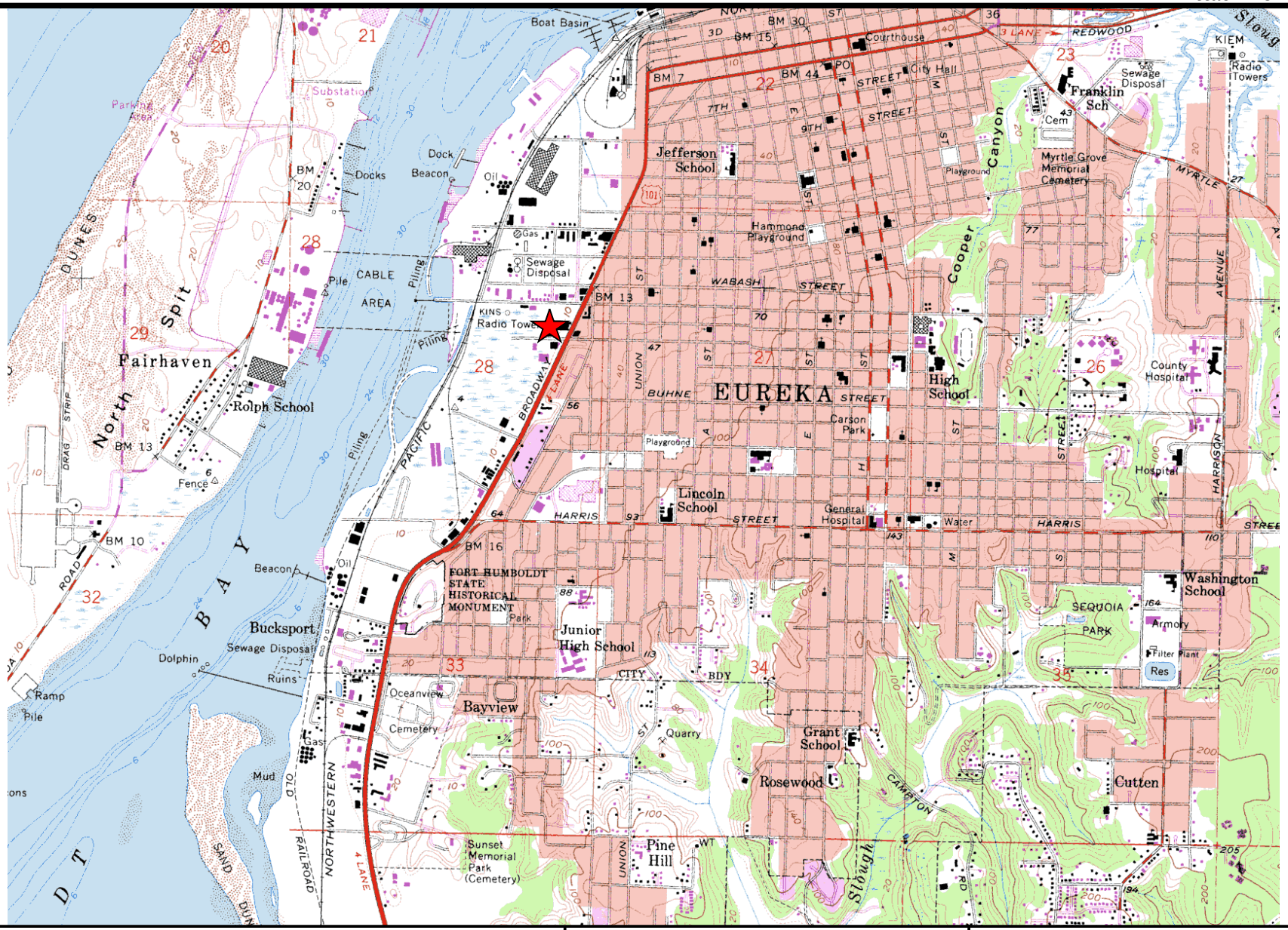
Appendix E – LACO Stormwater Sampling Report

Appendix F – Natural Resources Management Report-Request for Reduced Buffer

Appendix G – Soil and Ground Water Management Plan

APPENDIX A

Figures



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS
865 Cotting Lane, Ste F, Vacaville, CA 95688

Project Name: Humboldt Paint Factory	Date: April 2016
Location: 936 Hawthorne Street, Eureka	
Drawing By: DLG	Scale: NS

Legend

★ Site Location

FIGURE 1
Regional Location

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS
865 Cotting Lane, Ste F, Vacaville, CA 95688

Project Name: Humboldt Paint Factory	Date: April 2016
Location: 936 West Hawthorne Street, Eureka	
Drawing By: DLG	Scale: NS

Legend

Site Location

FIGURE 2
Aerial Map

Attachment 3

Assessor's Map Bk.003, Pg.18
County of Humboldt, CA.

CITY OF EUREKA

003–18

RS, Bk. 35 of SURVEYS, Pg. 126
RM, Bk. 6 of MAPS, Pg. 3
"Clark's Add. to the Town of Eureka"
RM, Bk. 6 of MAPS, Pg. 4
"Second Enlargement of Clark's Addition to the City of Eureka"
RM, Bk. 9 of MAPS, Pg. 6
"Third Enlarement of Clark's Addition to the City of Eureka"

ASSESSOR'S PARCEL MAP

1. THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY.
2. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN.
3. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

NOTE – Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles.

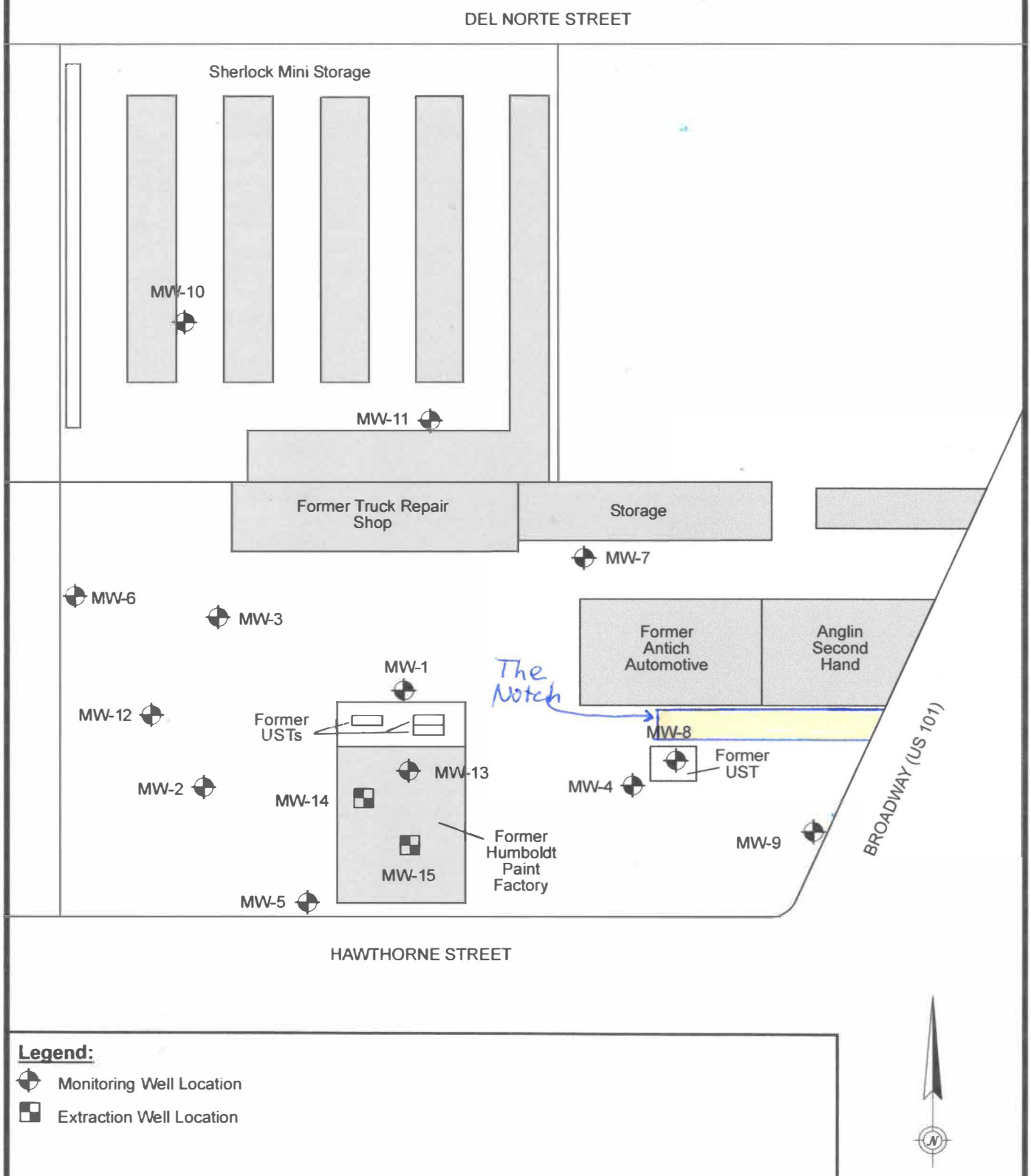
RD Nov 13, 2018
RUSSELL DUTRA

Attachment 3

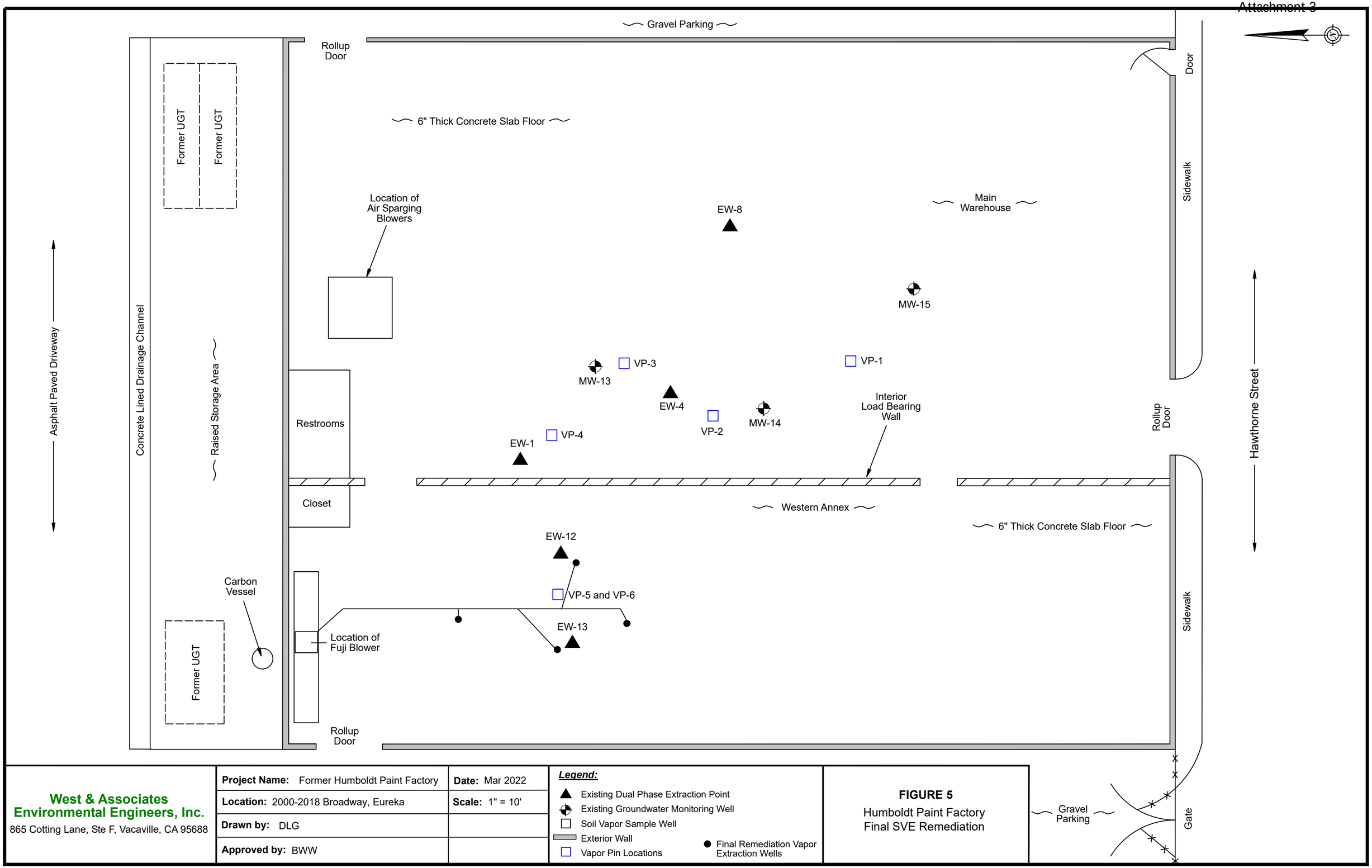
WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

865 Cotting Lane, Ste F, Vacaville, CA 95688

Project Name: Former Humboldt Paint Factory	**Date:** May 2018	**FIGURE 4** Site Plan
Location: Broadway & W. Hawthorne, Eureka	**Scale:** NA	
Drawing By: DLG		



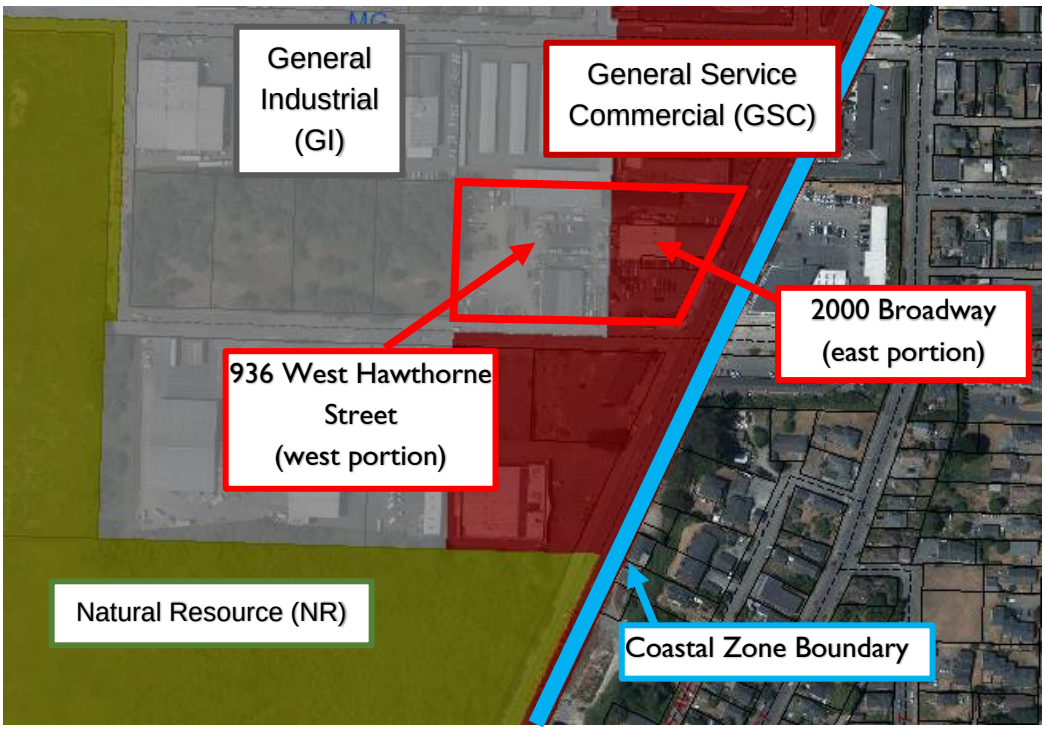
Attachment 3



West & Associates Environmental Engineers, Inc. 865 Cotting Lane, Ste F, Vacaville, CA 95688	**Project Name:** Former Humboldt Paint Factory	**Date:** Mar 2022	***Legend:*** ▲ Existing Dual Phase Extraction Point ⊕ Existing Groundwater Monitoring Well □ Soil Vapor Sample Well Exterior Wall □ Vapor Pin Locations ● Final Remediation Vapor Extraction Wells
	Location: 2000-2018 Broadway, Eureka	**Scale:** 1" = 10'	
	Drawn by: DLG		
	Approved by: BWW		

FIGURE 5
Humboldt Paint Factory
Final SVE Remediation

Figure 6. Existing Land Use Designations Map (project proposes to the changed the land use designation for 936 West Hawthorne Street from GI to GSC, to be consistent with 2000 Broadway)



APPENDIX B

Allowed Land Uses

Comparison Table

	MG - General Industrial	CS - Service Commercial
Permitted Uses	All uses listed as permitted uses in the ML District: Manufacturing, assembling, compounding, packaging, and processing of articles or merchandise from the following previously prepared materials: asbestos, bone, canvas, cellophane, cellulose, cloth, cork, feathers, felt, fiber, and synthetic fiber, fur, glass, hair, ink, horn, leather, paint (not employing a boiling process), paper, plastics, precious or semi-precious metals or stones, rubber and synthetic rubber, shells, straw, textiles, tobacco, and wood (not including a planing mill or saw mill); Manufacturing, assembling, compounding, packaging, and processing cosmetics, drugs, pharmaceuticals, perfumes, perfumed toilet soap (not including refining or rendering of fats or oils), and toiletries; Manufacture of ceramic products, such as pottery, figurines, and small glazed tile, utilizing only previously pulverized slag, providing that kilns are fired only by electricity or gas; Manufacture and maintenance of electric and neon signs, commercial advertising structures, and light sheet metal products, including heating, and ventilating ducts and equipment, cornices, eaves, and the like; Manufacture of scientific, medical, dental, and drafting instruments, orthopedic and medical appliances, optical goods, watches and clocks, electronics equipment, precision instruments, musical instruments, and cameras and photographic equipment, except film; Assembly of small electric appliances, such as lighting fixtures, irons, fans, toasters, and electric toys, but not including refrigerators, washing machines, dryers, dishwashers, and similar home appliances; Assembly of electrical equipment, such as radio and television receivers, phonographs, and home motion picture equipment, but not including electrical machinery;	Accessory uses and structures located on the same site as a permitted use; Accessory uses and structures located on the same site as conditional use; Addressograph services; Administrative, business, and professional offices, except medical and dental offices; Ambulance services; Art and artists' supply stores; Art galleries and stores selling objects of art; Arts and crafts schools and colleges; Auction rooms; Auction establishments, including outdoor displays; Automobile rental agencies; Automobile repairing, overhauling, rebuilding, and painting; Automobile (new car) sales and services, including used car sales incidental to new car sales; Automobile (used car) sales; Automobile supply stores; Automobile upholstery and top shops; Automobile washing, including the use of mechanical conveyors, blowers, and steam cleaners; Bail bonds; Bakeries; Bakeries, including baking for sale on the premises only; Banks; Banquet rooms; Barber shops and beauty shops; Bars; Beverage distributors; Bicycle shops; Blacksmith shops not less than three hundred (300') feet from an R or OR District; Blueprint and photostat shops; Boat sales, services, and repairs; Book stores and rental libraries; Bookbinding; Bottling works; Bowling alleys; Building materials' yards and other than gravel, rock, or cement yards not less than three hundred (300') feet from an R or OR District;

	Manufacture and assembly of electrical supplies, such as coils, condensers, crystal holders, insulation, lamps, switches, and wire and cable assembly, provided no noxious or offensive fumes or odors are produced; Manufacture of cutlery, hardware, and hand tools, die and pattern making, metal stamping, and extrusion of small products, such as costume jewelry, pins and needles, razor blades, bottle caps, buttons, and kitchen utensils; Manufacturing, canning, and packing of food products, including fruits and vegetables, but not including meat products, pickles, sauerkraut, vinegar, or yeast, dehydrating of garlic or onions, or refining or rendering of fats and oils; Processing, packing, and canning of seafood for human consumption, not including processing seafood for fish oils; Bakeries; Blacksmith shops; Boat buildings; Bottling works; Building material storage yards; Bus depots; Cannabis general use, subject to the provisions of Article 30 of this chapter (Cannabis); Cold storage plants; Contractors' equipment yards; Dairy products plants; Emergency shelters pursuant to the requirements and regulations contained in Section 10-5.250 (Emergency Shelters); Freight forwarding terminals; Furniture manufacture; Ice manufacture; Janitorial services and supplies; Kennels; Laboratories; Laundry and cleaning plants; Lumber yards, not including planing mills or saw mills; Machine shops not involving the use of drop hammers, automatic screw machines, or punch presses with a rated capacity of over twenty (20) tons; Mattress manufacture; Metal finishing and plating;	Bus depots, provided buses shall not be stored on the site and no repair work or servicing of vehicles shall be conducted on the site; Business, professional, and trade schools and colleges; Cabinet shops; Candy shops; Cannabis general use, subject to the provisions of Article 30 of this chapter (Cannabis); Carpenter shops; Carpet and rug cleaning and dyeing; Catering establishments; Christmas tree sales lots; Cigar stores; Cleaning and dyeing, including the use of one synthetic dry cleaning machine using nonexplosive solvents and having a capacity of not more than forty (40) pounds per cycle only; Cleaning, coin-operated; Clothing and costume rental establishments; Clothing stores; Cold storage plants; Columbariums and crematories not less than three hundred (300') feet from an R or OR District; Contractors' equipment rental or storage yards not less than three hundred (300') feet from an R or OR District; Dairy products plants; Dairy products manufacturing for retail sales on the premises only; Dance halls; Delicatessen stores; Department stores; Diaper supply services; Drugstores; Dry goods stores; Electrical appliance sales and repair stores, provided repair services shall be incidental to retail stores; Electrical repair shops; Emergency shelters pursuant to the requirements and regulations contained in Section 10-5.250 (Emergency Shelters); Employment agencies; Feed and fuel stores; Finance companies;

	Mobile vendors as prescribed in Article 19.5; Offices, not including medical or dental offices; Printing, lithographing, and engraving; Public utility and public service pumping stations, equipment buildings and installations, service yards, power stations, drainage ways and structures, storage tanks, and transmission lines; Railroad stations; Repair shops, including electrical, glass and automotive; Sheet metal shops; Storage yards for commercial vehicles; Textile, knitting and hosiery mills; Trucking terminals; Veterinarians' offices and small animal hospitals; Warehouses, except for the storage of fuel or flammable liquids; Welding shops; Woodworking shops and cabinet shops; Pickup truck camper and canopy assembly; Retail sales establishments with single occupant floor areas of forty thousand (40,000) square feet or larger; Wholesale stores with single occupant floor areas of forty thousand (40,000) square feet or larger and public utility building, and uses; Parking lots; Accessory structures and uses located on the same site as a permitted use; and Wireless telecommunication facilities located more than 100' from an R District subject to a wireless telecommunication facility permit issued pursuant to Article 31 of this chapter (Wireless Telecommunication Facilities). Aircraft and aircraft accessories and parts manufacture; Automobile, trucks, and trailer accessories and parts manufacture; Automobile, truck, and trailer assembly; Bag cleaning; Battery manufacture; Boiler works; Box factories and cooperages;	Florists; Food lockers; Food stores and supermarkets; Freight forwarding terminals; Frozen food distributors; Fur shops; Furniture stores; Garden shops; Gift shops; Glass replacement and repair shops; Golf driving ranges; Gunsmiths; Gymnasiums; Hardware stores; Heating and ventilating shops; Hobby shops; Hospital equipment; Hotels and motels; Household appliance stores; Household repair shops; Ice storage houses; Ice vending stations; Interior decorating shops; Janitorial services and supplies; Jewelry stores; Laboratories; Laundry plants; Laundries, self-service type; Leather goods and luggage stores; Linen supply services; Liquor stores; Live storage, killing, or dressing of poultry or rabbits for retail sale on premises not less than three hundred (300') feet from an R or OR District; Locksmiths; Lumberyards, not including planing mills or saw mills, not less than three hundred (300') feet from an R or OR District; Machinery sales and rentals; Massage and physical culture studios; Mattress repair shops; Marine sales, services, and repairs; Medical and orthopedic appliance stores; Meeting halls; Mens' furnishing stores; Millinery shops; Mobile vendors as prescribed in Article 19.5; Motorcycle sales and services; Mortuaries;

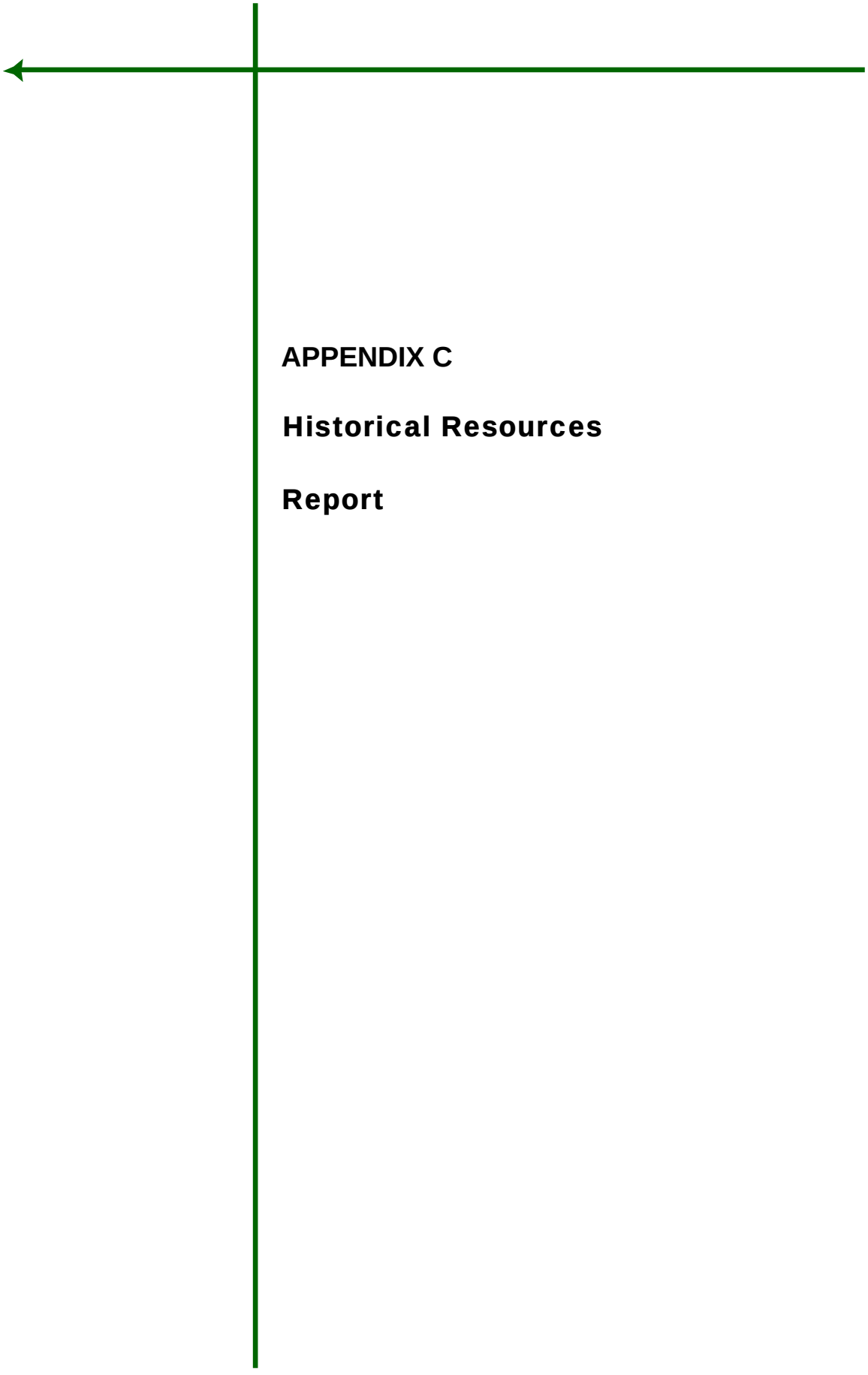
	Breweries and distilleries; Building materials manufacture and assembly, including composition wallboards, partitions, panels, and prefabricated structures; Business machines manufacture, including accounting machines, calculators, cardcounting equipment, and typewriters; Can and metal container manufacture; Candle manufacture, not including rendering; Cannabis general use, subject to the provisions of Article 30 of this chapter (Cannabis); Carpet and rug manufacture; Cement products manufacture, including concrete mixing and batching; Chemical products manufacture provided no hazard of fire or explosion is created, including adhesives, bleaching products, bluing, calcimine, dyestuffs (except aniline dyes), essential oils, soda and soda compounds, and vegetable gelatin, glue, and size; Clay products manufacture, including brick, fire brick, tile, and pipe; Cork manufacture; Electronics manufacturing; Firearms manufacture; Flour, feed and grain mills; Food products manufacture, including such processes as cooking, dehydrating, roasting, refining, pasteurization, and extraction involved in the preparation of such products as casein, cereal, chocolate and cocoa products, cider and vinegar, coffee, glucose, milk and dairy products, molasses and syrups, oleomargarine, pickles, rice, sauerkraut, sugar, vegetable oils, and yeast; Glass and glass products manufacture; Gravel, rock, and cement yards; Hair, felt, and feathers processing; Insecticides, fungicides, disinfectants, and similar industrial and household chemical compounds manufacture; Jute, hemp, sisal, and oakum products manufacture; Leather and fur furnishing and dyeing, not including tanning and curing;	Motels and hotels; Music and dance studios; Music stores; Musical instrument repair shops; Newsstands; Nurseries and garden supply stores provided all equipment, supplies, and merchandise other than plants shall be kept within a completely enclosed building, and fertilizer of any type shall be stored and sold in packaged form only; Office and business machine stores; Offices and office buildings; Packing and crating; Paint, glass, and wallpaper shops; Parcel delivery services, including garage facilities for trucks but excluding repair shop facilities and repair shop facilities; Parking facilities, including fee parking facilities improved in conformity with the standards prescribed for required off-street parking facilities in Section 10-5.1504 of Article 15 of this chapter; Passenger railroad stations; Pet and bird stores; Phonograph record stores; Photographic supply stores and studios; Pickup truck camper, and canopy assembly, sales, and service; Picture framing shops; Plumbing, heating, and ventilating equipment showrooms with storage for floor samples only; Plumbing shops; Pool halls; Post offices; Prescription pharmacies and dental and optical laboratories; Pressing establishments; Printing, including lithographing and engraving; Printing shops; Private clubs and lodges; Public utility and public service pumping stations, power stations, equipment buildings and installations, drainage ways and structures, storage tanks, and transmission lines; Radio and television broadcasting studios; towers and other support structures, commercial satellite dishes, antennas, and

	Machinery manufacture, including heavy electrical, agricultural, construction, and mining machinery, and light machinery and equipment, such as air conditioning, commercial motion picture equipment, dishwashers, dryers, furnaces, heaters, refrigerators, ranges, stoves, ovens, and washing machines; Machine tools manufacture, including metal lathes, metal presses, metal stamping machines, and woodworking machines; Match manufacture; Meat products processing and packaging, not including slaughtering and glue and size manufacture; Metal alloys and foil manufacture, including solder, pewter, brass, bronze, and tin, lead, and gold foil; Metal casting and foundaries, not including magnesium foundaries; Mobile vendors as prescribed in Article 19.5; Motor and generator manufacture; Motor testing of internal combustion motors; Painting, enameling, and lacquering shops; Paper products manufacture, including shipping containers, pulp goods, carbon paper, and coated paper stencils; Paraffin products manufacture; Plastics manufacture; Porcelain products manufacture, including bathroom and kitchen fixtures and equipment; Railroad equipment stations manufacture, including railroad car and locomotive manufacture; Railroad freight stations, repair shops, and yards; Rubber products manufacture, including tires and tubes; Sandblasting; Shoe polish manufacture; Starch and dextrine manufacture; Steel products manufacture and assembly, including steel cabinets, lockers, doors, fencing and furniture; Stone products manufacture and stone processing, including abrasives, asbestos,	equipment buildings necessary for the specific facility are subject to the provisions of Article 31 of this chapter (Wireless Telecommunication Facilities); Realtors and real estate offices; Refrigeration equipment; Rental and tools, garden tools, power tools, trailers, and other similar equipment; Residential uses permitted under permitted uses in RM Districts shall be permitted in a CS District provided the minimum size of such dwelling units shall be not less than as set forth in the Building Code and Housing Code of the city; One-family dwellings Combinations of attached or detached dwelling units, including duplexes, multi-family dwellings, dwelling groups, row houses, and townhouses; Lodging houses in which not more than 15 paying guests may be lodged or boarded; Nursing homes for not more than three (3) patients; and, Vacation dwelling units as provided in Title 10 (Planning and Zoning) Chapter 5 (Zoning) §§10-5.3201 through 10-5.3214 (Vacation Dwelling Units) of this title. Riding Stables; Saving and loan offices; Safe and vault repairing; Scientific instrument, shops; Secondhand stores and pawn shops; Self-service laundries and self-service dry cleaning establishments; Septic tank and cesspool installation and service; Service stations, including automobile, truck, and trailer rentals as accessory uses only; Sheet metal shops; Shoe repair shops; Shoe stores; Shooting galleries within buildings; Sign painting shops; Skating rinks; Skating rinks within buildings;

	stone screening and sand and lime products; Structural steel products manufacture, including bars, girders, rails and wire rope; Textile bleaching; Wire and cable manufacture; Wood and lumber processing and woodworking, including planing mills, saw mills, excelsior, plywood, veneer, and wood-preserving treatment; and Wood scouring and pulling.	Small animal boarding not less than three hundred (300') feet from an R or OR District; Sporting goods stores; Sports arenas within buildings; Stamp and coin stores; Stationery stores; Stenographic services; Stone and monument yards not less than three hundred (300') feet from an R or OR District; Storage buildings for household goods; Storage yards for commercial vehicles; Swimming pool sales and services; Tailor and dressmaking shops; Taxidermist; Taxicab stands; Telegraph offices; towers and other support structures, commercial satellite dishes, antennas, and equipment buildings necessary for the specific facility are subject to the provisions of Article 31 of this chapter (Wireless Telecommunication Facilities); Television and radio sales and repair stores; Theaters and auditoriums within buildings; Ticket agencies; Tire sales and service, not including retreading and recapping, or mounting of heavy truck tires; Tire sales and service, including retreading and recapping; Tool and cutlery sharpening or grinding; Toy stores; Travel agencies and bureaus; Travelers' aid societies; Truck and trailer rentals, sales and services; Trucking terminals not less than one hundred fifty (150') feet from an R or OR District; Umbrella repair shops; Variety stores; Vending machine services; Veterinarians' offices and small animal hospitals, including short-term boarding of animals and incidental care, such as bathing and trimming, provided all operations are conducted entirely within a completely enclosed building which

		complies with the specifications of soundproof construction by the Building Inspector; Warehouses except for the storage of fuel or flammable liquids; Watch and clock repair shops; Welding shops not less than three hundred (300') feet from an R or OR District; Wholesale establishments; and Women's apparel accessory stores; and Wireless telecommunication facilities located more than 100' from an R District subject to a wireless telecommunication facility permit issued pursuant to Article 31 of this chapter (Wireless Telecommunication Facilities).
Conditional Uses	Airports and heliports; Asphalt and asphalt products manufacture; Cement, lime, gypsum, and plaster of paris manufacture; Charcoal, lampblack, and fuel briquettes manufacture; Chemical products manufacture, including acetylene, aniline dyes, ammonia, carbide, caustic, soda, cellulose, chlorine, cleaning and polishing preparations, creosote, exterminating agents, hydrogen and oxygen, industrial alcohol, nitrating of cotton or other materials, nitrates of an explosive nature, potash, pyroxylin, rayon yarn, and carbolic, hydrochloric, picric, and sulfuric acids; Coal, coke, and tar products manufacture; Drop forges; Dumps and slag piles; Fertilizer manufacture; Film manufacture; Fireworks manufacture and storage; Fish products processing and packaging; Garbage dumps; Gas manufacture or storage; Gas and oil wells; Gelatine, glue, and size manufacture from animal or fish refuse; Incineration or reduction of garbage, offal, and dead animals; Junk yards; Lard manufacture; Linoleum and oil cloth manufacture;	Accessory uses and structure located on the same site as a conditional use; Amusement parks; Automobile and motorcycle racing stadiums and drag strips; Cannabis retail, subject to the provisions of Article 30 of this chapter (Cannabis); Charitable institutions; Churches, parsonages, parish houses, and other religious institutions; Circuses, carnivals, and other transient amusement enterprises; Drive-in theaters; Kennels not less than three hundred (300') feet from an R or OR District; Light industrial uses permitted in the ML Limited Industrial District; Mobilehome Parks in accordance with the regulations prescribed in Article 21 of this chapter (Manufactured Homes, Mobilehomes, Commercial Coaches, Mobilehome Parks and Recreational Vehicle Parks); Oil and gas pipelines; Pony riding rings; Prefabricated structures sales; Racetracks; Recreational Vehicle Parks in accordance with the regulations prescribed in Article 21 of this chapter (Manufactured Homes, Mobilehomes, Commercial Coaches, Mobilehome Parks and Recreational Vehicle Parks);

	Magnesium foundaries; Manure, peat, and topsoil processing and storage; Metal and metal ores reduction, refining, smelting, and alloying; Motor vehicle wrecking yards; Oil and gas pipelines; Paint manufacture, including enamel, lacquer, shellac, turpentine, and varnish; Paper mills; Petroleum and petroleum products storage; Pulp mills; Rifle ranges; Rolling mills; Rubber manufacture or processing, including natural or synthetic rubber and gutta-percha; Soap manufacture, including fat rendering; Steam plants; Stockyards and slaughterhouses; Storage of inflammable liquids; Storage of used building materials; Tallow manufacture; Tanneries and curing and storage of rawhides; Wood and bones distillation; Wood pulp and fiber reduction and processing; Storage of logs or wood chips; and Accessory structures and uses located on the same site as a conditional use; and Wireless telecommunication facilities located within 100' of an R District subject to the provisions of Article 31 of this chapter (Wireless Telecommunication Facilities).	Restaurants and soda fountains, including drive-in establishments; Riding stables; Sports areas or stadium; Storage yards for fuel or flammable liquids; and Veterinarians' offices and small animal hospitals, including operations not conducted within a completely enclosed building, not less than three hundred (300') feet from an R or OD District; and Wireless telecommunication facilities located within 100' of an R District subject to the provisions of Article 31 of this chapter (Wireless Telecommunication Facilities).



APPENDIX C

Historical Resources Report

HISTORICAL RESOURCES REPORT FOR COMMERCIAL BUILDINGS AT:

2000 & 2016 BROADWAY

900 & 912 WEST HAWTHORNE

EUREKA, CALIFORNIA

Prepared by:

Raymond W. Hillman
Pride Enterprises Historical Consulting
1401 East Avenue, Eureka, CA 95501
(707) 407-6834

GENERAL DESCRIPTION (see Exhibits A & B)

2016 Broadway

Currently occupied by Anglin Second Hand, this is the major structure on this parcel It is of reenforced concrete block and has a gable roof supported by wooden truss, The gable peak is behind a stepped false front. It has a frontage of 71' and extends into the parcel; 78'. The fenistration consists of four plate glass windows, two on each side of a pair of 5' wide entry doors which are clad in stainless steel. Each side of the entry is clad with red brick. The commercial space encompasses 6,128 sf plus a garage added to the rear with 3,392 sq ft. All windows in the side walls are steel sash.

2000 Broadway

This is across a parking lot from Anglin's to the north.Construction is of reenforced concrete block with a stepped false front obscuring the gable. This structure encompasses 12,764 sq ft . The facade fenistration consists of two plate glass windows flanking the entry ; a metal awning runs the full length of the facade, Most of the side and rear windows are boarded up. Separate and to the rear is a concrete block shop building with four bays and a work shop with steel sash.

900 & 912 W Hawthorne

Built entirely of reenforced concrete block, it has a gable roof suppoprted by wooden truss. The gable is covered by a stepped flase front It encompasses 21,240 sf and has a second story ¾ the area of the ground floor. All side and rear windows have steel sash. The building was originally designed for two businesses each occupying 40 x 168' .

Historical Summary

All of these properties were originally built and owned by Ed DeBon who either occupied or had tenants for the following buildings. He had a dealership in White and Autocar trucks, sold diesel engines and machinery plus interests in the timber industry

2016 Broadway

Upon competion c 1951 this building waas first occupied by Aikins Tractor Company, Ed Aikins president; they were dealers in logging and earth moving equipment, Allis Chalmers tractors and equipment. They had a branch location in Ukiah. This company established a prominent advertising presenbce with the Polk City Directory not only with full page advertising but also on the spine of the directory itself.. (See Exhibits C & D)

A c1952 Sanborn Map shows the use of the building divided in two sections: sales and service and a truck repair shop; they were separated by a wooden partition. Aikins remained here until c1959 to be replaced by DeBon Motors, a truck dealership. By 1965 Baywood Truck and Equipment was in its place and remained there until c 1984 when All Auto Parts was established there. About 1987 Anglin Second Hand became the next tenant and remains there to this day.(See Exhibit D)

2000 Broadway

This is the oldest of the subject buildings, and is currently occupied by Humboldt Lighting. It was built for and first occupied by Ed DeBon, founder of DeBon Machinery, in 1948. This firm, dealing in logging equipment, remained here and at 2004 (a c1900 wood frame stable converted to DeBon's use and lost in a print shop fire in 1992) until c1957. By 1958 it was Made Rite Sausage Company. Two years later Pierce Mill Supply was listed there and after they moved further north on Broadway, Humboldt Cycle Company was providing sales and service there by 1965, 1970 saw Broadway Furniture there before a couple of years vacancy in the late 1970s- early 1980s. Roger's Waterbeds brought activitty again by c1984.

900-912 West Hawthorne

Built in 1954 the first tenants were Humboldt Paint at 912 and Eureka Radiator and Battery Works at 900. The latter firm vacated in the late 1960s and Humboldt Paint expanded into its space and remained there until c 1988. In 1991 this structure and others on Broadway were damaged considerably by the 1991 earthquake.(See Exhibit `E)

2050 Broadway While not part of the survey for lack of structures, it may be useful to know why there is an easement onto this corner parcel. This was the location of sign painting and outdoor advertising businesses- most noteworthy was Foster & Kleiser. The easement gave vehicular access to a series of structures on each side of the easement leading from Broadway. All were gone by c1950

Conclusions / Statement of Significance

All of these buildings were constructed during the great timber boom after World War II, Humboldt County was a major source of lumber for the post war building boom.along the West Coast.The businesses referenced here were just a small part of of hundreds of others serving the needs of this exceedingly prosperous era and by themselves have no further distinction.

It is therefore concluded that none of the above and their ancillary structures have historical significance.

Raymond W Hillman

Raymond W, Hillman
Cultural Resources Consultant
September 5, 2018

Sources

Humboldt County Assessors records, Humboldt County Courthouse, Eureka

Pacific Telephone Co. directories 1958-1988, Humboldt Room Humboldt Co. Main Library

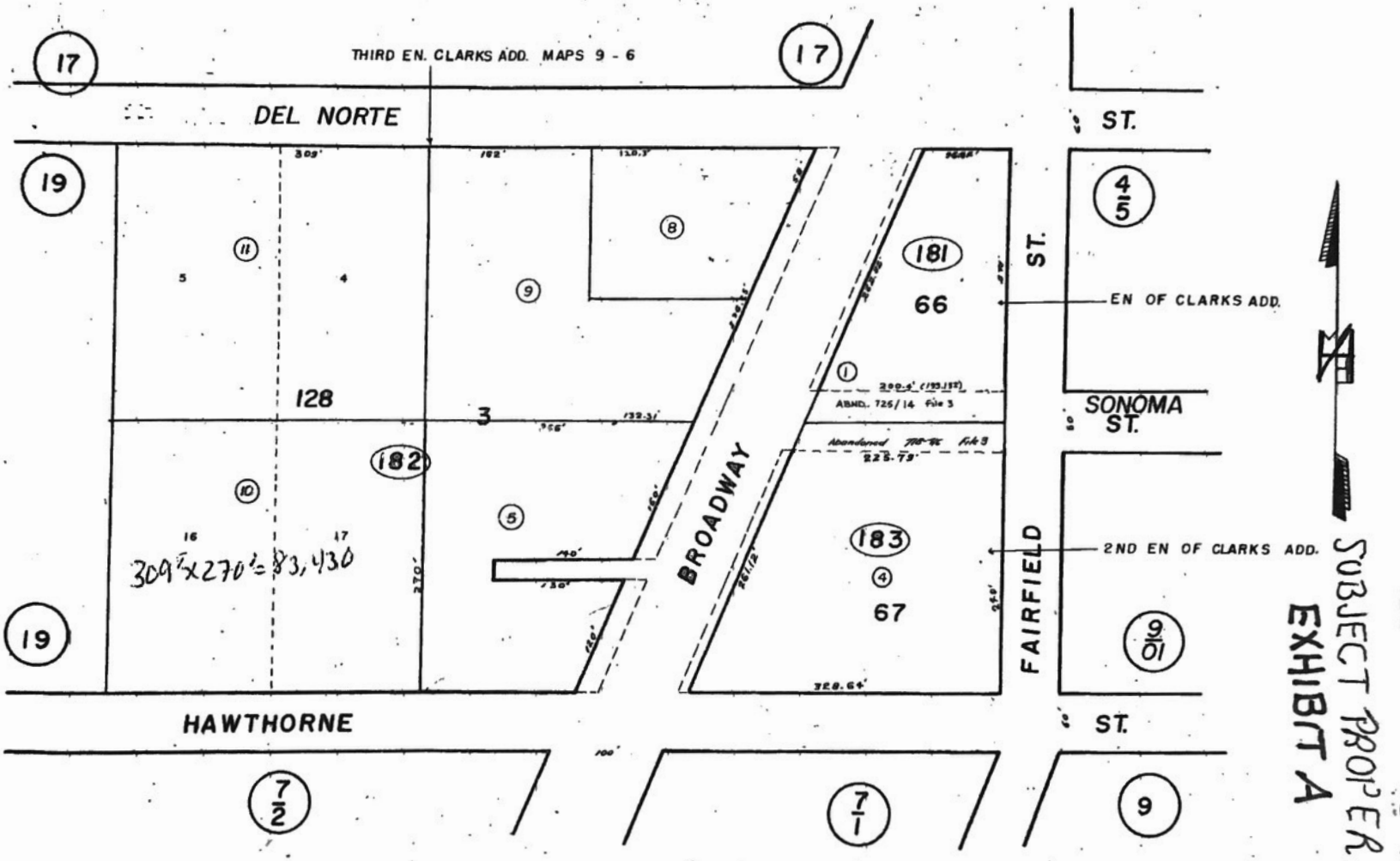
Polk Business Directories 1949-1988 Humboldt Room, Humboldt County Main Library, Eureka

Sanborn Insurance Map 1953 Clarke Museum, Eureka

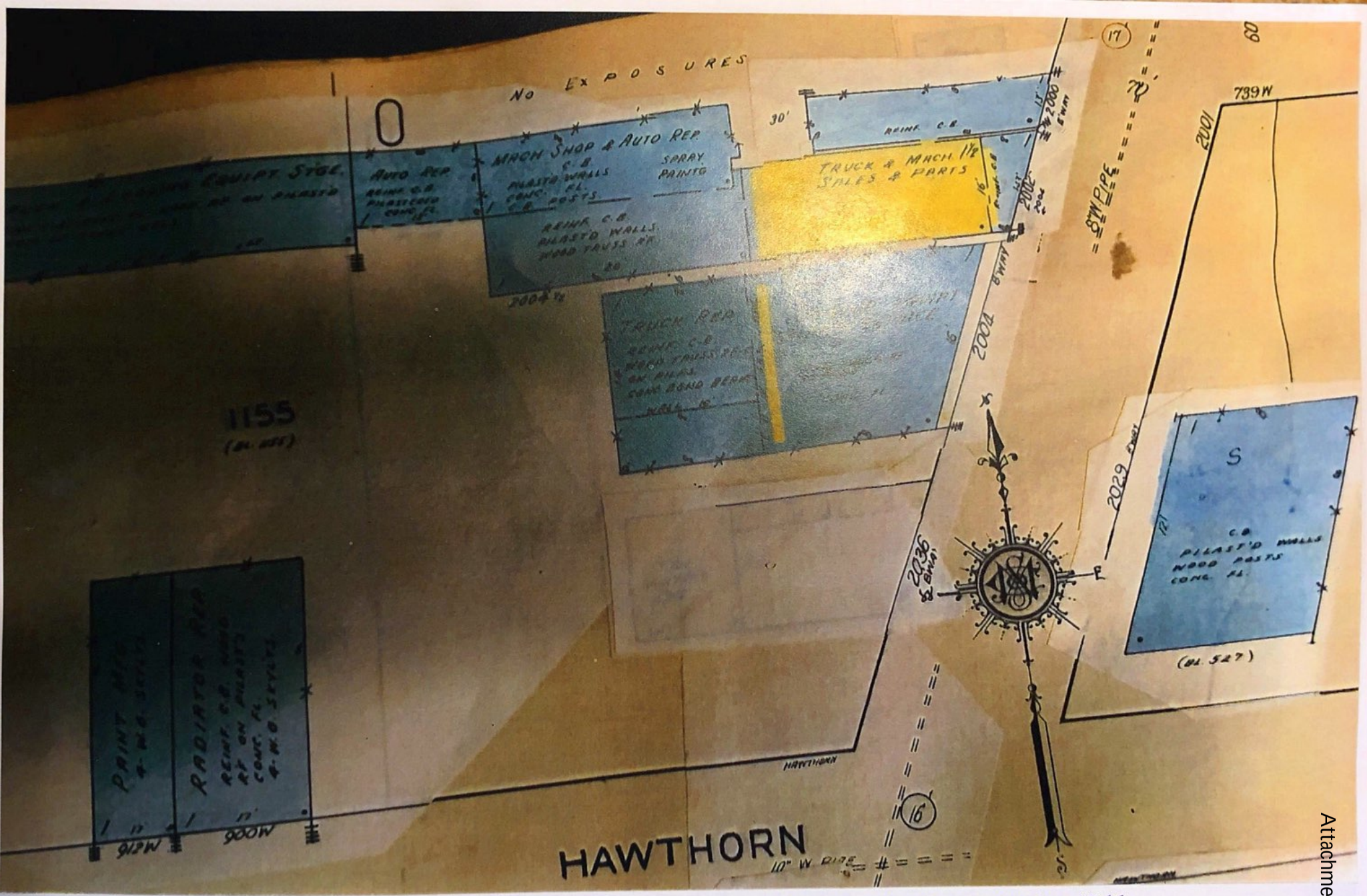
Field Survey from corner of Broadway & Hawthorne August 26, 2018

CITY OF EUREKA

3-18



SUBJECT PROPERTIES
EXHIBIT A



SANBORN INSURANCE MAP c1955
CLARKE MUSEUM, EUREKA

Attachment EXHIBIT B

POLK DIRECTORY 1956
A EXHIBIT C
Attachment 3

De BON MOTOR CO.

TRUCKS

Sales — Service

Authorized Dealers

Autocar Trucks

White

DIESEL ENGINES
INDUSTRIAL EQUIPMENT

Phone HIlside 3-1691

2004 Broadway (U.S. 101) Eureka

UKIAH BRANCH:

Highway 101 North Phone: HOmestead 2-2700

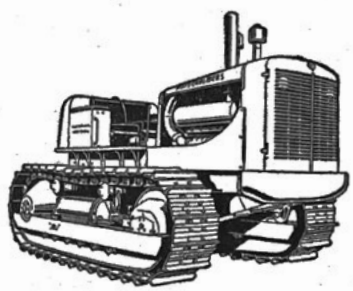
POLK DIRECTORY 1956
EXHIBIT D

DT
E Co.

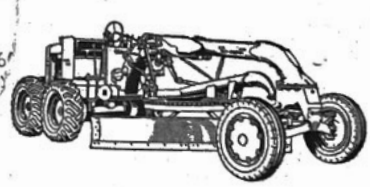
ance

e

AIKINS TRACTOR CO.



Allis-Chalmers — The Newest, Finest Tractor Line on Earth



Complete Line of Logging and Earth Moving Equipment

Tel. HIlside 2-2986

2016 Broadway
Opposite Airport

Ukiah

Eureka
Phone HOmestead 2-6518

1971
PACIFIC TELEPHONE DIRECTORY

Truck Repairing & Service

A-1 RADIATOR & BATTERY SERVICE
Radiators-Generators-Starters
3899 Rohnerville Rd Ftna------725-2068
B-T Equipment Co 76 South G Arc-822-4292

BAYWOOD TRUCK & EQUIP CO
EQUIPMENT REPAIRS
Diesel & Gasoline Engine Repair
Transmission — Rear Axle Repair
Body & Paint — Insurance Work
COMPLETE LUBRICATION & MAINTENANCE
ENGINE & CHASSIS DYNAMOMETER
24 HOUR HEAVY DUTY TOWING
Distributors For — PETERBILT
CUMMINS & DETROIT DIESEL
Hours Mon — Fri 8 AM to 12:30 AM
Sat 8 AM to 4:30 PM
2016 Broadway Eur--------443-1691

CUMMINS DIESEL ENGINES—
DISTRIBUTORS

Truck Stops

Bishop's Phillips 6
4050 Broadway
EUREKA TRUCK
Open 7 Days
2616 Broad

Truck Term

Franklin's S
1605 Gu

Truck Wr

EUREKA
719 W

Trucking

Addison
Rai

HAUL
movers. Ford Trucks,
e Road Service, Free
is Available. Major
ANYWHERE
"ON CALL"
ATION
--442-9679
OVES
otton
eeps
igh

Eureka

EXHIBIT E

Attachment 3

CONSULTATIONS

MANUFACTURERS OF...
INTERIOR • EXTERIOR
Custom Colorizing
HUNDREDS OF COLORS
"LET US SOLVE YOUR PAINTING PROBLEMS"
DEALER FOR
DITZLER AUTOMOTIVE FINISHES

Call 443-8341

HUMBOLDT PAINT FACTORY

Paint Is Our Only Business
912 W. HAWTHORNE – EUREKA

AMPLE FREE PARKING

1966 PACIFIC TELEPHONE DIRECTORY

MANUFACTURERS OF...
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HUNDREDS OF COLORS
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DEALER FOR
DITZLER AUTOMOTIVE FINISHES

Call 443-8341

HUMBOLDT PAINT FACTORY

Paint Is Our Only Business
912 W. HAWTHORNE – EUREKA

AMPLE FREE PARKING

PACIFIC TELEPHONE DIRECTORY 1971

Attachment 3

2016 BROADWAY

THESE & ALL PHOTOS FOLLOWING ARE BY RAYMOND HILLMAN

8/26/18

NORTH WALL
2016 BROADWAY

SOUTH WALL
(ENDING JUST BELOW
MOTEL 6 SIGN)

2000 BROADWAY

← NORTH WALL

REAR & SOUTH WALLS

↓

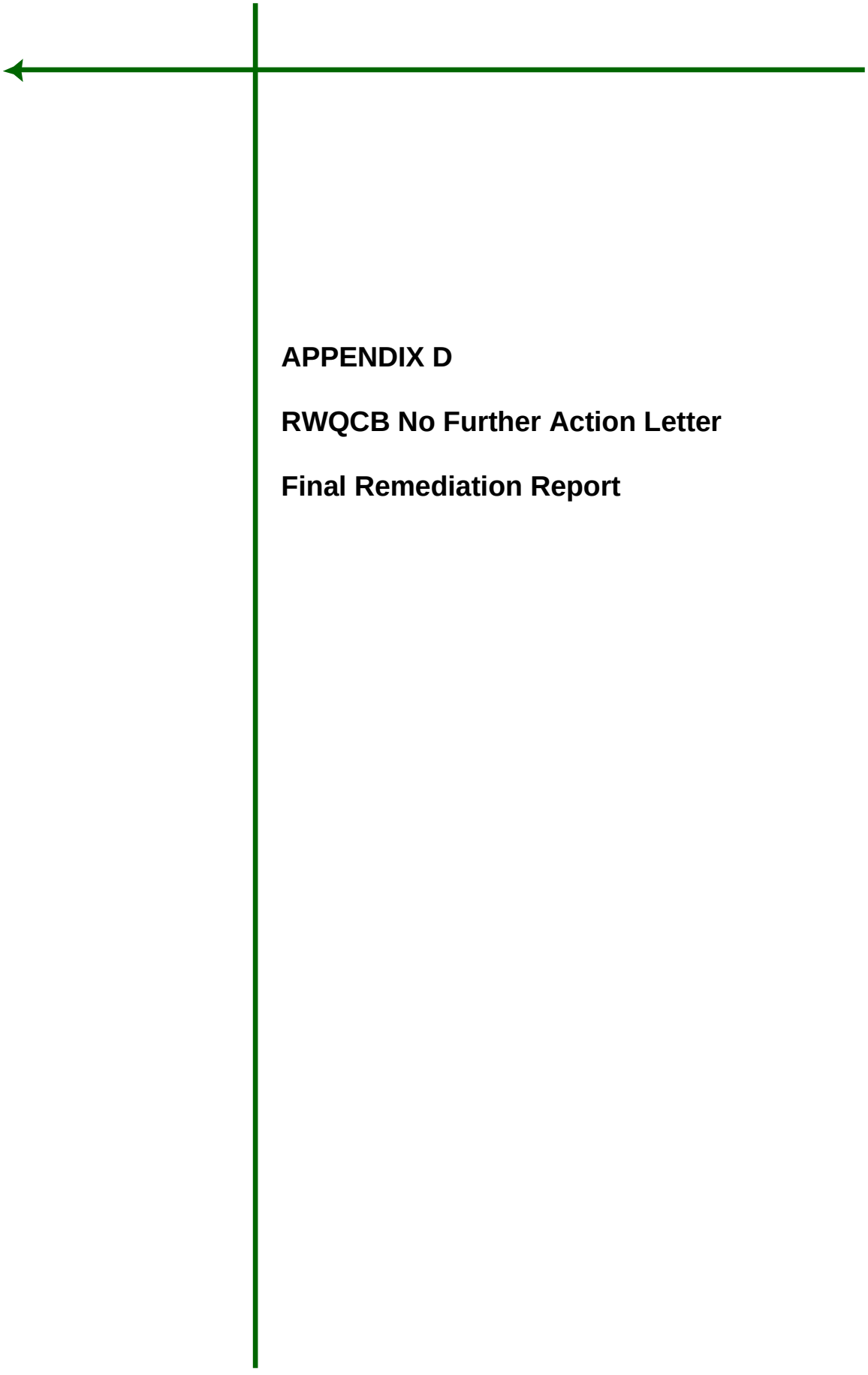
PAINT SHOP ↑ ORIGINALLY A MACHINE SHOP ↑

WEST BEHIND 2000 BROADWAY

912 W HAWTHORNE

900 W HAWTHORNE

FACADE & WEST WALL



APPENDIX D

RWQCB No Further Action Letter

Final Remediation Report

CALIFORNIA Water Boards

GAVIN NEWSOM GOVERNOR

YANA GARCIA SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

February 2, 2023

Mr. Alan Tirsbeck
2004 Broadway
Eureka, CA 95501
eawatt1@aol.com

Dear Mr. Tirsbeck:

Subject: No Further Action

Site: Deo, Fred C., 2000-2018 Broadway, Eureka, CA
Case: No. 1THU171

This letter confirms the completion of a site investigation and corrective action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release at the site is required.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code.

Claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims

beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

Please contact François Bush of my staff at (707) 543-7148 or francois.bush@waterboards.ca.gov if you have any questions regarding this matter.

Sincerely,

C.E. Reed for Water Boards
Digitally signed by Charles Reed_Sep2020
Date: 2023.02.02 15:23:46 -08'00'

Valerie Quinto
Executive Officer

230202_FAB_er_DeoFred_UST_NFA

cc: Brian West, West Associates, brian@westengineers.com
Bruce Jacobsen, West Associates, bjacobsen545@gmail.com

WEST ASSOCIATES
ENVIRONMENTAL ENGINEERS, INC.

FINAL REMEDIATION REPORT
SOIL VAPOR EXTRACTION
HUMBOLDT PAINT FACTORY BUILDING

FRED C. DEO LEAKING UNDERGROUND TANK SITE
2000-2018 BROADWAY, EUREKA
CASE No. 1THU171

Prepared For:
Mr. Alan Tirsbeck

Submitted To:
North Coast Region
Regional Water Quality Control Board
Santa Rosa

Prepared By:
West & Associates Environmental Engineers, Inc.
Vacaville

March 2022

ACKNOWLEDGEMENTS

This final remediation report was prepared under authorization from our client, Mr. Alan Tirsbeck and is intended for his exclusive use.

Environmental compliance activities at the Humboldt Paint Factory leaking underground tank site in Eureka are under direction of the North Coast Region, Regional Water Quality Control Board located in Santa Rosa. The case has been assigned No. 1THU171.

Analytical services were subcontracted to K Prime, Inc. located in Santa Rosa. K Prime is certified by the California Department of Health Services for the analyses performed.

During the preparation of this report reliance was made on work product generated by others, specifically SHN Engineers, Inc.

The Humboldt Paint Factory leaking underground tank site has been assigned GeoTracker Global ID No. T0602300136.

This report was prepared by West & Associates Environmental Engineers, Inc., 865 Cotting Lane, Suite F, Vacaville, California 95688. The principal author of this Report is Mr. Brian W. West PE (RCE No. 32319, expires 12/31/22).

WEST ASSOCIATES

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APPENDICES

WEST ASSOCIATES

1.0 INTRODUCTION

This report describes remediation activities performed to address a small area of residual volatile organic compound (VOC) contamination at the Fred C. Deo leaking underground tank site in Eureka, Humboldt County (the Site). The regional location of the Fred C. Deo site is depicted on *Figure 1*. An aerial view of the Site appears in *Figure 2*. All Plates appear in *Appendix A*.

The residual pocket of VOC-contaminated vapor was discovered during the sub-slab soil vapor survey (SVS) as described in the Sub-Slab Soil Vapor Survey Report dated October 2021. Remediation of this area was accomplished using soil vapor extraction (SVE) to remove a small mass of residual VOCs from the vadose zone soils. Now that this area has been effectively remediated by SVE the Fred C. Deo case meets all criteria for closure in accordance with LTCP guidelines.

1.1 Scope

The principal area of concern on the Deo property has been gasoline contamination under the former Humboldt Paint Factory (HPF) building. A dual phase extraction project completed in 2020 removed the vast majority of contamination and remediated groundwater to closure concentrations.

Following completion of the dual phase extraction project, five post-remediation sub-slab vapor samples were collected from vapor pins installed located within the building footprint at the locations shown on *Figure 3*. Four of the five soil vapor samples collected were reported to have acceptable concentrations of VOCs. However, the sample from vapor pin VP-5 had concentrations of benzene, ethylbenzene, and naphthalene that present an unacceptable risk of exposure, as described in the Petroleum Vapor Intrusion to Indoor Air section of the LTCP. Soil vapor samples collected from nearby extraction wells EW-12 and EW-13 were acceptable under the same criteria during previous sampling events. Therefore, it was concluded that a relatively small area was impacted by unacceptable VOC concentrations in shallow soils and that a short-term, focused SVE program could remediate this area so that the case would be eligible for closure in accordance with the LTCP.

1.2 Objective

The Fred C. Deo property has been an open case for over a quarter of a century. Gasoline contamination under the former HPF building has been remediated by a combination of dual phase extraction and air sparging (DPE/AS) to reduce the concentrations of benzene and other COCs in groundwater to levels that are acceptable for case closure.

The LTCP requires that the potential for vapor intrusion to indoor air be evaluated at all sites that are not active commercial petroleum fueling facilities. As a condition of case closure, therefore, it is necessary to confirm that vapor concentrations in shallow soils do not exceed the “soil gas criteria” listed in the LTCP. Based on the results of the October 2021 SVS, additional vadose zone remediation was required in the vicinity of VP-5.

The objective of this final SVE program, therefore, was to remediate the shallow soils around VP-5, re-sample the area post-remediation, and demonstrate that case closure under the LTCP is appropriate.

2.0 SUMMARIZED BACKGROUND

The Fred C. Deo site (the Site) is a commercial property in the coastal portion of southern Eureka at the southwest corner of Highway 101 and Hawthorne Street. *Figure 3* depicts the current property layout.

The former Fred C. Deo property as a whole is now approximately 3 acres in size. Mr. Deo's property formerly was larger and consisted of two legal parcels. In the year 2000 Mr. Deo sold what is now referred to as the "North Deo Property" to Mr. Dennis Fitze. Mr. Fitze subsequently developed the North Deo Property into the Sure Lock mini-storage facility.

Currently, the remaining Deo property is used for a variety of purposes, primarily automotive related. As a generalization, it can be stated that the easterly half of the property is used for vehicle sales and the westerly half for vehicle storage.

Formerly, the property was occupied by a variety of commercial/industrial users. Of particular environmental interest is a building fronting Hawthorne Street formerly occupied by the Humboldt Paint Factory. Product leakage from a former underground gasoline tank resulted in serious groundwater contamination.

In 2003 Mr. Deo sold the 3-acre remainder property to the current owner, Mr. Tirsbeck. Mr. Tirsbeck operates a used car lot, Eureka Auto Wholesalers, out of the front of the property and leases the rest to various tenants.

Several underground fuel storage tanks were removed from the property in 1989. There currently is no underground fuel storage at the Site. However, historic gasoline and diesel fuel leakage has contaminated soil and groundwater.

Past site assessment activities completed to evaluate the extent of soil and groundwater contamination included collecting soil samples from more than 50 locations and installing 15 groundwater monitoring wells.

The initial remedial investigation report prepared by LACO Associates in November 1990 established that the main area impacted by petroleum compounds released from underground fuel tanks at the Site was underneath the Humboldt Paint Factory (HPF) building.

A work plan to perform HVDPE pilot testing was submitted to HCDEH and approved in April 2010. Two additional wells (MW-14 and MW-15) were installed inside the HPF building in 2011. These 4-inch wells were intended to serve as extraction wells for this HVDPE pilot testing and potential remediation program.

No activities were performed at the HPF site for several years. Groundwater monitoring completed in October 2015 demonstrated that significant contamination remained underneath the HPF building, with the sample from MW-13 containing 33,000 µg/L TPH-g and 2,000 µg/L benzene. HCDEH issued directive letters to Mr. Alan Tirsbeck (current owner of the Site) in December 2015 and January 2016, requiring that a pilot test be performed using the wells inside the HPF building.

The 120-hour HVDPE pilot test at HPF was performed during February 2016. Field measurements and laboratory data collected during this pilot test demonstrated that the VOC mass extraction rate was initially close to 40 pounds per day and remained above 14 pounds per day for the duration of the test. Therefore, a full-scale remediation program was warranted to meet the requirements of the HCDEH directive letter.

The HVDPE remediation program at HPF was performed from June through August 2016 in conformance with the HCDEH directive letter dated May 12, 2016. VOC extraction rates remained well above the established performance threshold of 10 pounds per day until the end of the program. The remediation system operated a total of 1,101 hours and removed an estimated 1,063 pounds of contaminant mass from the subsurface environment.

No significant rebound in VOC extraction rate was observed when the system was restarted after being turned off for two weeks. HCDEH placed the case in verification monitoring and requested that at least one round one groundwater monitoring be performed to determine the impact of contaminant mass removal on groundwater concentrations in the source area and downgradient wells. Groundwater concentrations in most of the wells were acceptable, but the sample from MW-13 still had fairly high concentrations of TPH-g and benzene.

In January 2018 regulatory oversight of this case transitioned from HCDEH to the Regional Water Quality Control Board, North Coast Region (RWQCB). A directive letter issued by the RWQCB in April 2018 specified that additional groundwater monitoring be performed and a soil vapor survey work plan be submitted to address remaining impediments to closure under the Low Threat Closure Policy (LTCP). Based on the concentrations of TPH-g and benzene reported in well MW-13, the RWQCB requested that additional remediation be performed to address residual contamination underneath this portion of the HPF building.

During the first quarter of 2018, a remedial system based on air sparging of groundwater coupled with dual phase extraction was installed inside the HPF building. After some delay arranging for a dedicated PG&E electrical service, the remediation system was started in late May 2018.

The HPF remedial system operated effectively in 2018 and 2019. The system was expanded to the western annex portion of the HPF building in November 2019. By December 2019 remedial goals were achieved in the main warehouse portion of the Site and remedial activities there were discontinued. Active remediation continued in the western annex portion of the Site until February 28, 2020 when the remedial system was intentionally shut down to evaluate post-remediation groundwater concentrations. These results were favorable, so active remediation was discontinued at that time.

Soil vapor screening was performed at the HPF site In November 2020 to determine whether the dual phase extraction remediation program had effectively reduced concentrations of volatile organic compounds (VOCs) in the vadose zone to levels that were supportive of case closure. In this screening program soil vapor samples were collected from five dual phase extraction wells installed in 2019 and the three monitoring wells previously installed by others inside the HPF building.

The other purpose of this screening program was to see if the selected wells, which were designed as monitoring and extraction wells, could be configured to function as vapor sampling wells. If so, no dedicated soil vapor wells would need to be installed and the project could be completed in a more cost-effective manner. The soil vapor screening results were favorable, so it was concluded that additional dual phase extraction would not likely be required to achieve case closure and that the existing wells could be used to perform the SVS at this Site.

Based on the success of the soil vapor screening program, a formal SVS was performed at the Site using the same eight monitoring and remediation wells that were sampled during the screening program. In June 2021 soil vapor samples were collected from the eight wells in accordance with the soil vapor sampling work plan addendum issued to and approved by the RWQCB in May 2021. Leak detection was accomplished using helium as a tracer gas to ensure that the wells were properly constructed and the sample train components did not leak. Vapor samples were collected

after the well and sample train integrity were confirmed using the helium shroud method as described in Appendix C of the Advisory for Active Soil Gas Investigations (July 2015).

The concentrations of benzene, ethylbenzene and naphthalene reported in shallow soil vapor samples collected from these locations within the footprint of the former HPF building were all significantly less than the thresholds established in the LTCP for indoor air exposure at both commercial and residential sites. They were also lower than the current Tier 1 Environmental Screening Levels (ESLs).

These sample results were generally lower than those reported during the soil vapor screening program conducted in November 2020. There are two primary reasons for this decline in vapor concentrations. The HPF building had previously been leased to a tenant for vehicle and equipment storage. The property owner (and RP) terminated this lease and had the tenant's equipment removed from the building in between the two sampling events. The owner then cut off extraction well piping at grade, leaving the wellheads exposed to the atmosphere. This accelerated the volatilization of soil vapors underneath the building slab by allowing the wells to vent directly to the atmosphere. This venting process, which occurred for several months between sampling events, resulted in the removal of some quantity of residual vadose zone contamination from underneath the HPF building.

In October 2021 five vapor samples were collected from vapor pins installed located within the building footprint at the locations shown on *Figure 3*. These sample results were compared with the thresholds shown in Appendix 4, Scenario 4 of the LTCP and the Tier 1 ESLs to determine whether the concentrations of benzene, ethylbenzene, or naphthalene present an unacceptable risk of exposure, as described in the Petroleum Vapor Intrusion to Indoor Air section of the LTCP. At four of the five vapor pin locations soil vapor data met all applicable thresholds. At the fifth location, midway between extraction wells EW-12 and EW-13, the concentrations of TPH-g and a few VOCs were greater than the LTCP thresholds, indicating that a small mass of shallow contamination remained in this area.

In summary, extensive environmental investigation at the HPF site over many years largely defined the magnitude and extent of gasoline contamination in soil and groundwater. The DPE/AS remediation project has been completed and groundwater concentrations are now acceptable for case closure under the LTCP. Data from the sub-slab SVS indicated that the main area of contamination had been effectively remediated to acceptable levels but a small area west of the interior building wall still had TPH-g and VOC concentrations in the vadose zone that required additional remediation.

3.0 SOIL VAPOR EXTRACTION (SVE) TO REMEDIATE SMALL RESIDUAL AREA NEAR VP-5

Objectionable VOC concentrations were detected in soil gas at sampling location VP-5 during the sub-slab SVS. That vicinity is in an area which was a known gasoline hot spot, including the occurrence of free phase product observed on one occasion in nearby extraction well EW-13.

Vapor Pin location VP-5 is in between existing extraction wells EW-12 and EW-13. Both wells were formerly utilized for dual phase extraction which required the perforated casing to extend into the saturated zone.

Our workplan for this final SVE program proposed to remediate the residual sub-slab VOC vapor hotspot in the vicinity of VP-5 by soil vapor extraction through existing points EW-12 and EW-13. To convert the wells from dual phase extraction to soil vapor extraction only it was proposed to first remove the three-inch diameter PVC casing. Based on our experience building the extraction wells, upon removal of the PVC casing it was predicted the borings would collapse in the saturated zone but would stay open in the vadose zone.

Upon removal of the PVC casing a slotted two-foot long section of three-inch diameter PVC pipe was to be placed in the boring, stubbed out above the floor slab six inches. Non-shrink construction grout would be used to seal the annulus where the PVC pipe passes through the floor slab.

Prior to mobilizing for field work, the North Coast AQMD was contacted with a request to re-activate the SVE operating permit for this Site. They indicated that the previous permit could not be re-activated and that a new permit would be required. New Forms 1300 and 1307 were prepared and submitted to NCUAQMD for approval (along with the permit fee). Fortunately, NCUAQMD was able to issue the new SVE Permit for this project (No. VE36) within a few days. A copy of this permit is included in *Appendix B*.

The approach described above was successful at EW-13. The PVC casing in EW-12, however, could not be removed in this manner. As a result, it was decided to begin SVE from EW-13 and schedule a return site visit to core through the concrete slab at a new location next to EW-12 and install a new vadose zone vapor extraction well.

A 2.5 HP Fuji regenerative blower was used for vapor extraction on this project. The inlet of the blower was connected to EW-13 using PVC piping already on-site from previous SVE activities. The blower outlet was connected by a 2-inch diameter flexible hose to the 2,000-pound capacity activated carbon adsorber located just outside the northwest corner of the HPF building.

The SVE system was started up shortly after 2 PM on February 2nd. It quickly became apparent that the blower was extracting water as well as soil vapors, so the vacuum at the wellhead was reduced by partially opening the bypass valve. After this adjustment the system stabilized and was extracting vapors with PID readings of 12-15 ppmv. The system was checked hourly until 7 PM and found to be operating effectively without generating any water. It was allowed to run overnight and checked starting at 7 AM on the morning of February 3rd. The system was operating normally, extracting vapors with PID readings of ~12 ppmv.

The concrete coring subcontractor had a cancellation on another project, so he mobilized to the Site mid-morning on the 3rd to core a new hole through the slab near EW-12. At the same time two additional locations for vadose zone vapor extraction wells were selected in the area in order to accelerate the process and increase the probability of success. The cost for this additional work was nominal, in that the concrete coring subcontractor was able to core the additional locations in less than two hours, the piping and most of the fittings required to connect two additional vapor wells were already on-site, and the additional labor was minimal.

Re-mobilization to the Site occurred on February 7th. The system was running well and still extracting vapors with a PID reading ~10 ppmv from EW-13.

Each of the three new vapor wells was installed that day using a hand auger to create a 3-inch diameter borehole to 24 inches below top of slab, placing a slotted and capped 2.5-inch diameter pipe in the borehole, and connecting the vapor well pipe to the SVE piping. Non-shrink construction grout was used to seal the annulus where the PVC pipe passes through the floor slab. All four vapor wells were configured with adjustable valves at each wellhead to regulate vapor flow and soil vapor sample ports. The locations of all four extraction wells and the SVE blower are shown on *Figure 3*.

The system was started up shortly before 5 PM on the 7th. VOC concentrations in extracted soil vapor were measured at various flowrates and pressures to determine optimum operating parameters. Once the system was optimized, the PID readings were ~12 ppmv. The system was checked hourly until 9 PM and continued to run well, so it was left on overnight.

On the morning of February 8th, the system was first checked at 6:30 AM and found to be operating well. It was re-adjusted slightly to maximize the vapor extraction rate and then checked hourly until 11:30 AM. PID readings stabilized at 7-8 ppmv, so the system was left running. It remained in operation until February 16th with no interruptions.

Altogether, the SVE system was operated continuously for a period of 14 days before being turned off. After a lapse of 5 days to allow for VOC de-sorption from the soil matrix, a new vapor pin was installed and a soil vapor sample collected as described below.

3.1 Installation of Sub-Slab Vapor Pin

One new sub-slab vapor pin was embedded midway between extraction wells EW-12 and EW-13 in the engineered fill underlying the foundation slab in accordance with the Vapor Pin® Standard Operating Procedures included in *Appendix C*. This vapor pin was installed on February 22nd and sampled the following day. The locations of all vapor pins, including the five installed previously are shown on *Figure 3*.

3.2 Purging – Sub-Slab Vapor Pin

The vapor pin was first evaluated for proper installation in accordance with the Vapor Pin® Standard Operating Procedures included in *Appendix C.* No leaks were detected in the installed vapor pin sample train.

The new sub-slab vapor pin was purged prior to sampling with a combination photo-ionization detector (PID) and oxygen (O_2) meter, as recommended by the vapor pin manufacturer. The vapor sample was collected after the PID and O_2 levels stabilized, which indicated the presence of soil gas. The total volume of soil gas purged prior to sampling was approximately 100 ml, which represents a minimum of three purge volumes.

3.3 Sampling

A sample was collected from the vapor pin in a laboratory-supplied and evacuated Summa canister after the purging process was completed. This Summa was equipped with a stainless-steel flow-limiting valve calibrated to a flow rate of 200 ml per minute, so that the canister was properly filled in five minutes.

The soil vapor sample was entered on a chain of custody form and delivered to the laboratory the same day it was collected, well within the allowable holding time for samples collected in Summa canisters. This sample was designated VP-6.

Note: During the Soil Vapor Survey (SVS) performed in October 2021 five vapor pin samples were collected, so labeling the new sample VP-6 seemed perfectly logical. We had forgotten that the Method Blank sample collected during the SVS in October 2021 had also been designated “VP-6” to disguise the fact that it was a blank. These are clearly two distinct samples, as shown on the chain-of-custody forms.

3.4 Laboratory Sample Analysis

Soil vapor sample VP-6 was analyzed in a DHS-certified laboratory by EPA-approved methods. The sample was analyzed for TPH-gasoline and for a full spectrum of VOCs including BTEX compounds, MtBE and other fuel oxygenates, lead scavengers and naphthalene using EPA Method TO-15. This sample was designated by K Prime as #228925.

3.5 Quality Assurance/Quality Control (QA/QC)

QA/QC procedures included:

- Assigning experienced, qualified, personnel for sample collection
- Adhering to techniques and protocols as specified in the approved Workplan
- Utilizing appropriate equipment and supplies
- Maintaining detailed field notes
- Utilizing laboratory-supplied and evacuated Summa Canisters
- Maintaining an unbroken Chain of Custody Record
- Timely delivery of the sample set to the testing laboratory
- Adhering to EPA-approved analytical procedures

There were no deviations from standard QA/QC protocol during the completion of this project.

4.0 SOIL VAPOR SAMPLE RESULTS

Analytical results for TPH-g, benzene, ethylbenzene and naphthalene in the Summa canister soil vapor sample collected as described above are presented on *Table 1*. This table also shows the results from VP-5, the previous vapor pin sample collected in this area, and the LTCP thresholds for vapor samples at both commercial and residential sites. A copy of the K Prime Analytical Report for this sample (#228925) is included in *Appendix D*.

TABLE 1
SOIL VAPOR SAMPLE ANALYSIS
TPH-G, BENZENE, ETHYLBENZENE & NAPHTHALENE
Fred C. Deo LUST Site
(µg/m^3 for VOCs, mg/m^3 for TPH-g)

Sample ID	TPH-G	Benzene	Ethyl-benzene	Naph-thalene	Other Compounds?
VP-6 (Lab #228925) Collected 2-23-22	<3.17	<3.19	<4.34	<5.24	No
VP-5 (Lab #22416) Collected 10-21-21	883	192	15,000	363	Toluene, Xylenes and two others)
LTCP Threshold (Commercial)	N/A	<280	<3,600	<310	N/A
LTCP Threshold (Residential)	N/A	<85	<1,100	<93	N/A

The concentrations of benzene, ethylbenzene and naphthalene reported in this shallow soil vapor sample are significantly less than the thresholds established in the LTCP for indoor air exposure at both commercial and residential sites.

5.0 DISCUSSION AND RECOMMENDATIONS

A final SVE remediation program and post-remediation sampling event were performed in conformance with applicable DTSC guidance documents and the Vapor Pin standard operating procedures.

The concentrations of benzene, ethylbenzene and naphthalene reported in a shallow soil vapor sample collected from VP-6 are significantly less than the thresholds established in the LTCP for indoor air exposure at both commercial and residential sites. This result, in conjunction with the results from four other vapor pin samples collected in October 2021, confirms that active remediation has reduced the soil vapor in soil underlying the HPF building to levels that are acceptable for case closure.

Groundwater monitoring was performed at the Site in October 2021. Current groundwater conditions, as documented in the Third Quarter 2021 Groundwater Monitoring Report, remain supportive of case closure under the LTCP. Soil vapor conditions are also supportive of case closure. Therefore, we recommend that this Site be considered eligible for case closure under the LTCP.

6.0 SUMMARY

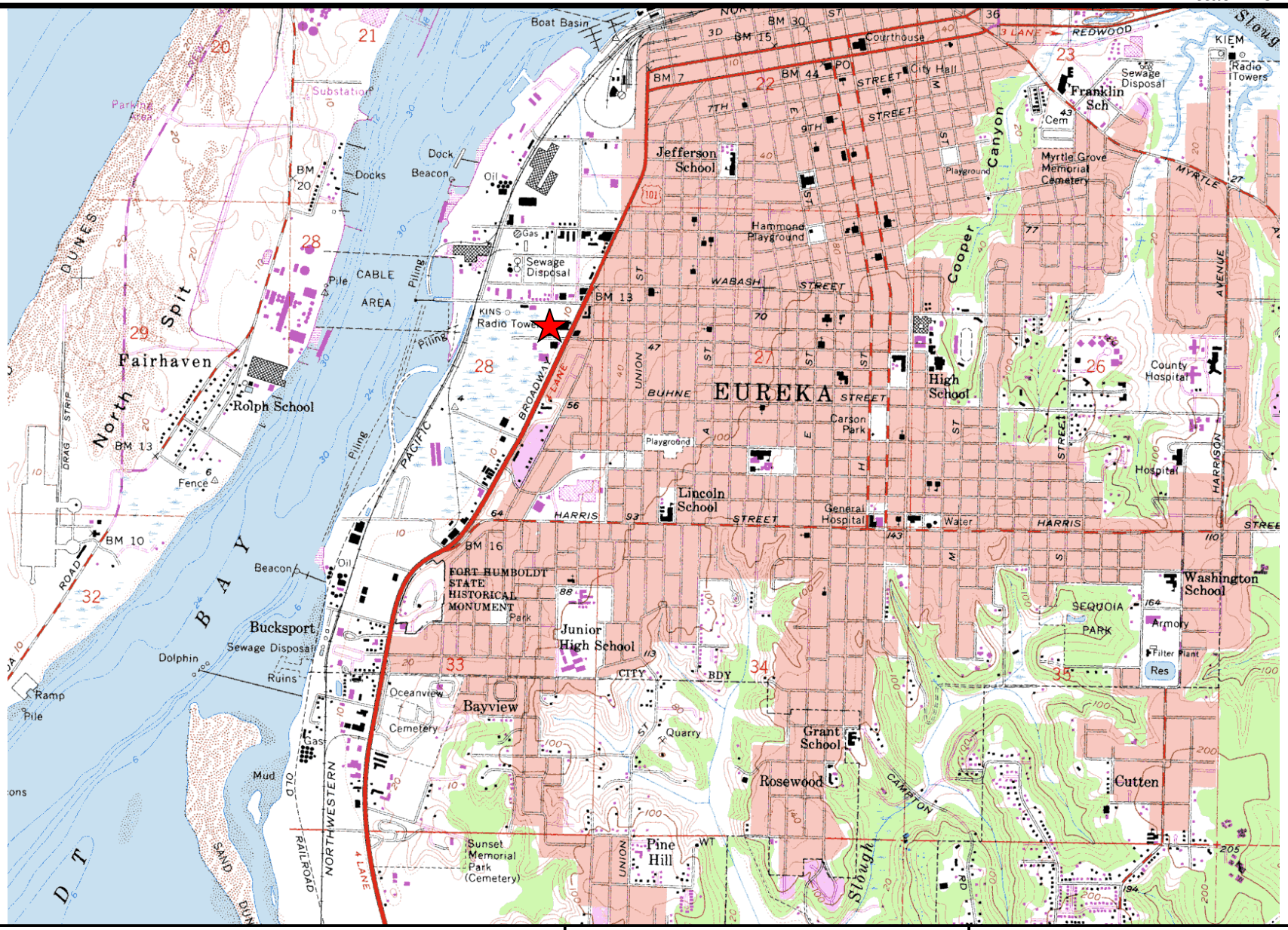
This final soil vapor extraction (SVE) program was conducted at the Site to address a small pocket of residual vadose zone contamination on the west side of the former HPF building. A post-remediation sub-slab vapor sample was collected using a vapor pin and analyzed for VOCs by EPA Method TO-15. The results were compared with the thresholds for vapor intrusion to indoor air shown on the table in Appendix 4, Scenario 4 of the LTCP. All soil vapor data met applicable LTCP thresholds, confirming that the SVE program effectively remediated residual shallow soil contamination in this area.

Post-remediation groundwater concentrations also meet the criteria for case closure under the LTCP, so we recommend that the Fred C. Deo UST case (1THU171) be considered eligible for closure.

7.0 ELECTRONIC DATA SUBMITTAL COMPLIANCE

This Final Soil Vapor Extraction Report has been uploaded to the Fred C. Deo GeoTracker Domain, Global ID T0602300136. The upload certificate is presented in *Appendix E*. Selected future work products will be uploaded to the GeoTracker database in conformance with State requirements.

Data from the Fred C. Deo Leaking Underground Tank site can be accessed through GeoTracker at http://www.geotracker.swrcb.ca.gov/.



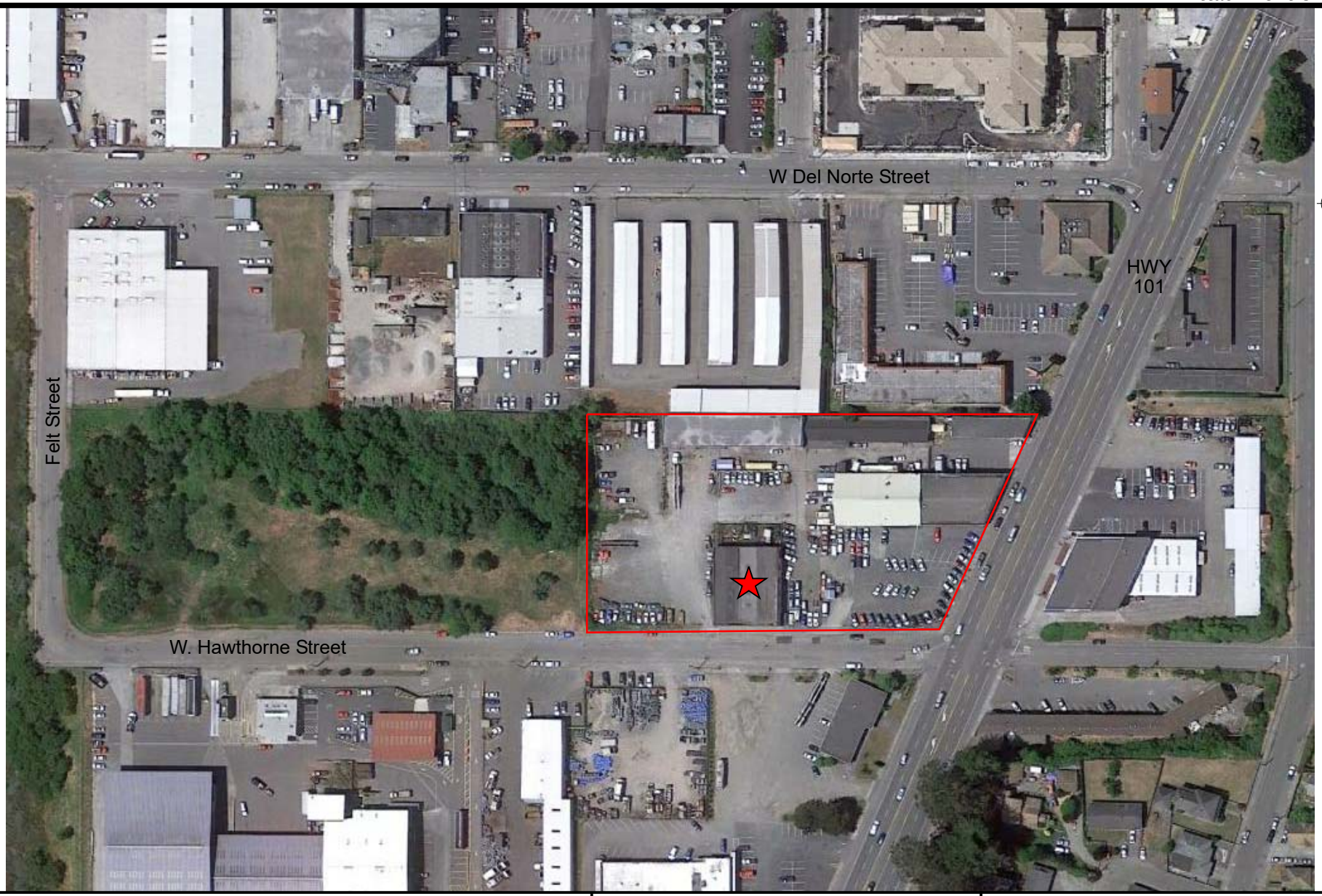
WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS
PO Box 5891, Vacaville, CA 95696

Project Name: Fred C. Deo	Date: April 2016
Location: 2000-2018 Broadway, Eureka	
Drawing By: DLG	Scale: NS

Legend

★ Site Location

FIGURE 1
Regional Location



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS
PO Box 5891, Vacaville, CA 95696

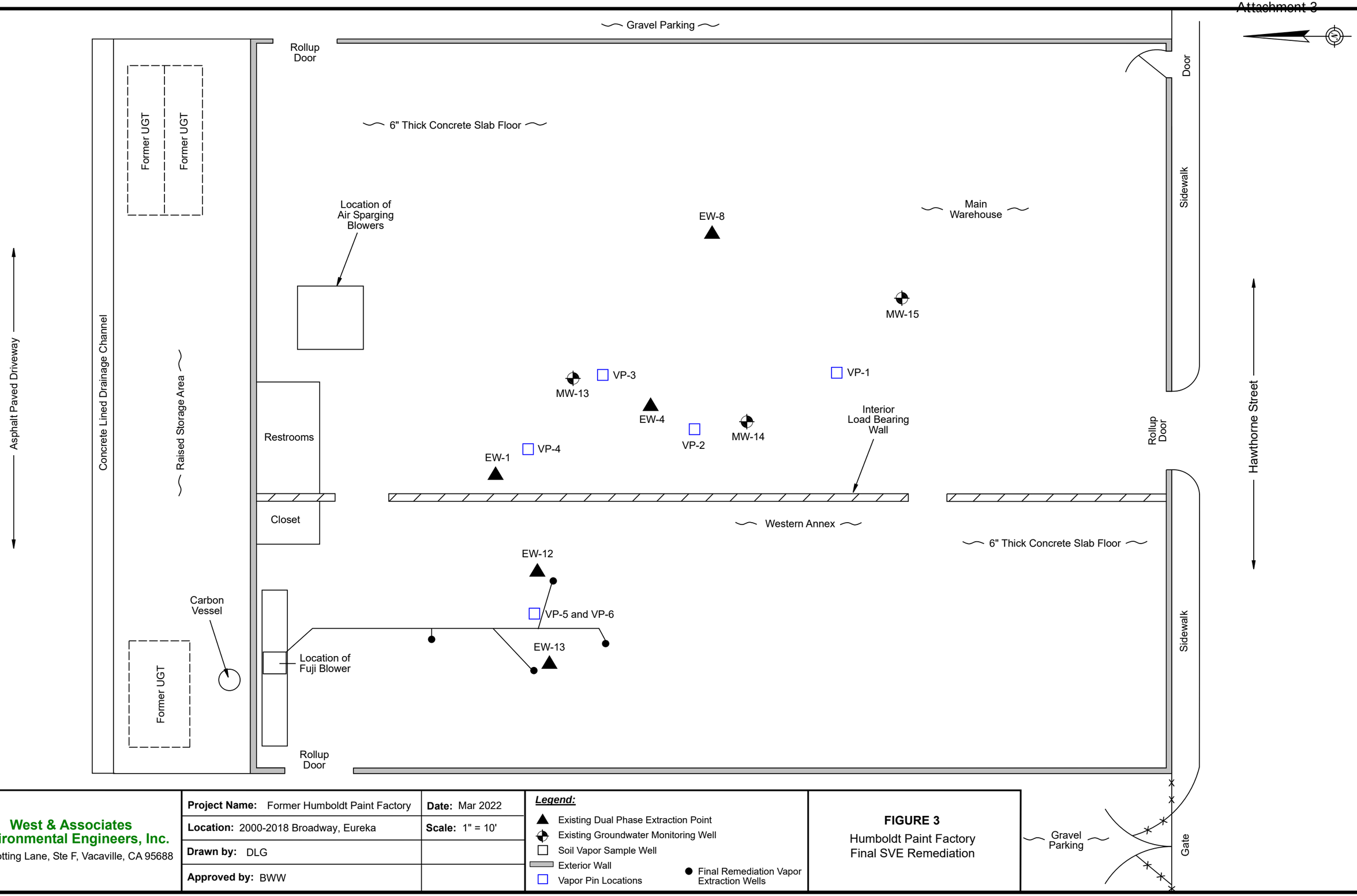
Project Name: Fred C. Deo	Date: April 2016
Location: 2000-2018 Broadway, Eureka	
Drawing By: DLG	Scale: NS

Legend

Site Location
Humboldt Paint Factory

FIGURE 2
Aerial Map

Attachment 3



West & Associates Environmental Engineers, Inc. 865 Cotting Lane, Ste F, Vacaville, CA 95688	**Project Name:** Former Humboldt Paint Factory	**Date:** Mar 2022	***Legend:*** ▲ Existing Dual Phase Extraction Point ⊕ Existing Groundwater Monitoring Well □ Soil Vapor Sample Well Exterior Wall □ Vapor Pin Locations ● Final Remediation Vapor Extraction Wells
	Location: 2000-2018 Broadway, Eureka	**Scale:** 1" = 10'	
	Drawn by: DLG		
	Approved by: BWW		

FIGURE 3
Humboldt Paint Factory
Final SVE Remediation

NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT
707 L Street, Eureka, CA 95501
Phone: (707) 443-3093 Fax: (707) 443-3099

VAPOR EXTRACTION SYSTEM PROJECT

PERMIT TO OPERATE
NO. VE36

NCUAQMD AIR POLLUTION CONTROL OFFICER HEREBY GRANTS:

Permittee:
West & Associates
865F Cotting Lane
Vacaville, CA 95688

Location:
Former Humboldt Paint Factory
936 W. Hawthorne Street
Eureka, CA 95501

Contact:
Bruce Jacobsen
Phone: (925) 705-1400
Email: bjacobsen@astound.net

Issue Date: January 28, 2022

SUBJECT TO THE FOLLOWING CONDITIONS:

This is your Permit to Operate. This permit is subject to the following terms and conditions:

GENERAL CONDITIONS

1. The Permittee shall comply with all conditions of this permit. Any violation of any condition of this Permit is a violation of NCUAQMD Rules and Regulations, and California State Law. [*NCUAQMD Rule 105(A)*]

2. Changes in plans, specifications, or other representations to the documents and forms submitted as part of the application package, shall not be made if they will increase the discharge of emissions or cause a change in the method of control of emissions or in the character of emissions of the subject facility. No modification shall be made prior to issuance of a permit revision for such modification. [*NCUAQMD Rule 102*]

3. This Permit shall be posted in a conspicuous location at the site and shall be made available to NCUAQMD representatives upon request. [*NCUAQMD Rule 102(H)*]

4. Permittee shall not discharge such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health or safety of any such persons or the public; or which cause or have a natural tendency to cause injury or damage to business or property. [*HSC §41700; NCUAQMD Rule 104(A)(1)*]

5. This Permit To Operate is effective beginning on the date of signature by the Authorized District Representative and is valid through the remainder of the fiscal year. Thereafter, this Permit may be renewed by the APCO each year upon full payment of fees, and if requested, upon the submission of emission inventory information. The APCO may refuse to renew this Permit. The APCO may also reopen the permit at any time and may make modifications to the permit as necessary to ensure compliance with applicable rules and regulations. The District fiscal year begins July 1st and ends June 30th. [*HSC §42333; NCUAQMD Rule 102(G)*]

EQUIPMENT SPECIFIC CONDITIONS

AUTHORIZED EQUIPMENT

6. This permit authorizes the installation and operation of the following equipment:

Table 1.0 - Authorized Process Equipment

Device S-1	**Vapor Extraction System**
Application	Environmental Soil Remediation
VE Make	Fuji
VE Model	Two (2) VFC 400P-ST (s/n 0704 J 774802 081 and 082)
Control Equip. Make	Custom manufacture
Control Equip. Model	n/a (Granular activated carbon - 2,000 lb. capacity cannister)

OPERATIONAL CONDITIONS

7. The authorized equipment shall have control devices installed and operational at all times the emitting device is operational. [*NCUAQMD Rule 120(D)(1)*]

8. The authorized equipment and associated control equipment shall be operated and maintained in accordance with the manufacturer's specifications such that the total quantity of VOC emissions is less than 1.0 pound per hour. [*NCUAQMD Rule 120(D)(2)*]

9. The authorized equipment using a VOC control device shall achieve VOC control efficiency of no less than 90% at all times. The destruction efficiency requirement shall not apply when uncontrolled VOC emissions are less than 0.1 pounds per hour. [*NCUAQMD Rule 120(D)(3)*]

10. The Permittee shall maintain the permitted equipment in compliance with federal and State Occupational Safety and Health Administration requirements so as to ensure the health and safety of District representatives performing a site inspection. [*NCUAQMD Rule 102(E)*]

11. The Permittee shall take immediate corrective action to restore compliant operation upon detection of an upset or breakdown condition that causes or may cause a violation of any emissions limitation, as established in this permit or in NCUAQMD rules. [*NCUAQMD Rule 102(E)*]

EMISSION LIMITATIONS

12. The Permittee shall not discharge pollutants into the atmosphere from the Vapor Extraction (VE) System at rates in excess of the emission limits in Table 2.0 below.[*NCUAQMD Rule 120(D)(2) & (D)(3)*]:

Table 2.0 Vapor Extraction System S-1 Emission Limits

Pollutant	Emission Rate	
	lb/hr	tons/yr
VOCs	1.0	4.0

RECORDKEEPING & REPORTING

13. The Permittee shall submit to the District [*NCUAQMD Rule 120(E)*]:
    a) Annual report no later than February 15 of each year, on District approved form;
    b) Notice of equipment modifications no sooner than 15 days prior to modification;
    c) Notice of project completion within 30 days after completion of permitted VE activity for a project;
    d) Notice of transfer of ownership no sooner than 15 days prior to any transfer.

14. The Permittee shall maintain equipment maintenance logs, and make them available upon request by district staff [*NCUAQMD Rule 120(E)*].

15. The Permittee shall report to the NCUAQMD any deviations from the requirements of this permit, including those attributable to breakdown conditions, the probable cause of the deviations, and any corrective actions or preventive measures taken. Within ten (10) days after occurrence, the Permittee shall report the following information regarding the event: [*NCUAQMD Rule 105(E)*]
    a) Duration of excessive emissions;
    b) Estimation of the quantity of emissions;
    c) Statement of the cause of the occurrence; and
    d) Corrective measures taken to prevent recurrences.

16. The Permittee shall provide information requested by the NCUAQMD for emission inventory purposes within thirty (30) days of receiving the request. [*NCUAQMD Rule 103(F)*]

AUTHORIZING SIGNATURE

NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT

707 L Street
EUREKA, CALIFORNIA 95501

PHONE (707) 443-3093
FAX (707) 443-3099

ISSUE DATE: 1/28/2022 | 2:10 PM PST

BY: DocuSigned by: Jason Davis BFA71974FCD74D4...

Jason L. Davis
DEPUTY APCO
for
BRIAN WILSON
AIR POLLUTION CONTROL OFFICER

Permit Seal

Standard Operating Procedure Installation and Extraction of the Vapor Pin®

Updated March 16, 2018

Scope:

This standard operating procedure describes the installation and extraction of the VAPOR PIN® for use in sub-slab soil-gas sampling.

Purpose:

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the VAPOR PIN® for the collection of sub-slab soil-gas samples or pressure readings.

Equipment Needed:

- Assembled VAPOR PIN® [VAPOR PIN® and silicone sleeve(Figure 1)]; Because of sharp edges, gloves are recommended for sleeve installation;
- Hammer drill;
- 5/8-inch (16mm) diameter hammer bit (hole **must** be 5/8-inch (16mm) diameter to ensure seal. It is recommended that you use the drill guide). (Hilti™ TE-YX 5/8" x 22" (400 mm) #00206514 or equivalent);
- 1½-inch (38mm) diameter hammer bit (Hilti™ TE-YX 1½" x 23" #00293032 or equivalent) for flush mount applications;
- ¾-inch (19mm) diameter bottle brush;
- Wet/Dry vacuum with HEPA filter (optional);
- VAPOR PIN® installation/extraction tool;
- Dead blow hammer;
- VAPOR PIN® flush mount cover, if desired;
- VAPOR PIN® drilling guide, if desired;
- VAPOR PIN® protective cap; and
- VOC-free hole patching material (hydraulic cement) and putty knife or trowel for repairing the hole following the extraction of the VAPOR PIN®.

Figure 1. Assembled VAPOR PIN®

Installation Procedure:

1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.

2) Set up wet/dry vacuum to collect drill cuttings.

3) If a flush mount installation is required, drill a 1½-inch (38mm) diameter hole at least 1¾-inches (45mm) into the slab. Use of a VAPOR PIN® drilling guide is recommended.

4) Drill a 5/8-inch (16mm) diameter hole through the slab and approximately 1-inch (25mm) into the underlying soil to form a void. Hole **must** be 5/8-inch (16mm) in diameter to ensure seal. It is recommended that you use the drill guide.

5) Remove the drill bit, brush the hole with the bottle brush, and remove the loose cuttings with the vacuum.

6) Place the lower end of VAPOR PIN® assembly into the drilled hole. Place the small hole located in the handle of the installation/extraction tool over the vapor pin to protect the barb fitting, and tap the vapor pin into place using a dead blow hammer (Figure 2). Make sure the installation/extraction tool is aligned parallel to the vapor pin to avoid damaging the barb fitting.

Figure 2. Installing the VAPOR PIN®

During installation, the silicone sleeve will form a slight bulge between the slab and the VAPOR PIN® shoulder. Place the protective cap on VAPOR PIN® to prevent vapor loss prior to sampling (Figure 3).

Figure 3. Installed VAPOR PIN®

7) For flush mount installations, cover the vapor pin with a flush mount cover, using either the plastic cover or the optional stainless-steel Secure Cover (Figure 4).

Figure 4. Secure Cover Installed

8) Allow 20 minutes or more (consult applicable guidance for your situation) for the sub-slab soil-gas conditions to re-equilibrate prior to sampling.

9) Remove protective cap and connect sample tubing to the barb fitting of the VAPOR PIN®. This connection can be made using a short piece of Tygon™ tubing to join the VAPOR PIN® with the

Nylaflow tubing (Figure 5). Put the Nylaflow tubing as close to the VAPOR PIN® as possible to minimize contact between soil gas and Tygon™ tubing.

Figure 5. VAPOR PIN® sample connection

10) Conduct leak tests in accordance with applicable guidance. If the method of leak testing is not specified, an alternative can be the use of a water dam and vacuum pump, as described in SOP Leak Testing the VAPOR PIN® via Mechanical Means (Figure 6). For flush-mount installations, distilled water can be poured directly into the 1 1/2 inch (38mm) hole.

Figure 6. Water dam used for leak detection

11) Collect sub-slab soil gas sample or pressure reading. When finished, replace the protective cap and flush mount cover until the next event. If the sampling is complete, extract the VAPOR PIN®.

Extraction Procedure:

1) Remove the protective cap, and thread the installation/extraction tool onto the barrel of the VAPOR PIN® (Figure 7). Turn the tool clockwise continuously, don't stop turning, the VAPOR PIN® will feed into the bottom of the installation/extraction tool and will extract from the hole like a wine cork, DO NOT PULL.

2) Fill the void with hydraulic cement and smooth with a trowel or putty knife.

Figure 7. Removing the VAPOR PIN®

- Prior to reuse, remove the silicone sleeve and protective cap and discard. Decontaminate the VAPOR PIN® in a hot water and Alconox® wash, then heat in an oven to a temperature of 265° F (130° C) for 15 to 30 minutes. For both steps, **STAINLESS – ½ hour, BRASS 8 minutes**

3) Replacement parts and supplies are available online.

K PRIME INC.

LABORATORY TEST REPORT

ACCT: 4634

TO: MR. BRUCE JACOBSEN
WEST & ASSOCIATES, INC.
630 EUBANKS COURT, #G
VACAVILLE, CA 95688

Phone: 707-451-1360
Email: bjacobsen545@gmail.com

FROM: Richard A. Kagel, Ph.D. RAK
Laboratory Director by AB 3/3/22

SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT: SAMPLE RECEIVED 2/23/2022

The following samples were received at our laboratory on February 23, 2022.

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
VP-6	AIR	2/23/2022	7:20	228925

Test results included in this report meet the requirements of ISO/IEC 17025:2017 as verified by the ANSI-ASQ National Accreditation Board (ANAB), and/or the requirements of the California Environmental Laboratory Accreditation Program (CA-ELAP), as applicable. Refer to certificates and scopes of accreditation AT-1427 (ANAB) and CA-ELAP #1532.

Results relate only to the samples tested. This test report shall not be reproduced except in full, without written permission of the laboratory.

If there are questions or concerns regarding this report, please contact your laboratory representative.

K Prime, Inc.
3621 Westwind Blvd.
Santa Rosa, CA 95403
Tel: (707)-527-7574 Fax: (707)-527-7879

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 4634
CLIENT PROJECT: SAMPLE RECEIVED 2/23/2022

METHOD: VOCS IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID:	VP-6
LAB NO:	228925
SAMPLE TYPE:	AIR
DATE SAMPLED:	2/23/2022
TIME SAMPLED:	07:20
BATCH ID:	021722A1
DATE ANALYZED:	2/28/2022

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	1.00	ND	4.95	ND
CHLOROMETHANE	74-87-3	1.00	ND	2.07	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	1.00	ND	6.99	ND
VINYL CHLORIDE	75-01-4	1.00	ND	2.56	ND
BROMOMETHANE	74-83-9	1.00	ND	3.88	ND
CHLOROETHANE	75-00-3	1.00	ND	2.64	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.00	ND	5.62	ND
1,1-DICHLOROETHENE	75-35-4	1.00	ND	3.97	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.00	ND	7.66	ND
METHYLENE CHLORIDE	75-09-2	1.00	ND	3.47	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.00	ND	3.96	ND
1,1-DICHLOROETHANE	75-34-3	1.00	ND	4.05	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.00	ND	3.97	ND
CHLOROFORM	67-66-3	1.00	ND	4.88	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.00	ND	5.46	ND
1,2-DICHLOROETHANE	107-06-2	1.00	ND	4.05	ND
BENZENE	71-43-2	1.00	ND	3.19	ND
CARBON TETRACHLORIDE	56-23-5	1.00	ND	6.29	ND
1,2-DICHLOROPROPANE	78-87-5	1.00	ND	4.62	ND
TRICHLOROETHENE	79-01-6	1.00	ND	5.37	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.00	ND	4.54	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.00	ND	4.54	ND
TOLUENE	108-88-3	1.00	ND	3.77	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.00	ND	5.46	ND
1,2-DIBROMOETHANE	106-93-4	1.00	ND	7.68	ND
TETRACHLOROETHENE	127-18-4	1.00	ND	6.78	ND
CHLOROBENZENE	108-90-7	1.00	ND	4.60	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	179601-23-1	2.00	ND	8.68	ND
STYRENE	100-42-5	1.00	ND	4.26	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.00	ND	6.87	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.00	ND	4.92	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.00	ND	4.92	ND
1,3-DICHLOROBENZENE	541-73-1	1.00	ND	6.01	ND
1,4-DICHLOROBENZENE	106-46-7	1.00	ND	6.01	ND
1,2-DICHLOROBENZENE	95-50-1	1.00	ND	6.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND	7.42	ND
NAPHTHALENE	91-20-3	1.00	ND	5.24	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND	10.7	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
RL - REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: _____
DATE: 3/3/22

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 4634
CLIENT PROJECT: SAMPLE RECEIVED 2/23/2022

METHOD: TVH C2-C10 AS HEXANE
REFERENCE: EPA TO 3

UNITS: PPM-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	DATE ANALYZED	MRL	SAMPLE CONC
VP-6	228925	AIR	02/23/2022	021522A1	02/28/2022	0.900	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: _____
DATE: 3/1/22

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 4634
CLIENT PROJECT: SAMPLE RECEIVED 2/23/2022

METHOD: TVH C2-C10 AS HEXANE
REFERENCE: EPA TO 3

UNITS: MG/M3

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	DATE ANALYZED	MRL	SAMPLE CONC
VP-6	228925	AIR	02/23/2022	021522A1	02/28/2022	3.17	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: _____
DATE: 3/1/22

K PRIME, INC.
LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B021722A1
SAMPLE TYPE: AIR

BATCH ID: 021722A1
DATE ANALYZED: 2/17/2022

METHOD: VOCS IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND	2.47	ND
CHLOROMETHANE	74-87-3	0.500	ND	1.03	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	0.500	ND	3.50	ND
VINYL CHLORIDE	75-01-4	0.500	ND	1.28	ND
BROMOMETHANE	74-83-9	0.500	ND	1.94	ND
CHLOROETHANE	75-00-3	0.500	ND	1.32	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND	2.81	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND	1.98	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND	3.83	ND
METHYLENE CHLORIDE	75-09-2	0.500	ND	1.74	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND	1.98	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND	2.02	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	ND	1.98	ND
CHLOROFORM	67-66-3	0.500	ND	2.44	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND	2.73	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND	2.02	ND
BENZENE	71-43-2	0.500	ND	1.60	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND	3.15	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND	2.31	ND
TRICHLOROETHENE	79-01-6	0.500	ND	2.69	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND	2.27	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND	2.27	ND
TOLUENE	108-88-3	0.500	ND	1.88	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND	2.73	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND	3.84	ND
TETRACHLOROETHENE	127-18-4	0.500	ND	3.39	ND
CHLOROBENZENE	108-90-7	0.500	ND	2.30	ND
ETHYLBENZENE	100-41-4	0.500	ND	2.17	ND
XYLENE (M+P)	179601-23-1	1.00	ND	4.34	ND
STYRENE	100-42-5	0.500	ND	2.13	ND
XYLENE (O)	95-47-6	0.500	ND	2.17	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND	3.43	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND	2.46	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND	2.46	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND	3.01	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND	3.01	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND	3.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	0.500	ND	3.71	ND
NAPHTHALENE	91-20-3	0.500	ND	2.62	ND
HEXACHLOROBUTADIENE	87-68-3	0.500	ND	5.33	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
MRL - METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

K PRIME, INC.
LABORATORY QUALITY CONTROL REPORT

LAB CONTROL ID: L021722A1
LAB CONTROL DUPLICATE ID: D021722A1

SAMPLE TYPE: AIR
BATCH ID: 021722A1
DATE ANALYZED: 2/17/2022

METHOD: VOCS IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

COMPOUND NAME	SPIKE ADDED (PPB)	REPORTING LIMIT (PPB)	SAMPLE CONC (PPB)	SPIKE CONC (PPB)	SPIKE REC (%)	REC LIMITS (%)
1,1-DICHLOROETHENE	10.0	0.500	ND	10.5	105	60 - 140
BENZENE	10.0	0.500	ND	9.13	91	60 - 140
TRICHLOROETHENE	10.0	0.500	ND	9.70	97	60 - 140
TOLUENE	10.0	0.500	ND	8.87	89	60 - 140
TETRACHLOROETHENE	10.0	0.500	ND	9.55	96	60 - 140

COMPOUND NAME	SPIKE ADDED (PPB)	SPIKE DUP CONC (PPB)	SPIKE DUP REC (%)	RPD (%)	QC LIMITS RPD (%)	QC LIMITS REC (%)
1,1-DICHLOROETHENE	10.0	10.4	104	1.2	25	60 - 140
BENZENE	10.0	9.26	93	1.4	25	60 - 140
TRICHLOROETHENE	10.0	9.70	97	0.0	25	60 - 140
TOLUENE	10.0	8.85	89	0.2	25	60 - 140
TETRACHLOROETHENE	10.0	9.59	96	0.4	25	60 - 140

NOTES:
NA - NOT APPLICABLE OR AVAILABLE
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

K PRIME, INC.
LABORATORY QC REPORT

METHOD BLANK ID:	B021522A1
LAB CONTROL SAMPLE ID:	L021522A1
LAB CONTROL DUPLICATE ID:	D021522A1
BATCH ID:	021522A1

METHOD: TVH C2-C10 AS HEXANE
REFERENCE: EPA TO 3

SAMPLE TYPE:	AIR
UNITS:	PPM-V

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
TVH	0.45	ND

ACCURACY (LAB CONTROL SAMPLE)

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
TVH	167	158	95	60-140

PRECISION (LAB CONTROL DUPLICATE)

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
TVH	158	163	3.4	±30

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
TVH - TOTAL VOLATILE HYDROCARBONS

K PRIME, INC.
LABORATORY QC REPORT

METHOD BLANK ID:	B021522A1
LAB CONTROL SAMPLE ID:	L021522A1
LAB CONTROL DUPLICATE ID:	D021522A1
BATCH ID:	021522A1

METHOD: TVH C2-C10 AS HEXANE
REFERENCE: EPA TO 3

SAMPLE TYPE:	AIR
UNITS:	MG/M3

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
TVH	1.58	ND

ACCURACY (LAB CONTROL SAMPLE)

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
TVH	586	554	95	60-140

PRECISION (LAB CONTROL DUPLICATE)

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
TVH	554	573	3.4	±30

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
TVH - TOTAL VOLATILE HYDROCARBONS

SUMMA CANISTER CHAIN OF CUSTODY

K PRIME INC.

K Prime, Inc. Laboratory
3621 Westwind Blvd.
Santa Rosa, CA 95403-1067
(707) 527-7574
clientservice@kprimeinc.com

EDF Log Code: T0602300136
Global ID

Client Company:	West + Associates
Contact:	Bruce Jacobsen
Phone:	925-705-1400
Email:	bjacobsen545@gmail.com
Client Project ID:	

KPI Project Number
4634

	KPI LAB NO.	SAMPLE I.D. (Location)	Collection: Date	Collection: Time	Canister I.D.	Controller I.D.	Pressure: Initial	Pressure: Final	Analyses: TO-15	Analyses: TPH-g by TO-15	Analyses: 8260 by TO-15	Analyses	Analyses	Turnaround Time	Notes
1	228925	VP-6	2-23-22	720 AM	S-166	691	-23	0	✓	✓	✓			Std	TPH-g & 8260
2															
3															
4															
5															
6															
7															
8															
9															
10															
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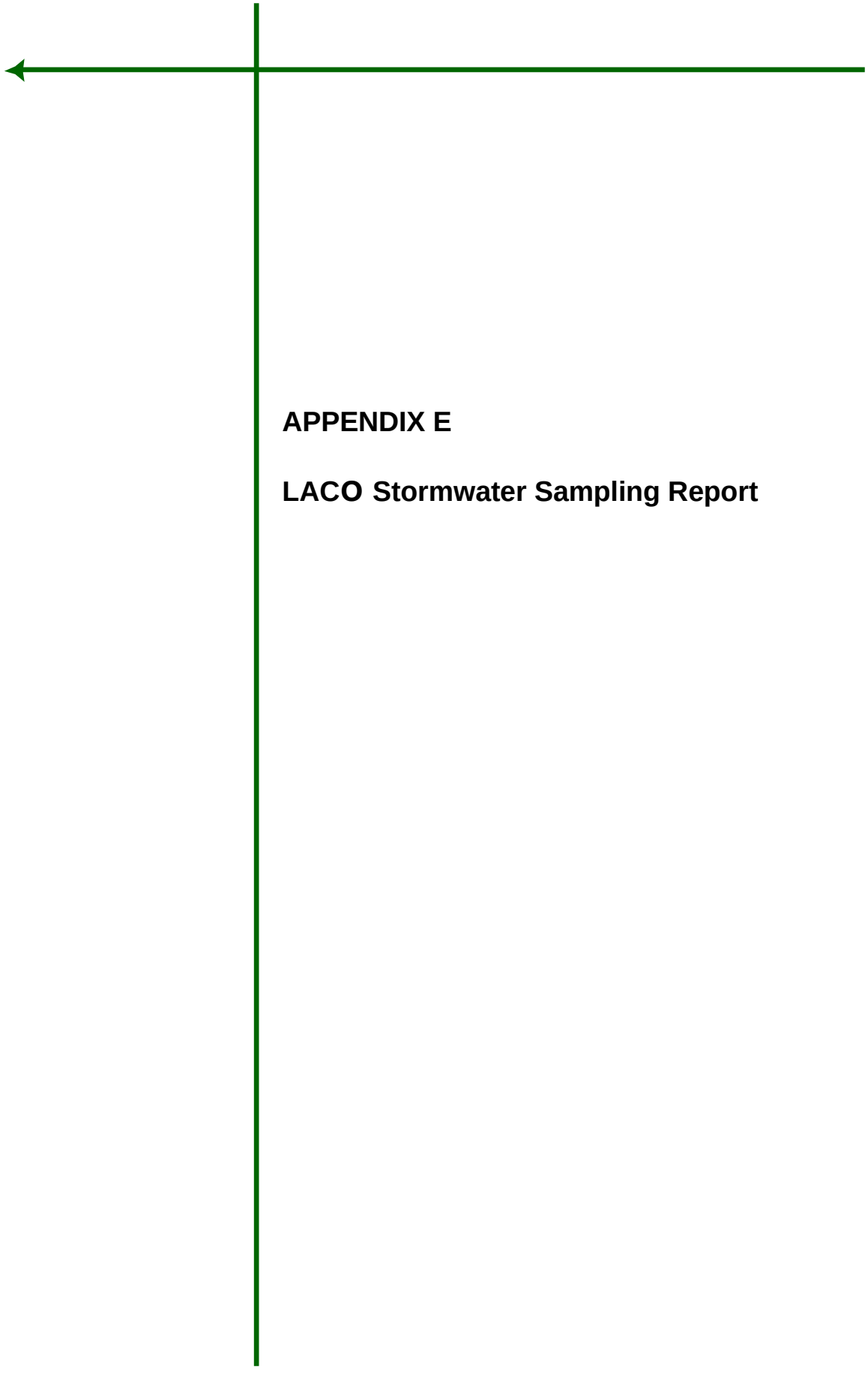
17															
18															
19															
20															

Relinquished by: (Signature) Bruce Jacobsen	Received by: (Signature) Kelly Meis KPI	Date: 2/23/22	Time: 13:05
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:



APPENDIX E

LACO Stormwater Sampling Report

April 26, 2023

7170.05

West and Associates
PO Box 5891
Vacaville, CA 95688

Attention: Mr. Bruce Jacobson

Subject: Letter Report of Findings - Tirsbeck Stormwater Compliance
2000-2018 Broadway Street, Eureka, California

Dear Mr. Jacobson:

West and Associates (West) retained LACO Associates (LACO) to collect stormwater samples at the above-referenced location (Site) in response to Investigative Order No. R1-2023-0012 issued by the North Coast Regional Water Quality Control Board (NCRWQB) on January 12, 2023 (Figure 1). The order required Mr. Alan Tirsbeck, current owner of the Site, to sample discharge from two discharge points identified by the NCRWQCB at the initiation of three separate storm events. LACO completed sampling on March 23, 2023, and this letter report documents our findings.

SAMPLE COLLECTION

Sampling was conducted on February 14, 2023, February 27, 2023, and March 23, 2023, by a qualified LACO sampling technician. Inspection reports are included in Attachment 1. Sampling locations were labeled "D1" and D2" (Figure 2). Samples were collected on days when the storm began within a timeframe for which we were able to get to the Site at the start of the storm and when there was sufficient discharge to sample. While late winter resulted in many days with precipitation at the Site, the timing of initiation of rainfall was not always such that LACO could sample the "first flush." Precipitation records for each storm event sampled are included with the inspection reports in Attachment 1. The intrinsic parameters pH and turbidity were measured in the field with field meters within the required 15-minute timeframe where applicable.

Samples were collected in laboratory-supplied containers for analysis of:

- Total Suspended Solids (TSS) by SM 2540 D, 1997. Revs. 2011
- Hexane Extractable Oil and Grease (O&G) by EPA Method 1664B
- Volatile Organic Compounds (VOCs) by EPA Method 8260B
- Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Method 8260B

ANALYTICAL RESULTS

North Coast Laboratories Ltd. (NCL), a state-certified laboratory, performed the analyses. Analytical results are summarized in Table 1 and the reports are included in Attachment 2.

Table 1: Summary of Analytical Results

Sample ID/ Date	Oil & Grease (mg/L)	TSS (mg/L)	VOCs (µg/L)	TPHg (µg/L)	Turbidity (NTU)	pH
D1						
2/14/2023	8.0	320	ND<0.50-10	ND<50	547	7.00
2/27/2023	ND<5.2	120	ND<0.50-10	ND<50	38.9	7.38

Sample ID/ Date	Oil & Grease (mg/L)	TSS (mg/L)	VOCs (µg/L)	TPHg (µg/L)	Turbidity (NTU)	pH
2/28/2023	ND<4.8	—	—	—	---	---
3/23/2023	3.5 J	340	Toluene 0.60 ND<0.50-10	ND<50	452	7.27
D2						
2/14/2023	4.0 J	400	ND<0.50-10	ND<50	504	7.14
2/27/2023	2.8	50	ND<0.50-10	ND<50	30.3	7.12
2/28/2023	ND<4.7	---	—	—	---	—
3/23/2023	14	266	ND<0.50-10	ND<50	499	7.22

J - Test results that fall below the reporting limit but above the method detection limit are considered approximate values.

ND Below stated laboratory reporting limits

Note that for the February 27, 2023, samples the laboratory did not preserve the O&G sample within the required 4-hour window. LACO requested that they process the original sample for comparison as it was collected at the start of the storm, and we collected a second sample when we were notified of the error. Also note, that NCL noted in this report that the O&G and TSS samples received for the February 27 and 28, 2023, events were above the required 6 degree C holding temperature. This was due to our submitting the samples shortly after collection when they were still at groundwater temperatures.

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Sincerely,
LACO Associates

Christine S. Manhart, PG, QSD/P, QISP
Principal Geologist
Lic. No. 7576, Exp. 3/31/25

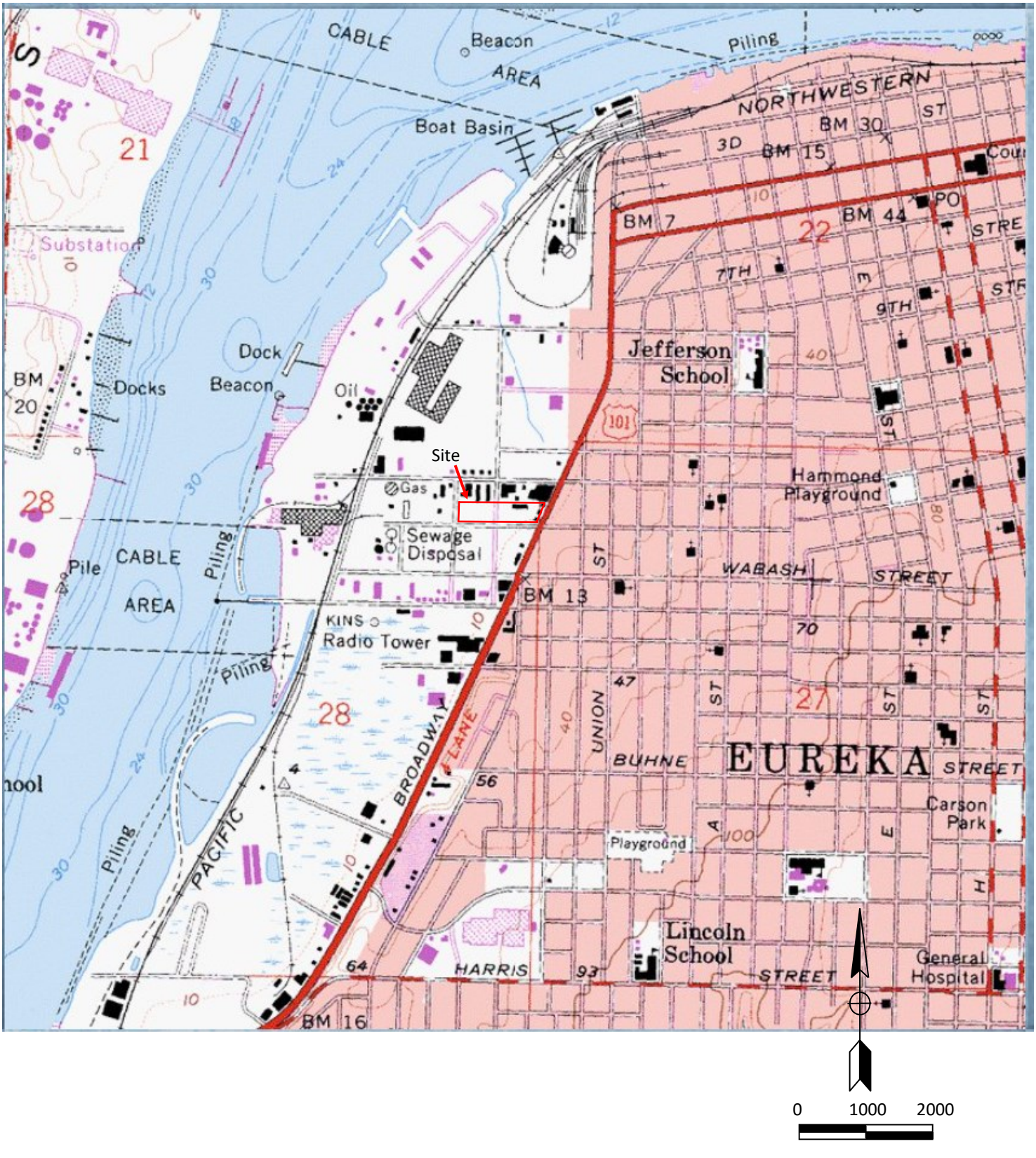
CSM:

P:\7100\7170 West and Associates\7170.05 Tirsbeck Stormwater Compliance\10 Civil\SWPPP\7170.05 Tirsbeck Letter RoF 20230426.docx

Attachment 3

LACO
EUREKA UKIAH SANTA ROSA
1-800-515-5054 www.lacoassociates.com

PROJECT	Tirsbeck Stormwater Compliance RoF	BY CSM	FIGURE 1
CLIENT	West & Associates	DATE 4/27/23	
LOCATION	Eureka , CA	CHECK	JOB NO. 7170.05
	Location Map	SCALE 1" = 2000'	



Attachment 3

LACO
EUREKA UKIAH SANTA ROSA
1-800-515-5054 www.lacoassociates.com

PROJECT	Tirsbeck Stormwater Compliance RoF	BY CSM	FIGURE 2
CLIENT	West & Associates	DATE 4/27/23	
LOCATION	Eureka , CA	CHECK	JOB NO. 7170.05
	Sampling Location	SCALE As shown	

ATTACHMENT 1 INSPECTION REPORTS

MONTHLY BMP INSPECTION REPORT

Date and Time of Inspection: 2/14/2023, 8:30 am		Date Report Written: 2/27/2023	
Part I. General Information			
Site Information			
Facility Name: 7170.05 W&A: Tirsbeck Stormwater Compliance			
Facility Address: 2000-2018 Broadway Street, Eureka, California 95501			
Photos Taken: (Circle one)	Yes	No	Photo Reference IDs: See Attached
Weather			
Estimate storm beginning: February 14, 2023 6:00 AM (date and time)		Estimate storm duration: 10 (hours)	
Estimate time since last runoff from any drainage area: 02/10/2023		Rain gauge reading and location: 0.39 inches, estimated from Woodley Island Eureka NOAA Station.	

Is a "Qualifying Storm Event" predicted or did one occur (i.e., discharge from site preceded by 48-hrs without discharge)? Yes

Samples collected for Analytics:

Discharge Site #1
- 2 L for Oil & Grease
- 250 mL for TSS
- 120 mL for 8260 List 7 VOCs

Discharge Site #2
- 2 L for Oil & Grease
- 250 mL for TSS
- 120 mL for 8260 List 7 VOCs

On-site measurements:

Discharge Site #1
- pH 7.00
- Turbidity 547 NTU

Discharge Site #2
- pH 7.14
- Turbidity 504 NTU
- Observable sheen on water surface

Field Meter Calibration	
pH Meter ID No./Desc.: No.1/Oakton pHTestr 30 Calibration Date/Time: 02/10/23 15:00	Turbidimeter ID No./Desc.: No.1/Hach 2100Q Calibration Date/Time: 02/10/23 15:30
Inspector Information	
Inspector Name: Angela Cook	Inspector Title: Lab Technician
Signature: Angela Cook	Date: 02/27/2023

Part II. BMP Observations. Describe deficiencies in Part III.			
Minimum BMPs (List and Inspect all BMPs Implemented)	Failures or other Deficiencies (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping			
Sweeping impervious surfaces	N/A	N/A	
Clean up spills and leaks promptly	N/A	N/A	
Pick up loose parts and trash	N/A	N/A	
Preventative Maintenance			
Spill and Leak Prevention and Response			
Store and handle liquids in areas not exposed to stormwater	No	No	
Materials Handling and Waste Management			
Cover outside waste bins	No	No	
Erosion and Sediment Controls			
Sweep impervious surfaces	N/A	N/A	
Inlet protection	N/A	N/A	

Part II. BMP Observations Continued. Describe deficiencies in Part III.			
Advanced BMPs (List and Inspect all BMPs Implemented)	Adequately designed, implemented and effective (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Exposure Minimization BMPs			
Stormwater Containment and Discharge Reduction BMPs			
Retention Pond	N/A	N/A	
Detention Pond	N/A	N/A	
Treatment Control BMPs			
Other Advanced BMPs			

Part III. Descriptions of BMP Deficiencies		
Deficiency	**Repairs Implemented: Note – Repairs must be completed as soon as possible.**	
	Repaired (Y/N)	**Corrective Action Implemented**

Part IV. Additional Corrective Actions Required. Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Identify BMPs that need more frequent inspection. Note if SWPPP change is required.	
Required Actions	**Implementation Date**

Changes Since Last Inspection
Changes

Visual Observation Log - Monthly	
Date and Time of Inspection: 2/14/2023, 8:30 AM	Report Date: 2/27/2023
Facility Name:	
Weather	
Antecedent Conditions (last 48 hours): Fair	Current Weather: Overcast, rain, hail
NSWD Observations	

Were any authorized non-stormwater discharges observed?	Yes ☐ No X
Were any **unauthorized** non-stormwater discharges observed?	Yes ☐ No X
If yes to either, identify source:	
Outdoor Industrial Equipment and Storage Area Observations	
Complete Monthly BMP Inspection Report	Yes X No ☐
Drainage Area 1 and 2:	Were any deficiencies or any other potential source of industrial pollutants observed? Yes ☐ No X
If yes to any, describe:	
Exception Documentation (explanation required if inspection could not be conducted).	
Inspector Information	
Inspector Name: Angela Cook	Inspector Title: Lab Technician
Signature: 	Date: 2/27/2023

Southern discharge sampling location, D#1. Discharge received from vegetated swale receiving runoff from concrete lined ditch and adjacent areas.

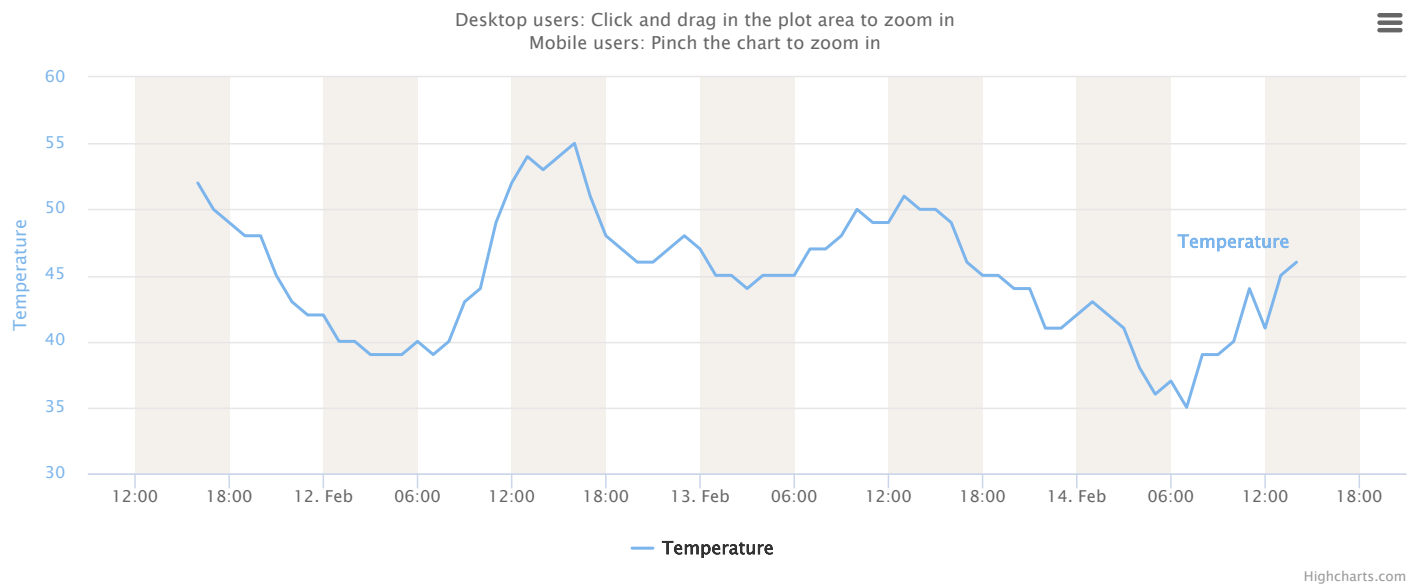
Northern discharge sampling location, D#2. Discharge received from subsurface corrugated pipe receiving runoff from concrete lined ditch and adjacent areas.

Eureka WFO

Attachment 3
Western Region Headquarters
Regional Headquarters

Temperature | 7 Days | Show All Data | Metric Units | Font: A A A | About This Page | Advanced Options

Rain totals for the selected period: 0.53 in



Weather conditions for:
Eureka WFO, CA (EKAWFO - EKA)
Elev: 20 ft; Lat/Lon: 40.80980/-124.16020

Get Yearly Precip Total (non QA/QC'd data)
Get Water Year Precip Total (non QA/QC'd data):
For selected observations near this location: click here

Date/Time (L)	Temp. (°F)	Wind Chill (°F)	Wind Direction	Wind Speed (mph)	Visibility (miles)	Weather	Clouds (x100 ft)	Station Pressure (in Hg)	6 Hour Precip (in)
Feb 14, 2:00 pm	46		N	15G0	7.00		BKN	30.29	
Feb 14, 1:00 pm	45	38	N	15	7.00		SCT	30.29	
Feb 14, 12:00 pm	41	33	N	14G0	7.00	rain	OVC	30.29	
Feb 14, 11:00 am	44	38	ENE	12G0	7.00		OVC	30.29	
Feb 14, 10:00 am	40	35	SSE	8	7.00		BKN	30.27	0.39
Feb 14, 9:00 am	39		SE	3	7.00	rain	OVC	30.26	
Feb 14, 8:00 am	39	35	ESE	6	7.00		OVC	30.28	
Feb 14, 7:00 am	35	30	SSE	6	7.00	rain	OVC	30.29	
Feb 14, 6:00 am	37			0	7.00	rain	OVC	30.29	
Feb 14, 5:00 am	36			0	7.00	rain	OVC	30.31	
Feb 14, 4:00 am	38		NNE	3	7.00		SCT	30.33	0.00
Feb 14, 3:00 am	41	37	N	6G0	7.00		SCT	30.33	
Feb 14, 2:00 am	42	36	NNE	10	7.00		SCT	30.35	
Feb 14, 1:00 am	43	37	NNE	12G0	7.00		SCT	30.35	
Feb 14, 12:00 am	42	36	NNE	12	7.00		OVC	30.34	
Feb 13, 11:00 pm	41	35	NNE	10	7.00		OVC	30.34	
Feb 13, 10:00 pm	41	33	N	15G0	7.00	rain	OVC	30.34	0.08
Feb 13, 9:00 pm	44	38	NNE	13	7.00	rain	BKN	30.33	
Feb 13, 8:00 pm	44	37	N	15G0	7.00	rain	BKN	30.32	
Feb 13, 7:00 pm	45	38	N	15	7.00		BKN	30.31	
Feb 13, 6:00 pm	45	38	N	15G0	7.00	rain	BKN	30.30	
Feb 13, 5:00 pm	46		N	16G0	7.00		BKN	30.30	
Feb 13, 4:00 pm	49		N	14G0	7.00		SCT	30.29	0.00
Feb 13, 3:00 pm	50		N	17	7.00		SCT	30.28	
Feb 13, 2:00 pm	50		N	17	7.00		BKN	30.29	
Feb 13, 1:00 pm	51		NNE	15	7.00		SCT	30.29	
Feb 13, 12:00 pm	49		NE	14	7.00		BKN	30.31	
Feb 13, 11:00 am	49		NNW	12	7.00		BKN	30.32	
Feb 13, 10:00 am	50		ENE	10	7.00		SCT	30.31	0.06
Feb 13, 9:00 am	48		NNE	16	7.00		BKN	30.30	
Feb 13, 8:00 am	47		N	13	7.00		OVC	30.28	
Feb 13, 7:00 am	47		N	14	7.00		OVC	30.25	
Feb 13, 6:00 am	45			0	3.00	drizzle	OVC	30.24	

Attachment 3

Date/Time (L)	Temp. (°F)	Wind Chill (°F)	Wind Direction	Wind Speed (mph)	Visibility (miles)	Weather	Clouds (x100 ft)	Station Pressure (in Hg)	6 Hour Precip (in)
Feb 13, 5:00 am	45			0	5.00	drizzle	OVC	30.25	
Feb 13, 4:00 am	45			0	7.00		OVC	30.24	0.00
Feb 13, 3:00 am	44			0	7.00		BKN	30.24	
Feb 13, 2:00 am	45			0	7.00		BKN	30.25	
Feb 13, 1:00 am	45			0	7.00		SCT	30.26	
Feb 13, 12:00 am	47		N	7	7.00		SCT	30.26	
Feb 12, 11:00 pm	48		N	10	7.00		OVC	30.26	
Feb 12, 10:00 pm	47		NNE	9	7.00		OVC	30.26	0.00
Feb 12, 9:00 pm	46			0	7.00		CLR	30.24	
Feb 12, 8:00 pm	46		NW	2	7.00		CLR	30.22	
Feb 12, 7:00 pm	47		NNW	3	7.00		CLR	30.20	
Feb 12, 6:00 pm	48		SSW	3	7.00		CLR	30.19	
Feb 12, 5:00 pm	51		N	9G0	7.00		CLR	30.23	
Feb 12, 4:00 pm	55		N	14	7.00		CLR	30.24	0.00
Feb 12, 3:00 pm	54		N	7	7.00		SCT	30.25	
Feb 12, 2:00 pm	53		NNE	5	7.00		SCT	30.24	
Feb 12, 1:00 pm	54		N	9	7.00		SCT	30.24	
Feb 12, 12:00 pm	52		NNE	5	7.00		SCT	30.25	
Feb 12, 11:00 am	49		NNE	5	7.00		SCT	30.26	
Feb 12, 10:00 am	44		SSW	3	3.00	mist	SCT	30.27	0.00
Feb 12, 9:00 am	43			0	0.75	mist	OVC	30.27	
Feb 12, 8:00 am	40		ESE	3	3.00	mist	SCT	30.25	
Feb 12, 7:00 am	39			0	7.00		CLR	30.23	
Feb 12, 6:00 am	40			0	7.00		CLR	30.22	
Feb 12, 5:00 am	39			0	7.00		BKN	30.24	
Feb 12, 4:00 am	39			0	7.00		OVC	30.24	0.00
Feb 12, 3:00 am	39			0	7.00		CLR	30.23	
Feb 12, 2:00 am	40			0	7.00		CLR	30.23	
Feb 12, 1:00 am	40			0	7.00		CLR	30.23	
Feb 12, 12:00 am	42			0	7.00		CLR	30.23	
Feb 11, 11:00 pm	42			0	7.00		CLR	30.22	
Feb 11, 10:00 pm	43			0	7.00		CLR	30.21	0.00
Feb 11, 9:00 pm	45			0	7.00		CLR	30.19	
Feb 11, 8:00 pm	48		NNE	6	7.00		CLR	30.18	
Feb 11, 7:00 pm	48		N	9	7.00		CLR	30.17	
Feb 11, 6:00 pm	49		N	15	7.00		CLR	30.17	
Feb 11, 5:00 pm	50		N	16	7.00		CLR	30.17	
Feb 11, 4:00 pm	52		N	20	7.00		CLR	30.17	0.00

MONTHLY BMP INSPECTION REPORT

Date and Time of Inspection: 2/27/2023, 8:00 am			Date Report Written: 2/27/2023
Part I. General Information			
Site Information			
Facility Name: 7170.05 W&A: Tirsbeck Stormwater Compliance			
Facility Address: 2000-2018 Broadway Street, Eureka, California 95501			
Photos Taken: (Circle one)	Yes	No	Photo Reference IDs:
Weather			
Estimate storm beginning: February 27, 2023 4:00 AM (date and time)			Estimate storm duration: 45 (hours)
Estimate time since last runoff from any drainage area: 02/26/2023			Rain gauge reading and location: 0.65 inches, estimated from Woodley Island Eureka NOAA Station.

Is a "Qualifying Storm Event" predicted or did one occur (i.e., discharge from site preceded by 48-hrs without discharge)? Yes

Samples collected for Analytics:

Discharge Site #1
- 2 L for Oil & Grease
- 1 L for TSS
- 120 mL for 8260 List 7 VOCs

Discharge Site #2
- 2 L for Oil & Grease
- 1 L for TSS
- 120 mL for 8260 List 7 VOCs

On-site measurements:

Discharge Site #1
- pH 7.38
- Turbidity 38.9 NTU

Discharge Site #2
- pH 7.12
- Turbidity 30.3 NTU
- Observable sheen on water surface

Field Meter Calibration	
pH Meter ID No./Desc.: No.1/Oakton pHTestr 30 Calibration Date/Time: 02/10/23 15:00	Turbidimeter ID No./Desc.: No.1/Hach 2100Q Calibration Date/Time: 02/10/23 15:30
Inspector Information	
Inspector Name: Angela Cook	Inspector Title: Lab Technician
Signature: Angela Cook	Date: 02/27/2023

Part II. BMP Observations. Describe deficiencies in Part III.			
Minimum BMPs (List and Inspect all BMPs Implemented)	Failures or other Deficiencies (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping			
Sweeping impervious surfaces	N/A	N/A	
Clean up spills and leaks promptly	N/A	N/A	
Pick up loose parts and trash	N/A	N/A	
Preventative Maintenance			
Spill and Leak Prevention and Response			
Store and handle liquids in areas not exposed to stormwater	No	No	
Materials Handling and Waste Management			
Cover outside waste bins	No	No	
Erosion and Sediment Controls			
Sweep impervious surfaces	N/A	N/A	
Inlet protection	N/A	N/A	

Part II. BMP Observations Continued. Describe deficiencies in Part III.			
Advanced BMPs (List and Inspect all BMPs Implemented)	Adequately designed, implemented and effective (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Exposure Minimization BMPs			
Stormwater Containment and Discharge Reduction BMPs			
Retention Pond	N/A	N/A	
Detention Pond	N/A	N/A	
Treatment Control BMPs			
Other Advanced BMPs			

Part III. Descriptions of BMP Deficiencies		
Deficiency	**Repairs Implemented: Note – Repairs must be completed as soon as possible.**	
	Repaired (Y/N)	**Corrective Action Implemented**

Part IV. Additional Corrective Actions Required. Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Identify BMPs that need more frequent inspection. Note if SWPPP change is required.	
Required Actions	**Implementation Date**

Changes Since Last Inspection
Changes

Visual Observation Log - Monthly	
Date and Time of Inspection: 2/27/2023, 8:30 AM	Report Date: 2/27/2023
Facility Name:	
Weather	
Antecedent Conditions (last 48 hours): Fair	Current Weather: Overcast, rain, hail
NSWD Observations	

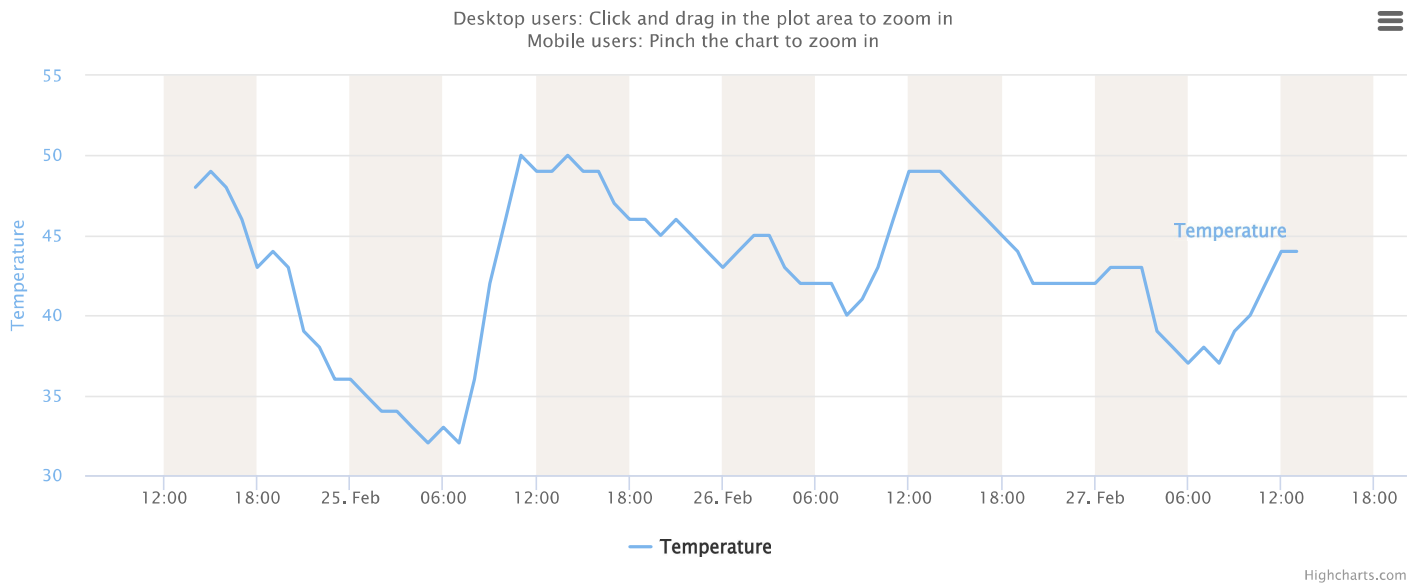
Were any authorized non-stormwater discharges observed?	Yes ☐ No X
Were any **unauthorized** non-stormwater discharges observed?	Yes ☐ No X
If yes to either, identify source:	
Outdoor Industrial Equipment and Storage Area Observations	
Complete Monthly BMP Inspection Report	Yes X No ☐
Drainage Area 1 and 2:	Were any deficiencies or any other potential source of industrial pollutants observed? Yes ☐ No X
If yes to any, describe:	
Exception Documentation (explanation required if inspection could not be conducted).	
Inspector Information	
Inspector Name: Angela Cook	Inspector Title: Lab Technician
Signature: 	Date: 2/27/2023

Eureka WFO

Weather.gov > Western Region Headquarters > Time Series Viewer

Attachment 3
Western Region Headquarters
Regional Headquarters

Select Graph ..... | 7 Days | Show Hourly Data | Metric Units | **Font:** A A **A** | About This Page | Advanced Options



Weather conditions for:
Eureka WFO, CA (EKAWFO - EKA)
Elev: 20 ft; Lat/Lon: 40.80980/-124.16020

Get Yearly Precip Total (non QA/QC'd data)
Get Water Year Precip Total (non QA/QC'd data):
For selected observations near this location: click here

Date/Time (L)	Temp. (°F)	Wind Chill (°F)	Wind Direction	Wind Speed (mph)	Visibility (miles)	Weather	Clouds (x100 ft)	Station Pressure (in Hg)	6 Hour Precip (in)
Feb 27, 1:00 pm	44	38	WSW	12G0	7.00		OVC	29.83	
Feb 27, 12:00 pm	44	38	WSW	12	7.00	rain	OVC	29.85	
Feb 27, 11:00 am	42	36	SSW	10G0	7.00	rain	BKN	29.85	
Feb 27, 10:00 am	40	35	SSE	8	7.00		OVC	29.84	0.63
Feb 27, 9:00 am	39		SW	5	6.00	rain	OVC	29.84	
Feb 27, 8:00 am	37	32	SSE	7	6.00	rain	OVC	29.84	
Feb 27, 7:00 am	38	32	S	8	5.00	rain	OVC	29.85	
Feb 27, 6:00 am	37	32	S	7	5.00	rain	OVC	29.85	
Feb 27, 5:00 am	38	33	S	7	5.00	rain	OVC	29.88	
Feb 27, 4:00 am	39	35	SW	6	5.00	rain	OVC	29.88	0.25
Feb 27, 3:00 am	43	37	S	12	7.00		BKN	29.91	
Feb 27, 2:00 am	43	38	SE	8	7.00		BKN	29.94	
Feb 27, 1:00 am	43	37	S	12	7.00		BKN	29.97	
Feb 27, 12:00 am	42	36	SSE	9	7.00		BKN	30.02	
Feb 26, 11:00 pm	42	36	S	9	7.00		BKN	30.05	
Feb 26, 10:00 pm	42	38	S	6	7.00		OVC	30.06	0.00
Feb 26, 9:00 pm	42	38	S	6	7.00		OVC	30.08	
Feb 26, 8:00 pm	42	38	S	6	7.00		BKN	30.10	
Feb 26, 7:00 pm	44	41	S	6	7.00		BKN	30.10	
Feb 26, 6:00 pm	45		S	3	7.00		OVC	30.11	
Feb 26, 5:00 pm	46		WSW	3	7.00		OVC	30.12	
Feb 26, 4:00 pm	47		WNW	6	7.00		BKN	30.12	0.00
Feb 26, 3:00 pm	48		NNW	7	7.00		SCT	30.12	
Feb 26, 2:00 pm	49		NNW	7	7.00		SCT	30.12	
Feb 26, 1:00 pm	49		NW	5	7.00		SCT	30.13	
Feb 26, 12:00 pm	49		NE	6	7.00		SCT	30.13	
Feb 26, 11:00 am	46		SE	2	7.00		BKN	30.14	
Feb 26, 10:00 am	43		SSW	3	7.00		OVC	30.12	0.35
Feb 26, 9:00 am	41		SSE	5	7.00	rain	OVC	30.10	
Feb 26, 8:00 am	40	33	N	10	5.00	rain	OVC	30.07	
Feb 26, 7:00 am	42		W	5	5.00	rain	OVC	29.98	
Feb 26, 6:00 am	42		SW	3	5.00	rain	OVC	29.97	
Feb 26, 5:00 am	42	38	SW	6	5.00	rain	OVC	30.00	

Attachment 3

Date/Time (L)	Temp. (°F)	Wind Chill (°F)	Wind Direction	Wind Speed (mph)	Visibility (miles)	Weather	Clouds (x100 ft)	Station Pressure (in Hg)	6 Hour Precip (in)
Feb 26, 4:00 am	43		SW	3	7.00	rain	OVC	30.01	0.05
Feb 26, 3:00 am	45	42	SSW	6	7.00	rain	OVC	30.02	
Feb 26, 2:00 am	45	42	S	6	7.00		OVC	30.03	
Feb 26, 1:00 am	44	39	S	8	7.00		OVC	30.03	
Feb 26, 12:00 am	43	39	SSE	6	7.00		OVC	30.04	
Feb 25, 11:00 pm	44		S	3	7.00		OVC	30.05	
Feb 25, 10:00 pm	45	41	S	8	7.00		OVC	30.06	0.00
Feb 25, 9:00 pm	46		S	6	7.00		OVC	30.05	
Feb 25, 8:00 pm	45			0	7.00		BKN	30.05	
Feb 25, 7:00 pm	46		W	5	7.00		BKN	30.06	
Feb 25, 6:00 pm	46		W	6	7.00		BKN	30.04	
Feb 25, 5:00 pm	47		SW	7	7.00		BKN	30.04	
Feb 25, 4:00 pm	49		WSW	12	7.00		BKN	30.03	0.00
Feb 25, 3:00 pm	49		WSW	12	7.00		CLR	30.01	
Feb 25, 2:00 pm	50		WSW	9	7.00		CLR	30.00	
Feb 25, 1:00 pm	49		W	8	7.00		CLR	30.01	
Feb 25, 12:00 pm	49		W	8	7.00		CLR	30.01	
Feb 25, 11:00 am	50		SW	3	7.00		CLR	30.01	
Feb 25, 10:00 am	46			0	7.00		CLR	30.02	0.00
Feb 25, 9:00 am	42			0	7.00		CLR	30.02	
Feb 25, 8:00 am	36	31	SE	6	7.00		CLR	30.01	
Feb 25, 7:00 am	32		SSE	2	7.00		CLR	30.00	
Feb 25, 6:00 am	33	27	WNW	7	7.00		CLR	30.00	
Feb 25, 5:00 am	32	26	NNE	6	7.00		CLR	29.98	
Feb 25, 4:00 am	33	28	SSE	6	7.00		CLR	29.99	0.00
Feb 25, 3:00 am	34	29	WSW	6	7.00		CLR	29.98	
Feb 25, 2:00 am	34		SSE	2	7.00		CLR	29.99	
Feb 25, 1:00 am	35		S	2	7.00		SCT	30.02	
Feb 25, 12:00 am	36		S	3	7.00		SCT	30.01	
Feb 24, 11:00 pm	36			0	7.00		BKN	30.01	
Feb 24, 10:00 pm	38			0	7.00		BKN	30.01	0.00
Feb 24, 9:00 pm	39		S	3	7.00		BKN	30.01	
Feb 24, 8:00 pm	43		ENE	5	7.00		BKN	30.01	
Feb 24, 7:00 pm	44	39	NNE	8	7.00		CLR	29.99	
Feb 24, 6:00 pm	43	38	NNE	8	7.00		SCT	29.98	
Feb 24, 5:00 pm	46		NNE	12G0	7.00		SCT	29.93	
Feb 24, 4:00 pm	48		NNE	7	7.00		SCT	29.92	0.00
Feb 24, 3:00 pm	49		NNE	5	7.00		SCT	29.90	
Feb 24, 2:00 pm	48		NNE	5	7.00		SCT	29.89	

MONTHLY BMP INSPECTION REPORT

Date and Time of Inspection: 3/23/2023, 2:00 PM	Date Report Written: 3/24/2023

Part I. General Information

Site Information

Facility Name: 7170.05 W&A: Tirsbeck Stormwater Compliance

Facility Address: 2000-2018 Broadway Street, Eureka, California 95501

Photos Taken: (Circle one)	Yes (circled)	No	Photo Reference IDs: See Photo Log

Weather

Estimate storm beginning: March 23, 2023 12:00 PM (date and time)	Estimate storm duration: 5 (hours)
Estimate time since last runoff from any drainage area: 03/19/2023	Rain gauge reading and location: 0.22 inches, estimated from Woodley Island Eureka NOAA Station.

Is a "Qualifying Storm Event" predicted or did one occur (i.e., discharge from site preceded by 48-hrs without discharge)? Yes

Samples collected for Analytics:

Discharge Site #1
- 2 L for Oil & Grease
- ½ gal for TSS
- 120 mL for 8260 List 7 VOCs

Discharge Site #2
- 2 L for Oil & Grease
- ½ gal for TSS
- 120 mL for 8260 List 7 VOCs

On-site measurements:

Discharge Site #1
- pH 7.27
- Turbidity 452 NTU
- Observable sheen on water surface

Discharge Site #2
- pH 7.22
- Turbidity 499 NTU
- Observable sheen on water surface

Exception Documentation (explanation required if inspection could not be conducted).

pH Meter ID No./Desc.: No.1/Oakton pHTestr 30 Calibration Date/Time: 03/10/23 13:25	Turbidimeter ID No./Desc.: No.1/Hach 2100Q Calibration Date/Time: 03/10/23 13:45

Inspector Information

Inspector Name: Angela Cook	Inspector Title: Lab Technician
Signature: 	Date: 03/24/2023

Part II. BMP Observations. Describe deficiencies in Part III.			
Minimum BMPs (List and Inspect all BMPs Implemented)	Failures or other Deficiencies (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping			
Sweeping impervious surfaces	N/A	N/A	
Clean up spills and leaks promptly	N/A	N/A	
Pick up loose parts and trash	N/A	N/A	
Preventative Maintenance			
Spill and Leak Prevention and Response			
Store and handle liquids in areas not exposed to stormwater	No	No	
Materials Handling and Waste Management			
Cover outside waste bins	No	No	
Erosion and Sediment Controls			
Sweep impervious surfaces	N/A	N/A	
Inlet protection	N/A	N/A	

Part II. BMP Observations Continued. Describe deficiencies in Part III.			
Advanced BMPs (List and Inspect all BMPs Implemented)	Adequately designed, implemented and effective (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Exposure Minimization BMPs			
Stormwater Containment and Discharge Reduction BMPs			
Retention Pond	N/A	N/A	
Detention Pond	N/A	N/A	
Treatment Control BMPs			
Other Advanced BMPs			

Part III. Descriptions of BMP Deficiencies		
Deficiency	**Repairs Implemented: Note – Repairs must be completed as soon as possible.**	
	Repaired (Y/N)	**Corrective Action Implemented**

Part IV. Additional Corrective Actions Required. Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Identify BMPs that need more frequent inspection. Note if SWPPP change is required.	
Required Actions	**Implementation Date**

Changes Since Last Inspection
Changes

Visual Observation Log - Monthly	
Date and Time of Inspection: 3/23/2023, 2:00 PM	Report Date: 3/24/2023
Facility Name: Trisbeck property	
Weather	
Antecedent Conditions (last 48 hours): Overcast	Current Weather: Overcast, rain
NSWD Observations	

Were any authorized non-stormwater discharges observed?	Yes ☐ No X
Were any **unauthorized** non-stormwater discharges observed?	Yes ☐ No X
If yes to either, identify source:	
Outdoor Industrial Equipment and Storage Area Observations	
Complete Monthly BMP Inspection Report	Yes X No ☐
Drainage Area 1 and 2:	Were any deficiencies or any other potential source of industrial pollutants observed? Yes X No ☐
If yes to any, describe: Observable sheen on water surface at both discharge locations.	
Exception Documentation (explanation required if inspection could not be conducted).	
Inspector Information	
Inspector Name: Angela Cook	Inspector Title: Lab Technician
Signature: Angela Cook	Date: 3/24/2023

Southern discharge sampling location, D#1. Discharge received from vegetated swale receiving runoff from concrete lined ditch and adjacent areas.

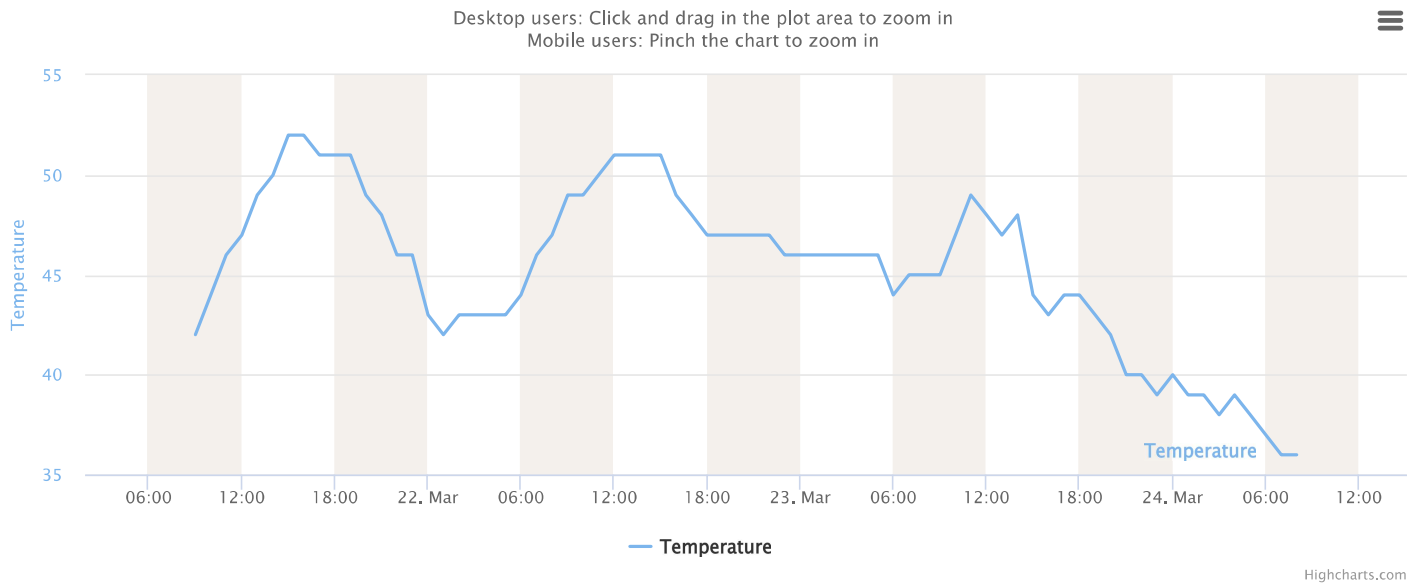
Northern discharge sampling location, D#2. Discharge received from subsurface corrugated pipe receiving runoff from concrete lined ditch and adjacent areas.

Eureka WFO

Weather.gov > Western Region Headquarters > Time Series Viewer

Attachment 3
Western Region Headquarters
Regional Headquarters

Select Graph ..... | 7 Days | Show Hourly Data | Metric Units | **Font:** A A **A** | About This Page | Advanced Options



Weather conditions for:
Eureka WFO, CA (EKAWFO - EKA)
Elev: 20 ft; Lat/Lon: 40.80980/-124.16020

Get Yearly Precip Total (non QA/QC'd data)
Get Water Year Precip Total (non QA/QC'd data):
For selected observations near this location: click here

Date/Time (L)	Temp. (°F)	Wind Chill (°F)	Wind Direction	Wind Speed (mph)	Visibility (miles)	Weather	Clouds (x100 ft)	Station Pressure (in Hg)	6 Hour Precip (in)
Mar 24, 8:00 am	36			0	7.00		BKN	30.60	
Mar 24, 7:00 am	36		S	3	7.00		BKN	30.59	
Mar 24, 6:00 am	37			0	7.00		BKN	30.59	
Mar 24, 5:00 am	38		S	3	7.00	rain	BKN	30.58	0.05
Mar 24, 4:00 am	39		E	3	7.00		SCT	30.58	
Mar 24, 3:00 am	38		S	5	7.00		BKN	30.57	
Mar 24, 2:00 am	39		SSW	3	7.00		BKN	30.56	
Mar 24, 1:00 am	39		S	5	7.00		SCT	30.55	
Mar 24, 12:00 am	40	36	ESE	6	7.00		SCT	30.55	
Mar 23, 11:00 pm	39			0	7.00		SCT	30.53	0.04
Mar 23, 10:00 pm	40		SSE	1	7.00		BKN	30.52	
Mar 23, 9:00 pm	40		S	2	7.00		BKN	30.50	
Mar 23, 8:00 pm	42		W	3	7.00		BKN	30.47	
Mar 23, 7:00 pm	43		SSE	2	7.00		BKN	30.46	
Mar 23, 6:00 pm	44		W	2	7.00		OVC	30.46	
Mar 23, 5:00 pm	44		S	3	7.00		OVC	30.45	0.22
Mar 23, 4:00 pm	43	39	NNE	6	3.00	rain	OVC	30.45	
Mar 23, 3:00 pm	44	38	N	12	4.00	rain	OVC	30.41	
Mar 23, 2:00 pm	48		W	7	7.00	rain	OVC	30.38	
Mar 23, 1:00 pm	47		SW	6	7.00	rain	OVC	30.39	
Mar 23, 12:00 pm	48		S	5	7.00	rain	OVC	30.39	
Mar 23, 11:00 am	49		S	6	7.00		OVC	30.38	0.02
Mar 23, 10:00 am	47		S	6	7.00		BKN	30.38	
Mar 23, 9:00 am	45	42	S	6	7.00		OVC	30.38	
Mar 23, 8:00 am	45		SE	3	7.00		OVC	30.36	
Mar 23, 7:00 am	45	42	WNW	6	7.00		OVC	30.34	
Mar 23, 6:00 am	44		S	3	7.00		OVC	30.33	
Mar 23, 5:00 am	46		NNW	3	7.00		OVC	30.33	0.04
Mar 23, 4:00 am	46		WNW	6	7.00		OVC	30.32	
Mar 23, 3:00 am	46		WNW	6	7.00		OVC	30.31	
Mar 23, 2:00 am	46			0	7.00		OVC	30.31	
Mar 23, 1:00 am	46		WNW	6	7.00		OVC	30.30	
Mar 23, 12:00 am	46		NW	7	7.00		OVC	30.29	

Attachment 3

Date/Time (L)	Temp. (°F)	Wind Chill (°F)	Wind Direction	Wind Speed (mph)	Visibility (miles)	Weather	Clouds (x100 ft)	Station Pressure (in Hg)	6 Hour Precip (in)
Mar 22, 11:00 pm	46		NW	3	7.00		OVC	30.28	0.03
Mar 22, 10:00 pm	47		NNW	3	7.00		OVC	30.26	
Mar 22, 9:00 pm	47		NW	7	7.00	drizzle	OVC	30.24	
Mar 22, 8:00 pm	47		WNW	7	7.00		OVC	30.22	
Mar 22, 7:00 pm	47		NNW	12	7.00	drizzle	OVC	30.21	
Mar 22, 6:00 pm	47		WNW	9	7.00		OVC	30.20	
Mar 22, 5:00 pm	48		N	12	7.00	drizzle	OVC	30.18	0.00
Mar 22, 4:00 pm	49		N	8	7.00		OVC	30.16	
Mar 22, 3:00 pm	51		NNW	10	7.00		OVC	30.14	
Mar 22, 2:00 pm	51		NNW	13	7.00		BKN	30.13	
Mar 22, 1:00 pm	51		NNW	8	7.00		OVC	30.11	
Mar 22, 12:00 pm	51		NNW	7	7.00		OVC	30.09	
Mar 22, 11:00 am	50		NW	5	5.00	mist	OVC	30.05	0.00
Mar 22, 10:00 am	49		NNW	5	5.00	mist	OVC	30.02	
Mar 22, 9:00 am	49		NW	6	4.00	mist	OVC	29.99	
Mar 22, 8:00 am	47			0	3.00	mist	OVC	29.95	
Mar 22, 7:00 am	46			0	7.00		OVC	29.90	
Mar 22, 6:00 am	44			0	7.00		OVC	29.86	
Mar 22, 5:00 am	43			0	7.00		BKN	29.83	0.00
Mar 22, 4:00 am	43		SW	3	7.00		OVC	29.81	
Mar 22, 3:00 am	43		NNW	5	7.00		OVC	29.78	
Mar 22, 2:00 am	43		SE	5	7.00		OVC	29.75	
Mar 22, 1:00 am	42		SE	5	7.00		BKN	29.73	
Mar 22, 12:00 am	43			0	7.00		BKN	29.70	
Mar 21, 11:00 pm	46			0	7.00		CLR	29.67	0.00
Mar 21, 10:00 pm	46		S	5	7.00		SCT	29.64	
Mar 21, 9:00 pm	48		ESE	3	7.00		SCT	29.62	
Mar 21, 8:00 pm	49			0	7.00		BKN	29.59	
Mar 21, 7:00 pm	51			0	7.00		BKN	29.57	
Mar 21, 6:00 pm	51			0	7.00		OVC	29.55	
Mar 21, 5:00 pm	51			0	7.00		OVC	29.54	0.00
Mar 21, 4:00 pm	52		ESE	3	7.00		OVC	29.53	
Mar 21, 3:00 pm	52		N	5	7.00		OVC	29.53	
Mar 21, 2:00 pm	50		NNW	5	7.00		OVC	29.55	
Mar 21, 1:00 pm	49			0	7.00		OVC	29.57	
Mar 21, 12:00 pm	47			0	7.00		OVC	29.59	
Mar 21, 11:00 am	46			0	7.00		OVC	29.61	0.00
Mar 21, 10:00 am	44			0	7.00		OVC	29.64	
Mar 21, 9:00 am	42			0	7.00		OVC	29.66	

ATTACHMENT 2 ANALYTICAL REPORTS

Attachment 3

NORTH COAST LABORATORIES LTD.

February 27, 2023

LACO Associates
P.O. Box 1023
Eureka, CA 95502

Attn: Accounts Payable

Order No.: 2302222
Invoice No.: 169091
PO No.:
ELAP No.1247-Expires July 2024

RE: 7170.05 Tirsbeck Stormwater Compliance

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	7170.05 - D#1
01B	7170.05 - D#1
01C	7170.05 - D#1
02A	7170.05 - D#2
02B	7170.05 - D#2
02C	7170.05 - D#2

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

Flag = Explanation in Case Narrative

All solid results are expressed on a wet-weight basis unless otherwise noted.

Approved for release by:

Roxanne Golich, Project Manager

Attachment 3

Date: 27-Feb-2023
WorkOrder: 2302222

CASE NARRATIVE

THIS IS AN AMENDED REPORT (2302222 R1):
J Flags were added as per client request.

J Flags:
Test results that fall below the reporting limit and above the method detection limit are considered approximate values.

EPA 8260:
The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were above the upper acceptance limits for 1,1,2,2-tetrachloroethane, 1,2,3-trichlorobenzene, ethyl tert-butyl ether, naphthalene, tert-amyl methyl ether, and tert-butyl alcohol. The elevated recoveries equate to a high bias. There were no detectable levels of these analytes in the sample; therefore, the data were accepted.

The 1,1,1,-trichloroethane, 1,1-dichloropropene, carbon tetrachloride, and trans-1,2-dichloroethene recoveries for the matrix spike (MS) were below the lower acceptance limit. The recoveries were within acceptance limits in the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) indicating the analytical batch was in control.

EPA 1664:
The oil and grease recovery for the matrix spike (MS) was below the lower acceptance limit. The recovery was within acceptance limits in the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) indicating the low recovery may be due to matrix effects.

Attachment 3

Date: 27-Feb-2023
WorkOrder: 2302222

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#1 **Received:** 2/14/2023
Lab ID: 2302222-01A **Matrix:** Groundwater **Collected** 2/14/2023 8:45
Test Name: Hexane Extractable Oil and Grease **Analyst:** MRB
Reference: EPA 1664B

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Oil and Grease	***8.0***			5.3	2.7	mg/L	1.1	02/20/2023	02/21/23 13:30

Client Sample ID: 7170.05 - D#1 **Received:** 2/14/2023
Lab ID: 2302222-01B **Matrix:** Groundwater **Collected** 2/14/2023 8:45
Test Name: Total Suspended Solids (TSS/NFR) **Analyst:** TF
Reference: SM 2540 D, 1997. Revs 2011

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Non-Filterable Residue(TSS)	320			1.0	0.78	mg/L	1.0	02/16/2023	02/17/23 10:30

Attachment 3

Date: 27-Feb-2023
WorkOrder: 2302222

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#1
Lab ID: 2302222-01C **Matrix:** Groundwater
Test Name: EPA 8260B
Reference: EPA 8260B

Received: 2/14/2023
Collected 2/14/2023 8:45
Analyst: JWP

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
1,1,1,2-Tetrachloroethane	ND			0.50	0.17	µg/L	1.0	N/A	02/17/23 17:54
1,1,1-Trichloroethane	ND			0.50	0.2	µg/L	1.0	N/A	02/17/23 17:54
1,1,2,2-Tetrachloroethane	ND			0.50	0.28	µg/L	1.0	N/A	02/17/23 17:54
1,1,2-Trichloroethane	ND			0.50	0.15	µg/L	1.0	N/A	02/17/23 17:54
1,1-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	02/17/23 17:54
1,1-Dichloroethene	ND			0.50	0.2	µg/L	1.0	N/A	02/17/23 17:54
1,1-Dichloropropene	ND			0.50	0.22	µg/L	1.0	N/A	02/17/23 17:54
1,2,3-Trichlorobenzene	ND			0.50	0.5	µg/L	1.0	N/A	02/17/23 17:54
1,2,3-Trichloropropane	ND			1.0	0.29	µg/L	1.0	N/A	02/17/23 17:54
1,2,4-Trichlorobenzene	ND			0.50	0.3	µg/L	1.0	N/A	02/17/23 17:54
1,2,4-Trimethylbenzene	ND			0.50	0.5	µg/L	1.0	N/A	02/17/23 17:54
1,2-Dibromo-3-chloropropane (DBCP)	ND			2.0	0.83	µg/L	1.0	N/A	02/17/23 17:54
1,2-Dibromoethane (EDB)	ND			1.0	0.21	µg/L	1.0	N/A	02/17/23 17:54
1,2-Dichlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	02/17/23 17:54
1,2-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	02/17/23 17:54
1,2-Dichloropropane	ND			1.0	0.38	µg/L	1.0	N/A	02/17/23 17:54
1,3,5-Trimethylbenzene	ND			0.50	0.44	µg/L	1.0	N/A	02/17/23 17:54
1,3-Dichlorobenzene	ND			0.50	0.27	µg/L	1.0	N/A	02/17/23 17:54
1,3-Dichloropropane	ND			1.0	0.24	µg/L	1.0	N/A	02/17/23 17:54
1,4-Dichlorobenzene	ND			0.50	0.29	µg/L	1.0	N/A	02/17/23 17:54
2,2-Dichloropropane	ND			0.50	0.42	µg/L	1.0	N/A	02/17/23 17:54
2-Chlorotoluene	ND			0.50	0.35	µg/L	1.0	N/A	02/17/23 17:54
4-Chlorotoluene	ND			0.50	0.34	µg/L	1.0	N/A	02/17/23 17:54
4-Isopropyltoluene	ND			0.50	0.34	µg/L	1.0	N/A	02/17/23 17:54
Benzene	ND			0.50	0.3	µg/L	1.0	N/A	02/17/23 17:54
Bromobenzene	ND			0.50	0.25	µg/L	1.0	N/A	02/17/23 17:54
Bromochloromethane	ND			0.50	0.29	µg/L	1.0	N/A	02/17/23 17:54
Bromodichloromethane	ND			0.50	0.26	µg/L	1.0	N/A	02/17/23 17:54
Bromoform	ND			0.50	0.21	µg/L	1.0	N/A	02/17/23 17:54
Bromomethane	ND			0.50	0.27	µg/L	1.0	N/A	02/17/23 17:54
Carbon Tetrachloride	ND			0.50	0.24	µg/L	1.0	N/A	02/17/23 17:54
Chlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	02/17/23 17:54
Chloroethane	ND			0.50	0.47	µg/L	1.0	N/A	02/17/23 17:54
Chloroform	ND			0.50	0.28	µg/L	1.0	N/A	02/17/23 17:54
Chloromethane	ND			0.50	0.28	µg/L	1.0	N/A	02/17/23 17:54
cis-1,2-Dichloroethene	ND			0.50	0.27	µg/L	1.0	N/A	02/17/23 17:54
cis-1,3-Dichloropropene	ND			1.0	0.27	µg/L	1.0	N/A	02/17/23 17:54
Dibromochloromethane	ND			0.50	0.2	µg/L	1.0	N/A	02/17/23 17:54
Dibromomethane	ND			0.50	0.24	µg/L	1.0	N/A	02/17/23 17:54

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Date: 27-Feb-2023

ANALYTICAL REPORT

WorkOrder: 2302222

Dichlorodifluoromethane	ND		0.50	0.46	µg/L	1.0	N/A	02/17/23 17:54
Di-isopropyl ether (DIPE)	ND		1.0	0.26	µg/L	1.0	N/A	02/17/23 17:54
Ethyl tert-butyl ether (ETBE)	ND		1.0	0.25	µg/L	1.0	N/A	02/17/23 17:54
Ethylbenzene	ND		0.50	0.23	µg/L	1.0	N/A	02/17/23 17:54
Hexachlorobutadiene	ND		0.50	0.41	µg/L	1.0	N/A	02/17/23 17:54
Isopropylbenzene	ND		0.50	0.19	µg/L	1.0	N/A	02/17/23 17:54
m,p-Xylene	ND		0.50	0.5	µg/L	1.0	N/A	02/17/23 17:54
Methyl tert-butyl ether (MTBE)	ND		0.50	0.32	µg/L	1.0	N/A	02/17/23 17:54
Methylene chloride	ND		0.50	0.35	µg/L	1.0	N/A	02/17/23 17:54
Naphthalene	ND		1.0	0.78	µg/L	1.0	N/A	02/17/23 17:54
n-Butylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	02/17/23 17:54
n-Propylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	02/17/23 17:54
o-Xylene	ND		0.50	0.21	µg/L	1.0	N/A	02/17/23 17:54
sec-Butylbenzene	ND		0.50	0.39	µg/L	1.0	N/A	02/17/23 17:54
Styrene	ND		0.50	0.22	µg/L	1.0	N/A	02/17/23 17:54
Tert-amyl methyl ether (TAME)	ND		0.50	0.33	µg/L	1.0	N/A	02/17/23 17:54
Tert-butyl alcohol (TBA)	ND		10	8.3	µg/L	1.0	N/A	02/17/23 17:54
tert-Butylbenzene	ND		0.50	0.16	µg/L	1.0	N/A	02/17/23 17:54
Tetrachloroethene	ND		0.50	0.15	µg/L	1.0	N/A	02/17/23 17:54
Toluene	ND		0.50	0.38	µg/L	1.0	N/A	02/17/23 17:54
trans-1,2-Dichloroethene	ND		0.50	0.22	µg/L	1.0	N/A	02/17/23 17:54
trans-1,3-Dichloropropene	ND		1.0	0.26	µg/L	1.0	N/A	02/17/23 17:54
Trichloroethene	ND		0.50	0.24	µg/L	1.0	N/A	02/17/23 17:54
Trichlorofluoromethane	ND		0.50	0.42	µg/L	1.0	N/A	02/17/23 17:54
Vinyl chloride	ND		0.50	0.42	µg/L	1.0	N/A	02/17/23 17:54
Surrogate: 1,2-Dichloroethane-d4	106		89.4-114	0.1	% Rec	1.0	N/A	02/17/23 17:54
Surrogate: Dibromofluoromethane	96.5		87.9-113	0.1	% Rec	1.0	N/A	02/17/23 17:54
Surrogate: Toluene-d8	97.1		88.5-109	0.1	% Rec	1.0	N/A	02/17/23 17:54

Test Name: TPH as Gasoline **Analyst:** JWP

Reference: EPA 8260B Modified / LUFT

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
TPHC Gasoline	ND			50	30	µg/L	1.0	N/A	02/16/23 17:48

Client Sample ID: 7170.05 - D#2 **Received:** 2/14/2023

Lab ID: 2302222-02A **Matrix:** Groundwater **Collected** 2/14/2023 8:45

Test Name: Hexane Extractable Oil and Grease **Analyst:** MRB

Reference: EPA 1664B

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Oil and Grease	***4.0***	J		4.7	2.5	mg/L	0.94	02/20/2023	02/21/23 13:30

Attachment 3

Date: 27-Feb-2023
WorkOrder: 2302222

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#2
Lab ID: 2302222-02B **Matrix:** Groundwater
Test Name: Total Suspended Solids (TSS/NFR)
Reference: SM 2540 D, 1997. Revs 2011

Received: 2/14/2023
Collected 2/14/2023 8:45
Analyst: TF

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Non-Filterable Residue(TSS)	400			1.0	0.78	mg/L	1.0	02/16/2023	02/17/23 10:30

Attachment 3

Date: 27-Feb-2023
WorkOrder: 2302222

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#2
Lab ID: 2302222-02C **Matrix:** Groundwater
Test Name: EPA 8260B
Reference: EPA 8260B

Received: 2/14/2023
Collected 2/14/2023 8:45
Analyst: JWP

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
1,1,1,2-Tetrachloroethane	ND			0.50	0.17	µg/L	1.0	N/A	02/17/23 18:20
1,1,1-Trichloroethane	ND			0.50	0.2	µg/L	1.0	N/A	02/17/23 18:20
1,1,2,2-Tetrachloroethane	ND			0.50	0.28	µg/L	1.0	N/A	02/17/23 18:20
1,1,2-Trichloroethane	ND			0.50	0.15	µg/L	1.0	N/A	02/17/23 18:20
1,1-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	02/17/23 18:20
1,1-Dichloroethene	ND			0.50	0.2	µg/L	1.0	N/A	02/17/23 18:20
1,1-Dichloropropene	ND			0.50	0.22	µg/L	1.0	N/A	02/17/23 18:20
1,2,3-Trichlorobenzene	ND			0.50	0.5	µg/L	1.0	N/A	02/17/23 18:20
1,2,3-Trichloropropane	ND			1.0	0.29	µg/L	1.0	N/A	02/17/23 18:20
1,2,4-Trichlorobenzene	ND			0.50	0.3	µg/L	1.0	N/A	02/17/23 18:20
1,2,4-Trimethylbenzene	ND			0.50	0.5	µg/L	1.0	N/A	02/17/23 18:20
1,2-Dibromo-3-chloropropane (DBCP)	ND			2.0	0.83	µg/L	1.0	N/A	02/17/23 18:20
1,2-Dibromoethane (EDB)	ND			1.0	0.21	µg/L	1.0	N/A	02/17/23 18:20
1,2-Dichlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	02/17/23 18:20
1,2-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	02/17/23 18:20
1,2-Dichloropropane	ND			1.0	0.38	µg/L	1.0	N/A	02/17/23 18:20
1,3,5-Trimethylbenzene	ND			0.50	0.44	µg/L	1.0	N/A	02/17/23 18:20
1,3-Dichlorobenzene	ND			0.50	0.27	µg/L	1.0	N/A	02/17/23 18:20
1,3-Dichloropropane	ND			1.0	0.24	µg/L	1.0	N/A	02/17/23 18:20
1,4-Dichlorobenzene	ND			0.50	0.29	µg/L	1.0	N/A	02/17/23 18:20
2,2-Dichloropropane	ND			0.50	0.42	µg/L	1.0	N/A	02/17/23 18:20
2-Chlorotoluene	ND			0.50	0.35	µg/L	1.0	N/A	02/17/23 18:20
4-Chlorotoluene	ND			0.50	0.34	µg/L	1.0	N/A	02/17/23 18:20
4-Isopropyltoluene	ND			0.50	0.34	µg/L	1.0	N/A	02/17/23 18:20
Benzene	ND			0.50	0.3	µg/L	1.0	N/A	02/17/23 18:20
Bromobenzene	ND			0.50	0.25	µg/L	1.0	N/A	02/17/23 18:20
Bromochloromethane	ND			0.50	0.29	µg/L	1.0	N/A	02/17/23 18:20
Bromodichloromethane	ND			0.50	0.26	µg/L	1.0	N/A	02/17/23 18:20
Bromoform	ND			0.50	0.21	µg/L	1.0	N/A	02/17/23 18:20
Bromomethane	ND			0.50	0.27	µg/L	1.0	N/A	02/17/23 18:20
Carbon Tetrachloride	ND			0.50	0.24	µg/L	1.0	N/A	02/17/23 18:20
Chlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	02/17/23 18:20
Chloroethane	ND			0.50	0.47	µg/L	1.0	N/A	02/17/23 18:20
Chloroform	ND			0.50	0.28	µg/L	1.0	N/A	02/17/23 18:20
Chloromethane	ND			0.50	0.28	µg/L	1.0	N/A	02/17/23 18:20
cis-1,2-Dichloroethene	ND			0.50	0.27	µg/L	1.0	N/A	02/17/23 18:20
cis-1,3-Dichloropropene	ND			1.0	0.27	µg/L	1.0	N/A	02/17/23 18:20
Dibromochloromethane	ND			0.50	0.2	µg/L	1.0	N/A	02/17/23 18:20
Dibromomethane	ND			0.50	0.24	µg/L	1.0	N/A	02/17/23 18:20

Attachment 3

Date: 27-Feb-2023

ANALYTICAL REPORT

WorkOrder: 2302222

Dichlorodifluoromethane	ND		0.50	0.46	µg/L	1.0	N/A	02/17/23 18:20
Di-isopropyl ether (DIPE)	ND		1.0	0.26	µg/L	1.0	N/A	02/17/23 18:20
Ethyl tert-butyl ether (ETBE)	ND		1.0	0.25	µg/L	1.0	N/A	02/17/23 18:20
Ethylbenzene	ND		0.50	0.23	µg/L	1.0	N/A	02/17/23 18:20
Hexachlorobutadiene	ND		0.50	0.41	µg/L	1.0	N/A	02/17/23 18:20
Isopropylbenzene	ND		0.50	0.19	µg/L	1.0	N/A	02/17/23 18:20
m,p-Xylene	ND		0.50	0.5	µg/L	1.0	N/A	02/17/23 18:20
Methyl tert-butyl ether (MTBE)	ND		0.50	0.32	µg/L	1.0	N/A	02/17/23 18:20
Methylene chloride	ND		0.50	0.35	µg/L	1.0	N/A	02/17/23 18:20
Naphthalene	ND		1.0	0.78	µg/L	1.0	N/A	02/17/23 18:20
n-Butylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	02/17/23 18:20
n-Propylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	02/17/23 18:20
o-Xylene	ND		0.50	0.21	µg/L	1.0	N/A	02/17/23 18:20
sec-Butylbenzene	ND		0.50	0.39	µg/L	1.0	N/A	02/17/23 18:20
Styrene	ND		0.50	0.22	µg/L	1.0	N/A	02/17/23 18:20
Tert-amyl methyl ether (TAME)	ND		0.50	0.33	µg/L	1.0	N/A	02/17/23 18:20
Tert-butyl alcohol (TBA)	ND		10	8.3	µg/L	1.0	N/A	02/17/23 18:20
tert-Butylbenzene	ND		0.50	0.16	µg/L	1.0	N/A	02/17/23 18:20
Tetrachloroethene	ND		0.50	0.15	µg/L	1.0	N/A	02/17/23 18:20
Toluene	ND		0.50	0.38	µg/L	1.0	N/A	02/17/23 18:20
trans-1,2-Dichloroethene	ND		0.50	0.22	µg/L	1.0	N/A	02/17/23 18:20
trans-1,3-Dichloropropene	ND		1.0	0.26	µg/L	1.0	N/A	02/17/23 18:20
Trichloroethene	ND		0.50	0.24	µg/L	1.0	N/A	02/17/23 18:20
Trichlorofluoromethane	ND		0.50	0.42	µg/L	1.0	N/A	02/17/23 18:20
Vinyl chloride	ND		0.50	0.42	µg/L	1.0	N/A	02/17/23 18:20
Surrogate: 1,2-Dichloroethane-d4	106		89.4-114	0.1	% Rec	1.0	N/A	02/17/23 18:20
Surrogate: Dibromofluoromethane	97.7		87.9-113	0.1	% Rec	1.0	N/A	02/17/23 18:20
Surrogate: Toluene-d8	95.9		88.5-109	0.1	% Rec	1.0	N/A	02/17/23 18:20

Test Name: TPH as Gasoline **Analyst:** JWP

Reference: EPA 8260B Modified / LUFT

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
TPHC Gasoline	ND			50	30	µg/L	1.0	N/A	02/16/23 18:14

Attachment 3

North Coast Laboratories, Ltd.

Date: 2/27/2023

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-42463** Batch ID: **42463** Test Code: **1664GOW** Units: **mg/L** Analysis Date **2/21/2023 1:30:00 PM** Prep Date: **2/20/2023**

Client ID: Run ID: **WC_230221A** SeqNo: **1622334**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	ND	5.0									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Sample ID: **MB 021723** Batch ID: **R112870** Test Code: **8260EW** Units: **µg/L** Analysis Date **2/17/2023 5:27:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230217A** SeqNo: **1622060**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	1.0									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0									
1,2-Dibromoethane (EDB)	ND	1.0									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromochloromethane	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Bromomethane	ND	0.50
Carbon Tetrachloride	ND	0.50
Chlorobenzene	ND	0.50
Chloroethane	ND	0.50
Chloroform	ND	0.50
Chloromethane	ND	0.50
cis-1,2-Dichloroethene	ND	0.50
cis-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	0.50
Dibromomethane	ND	0.50
Dichlorodifluoromethane	ND	0.50
Di-isopropyl ether (DIPE)	ND	1.0
Ethyl tert-butyl ether (ETBE)	ND	1.0
Ethylbenzene	ND	0.50
Hexachlorobutadiene	ND	0.50
Isopropylbenzene	ND	0.50
m,p-Xylene	ND	0.50
Methyl tert-butyl ether (MTBE)	ND	0.50
Methylene chloride	ND	0.50
Naphthalene	ND	1.0
n-Butylbenzene	ND	0.50
n-Propylbenzene	ND	0.50
o-Xylene	ND	0.50
sec-Butylbenzene	ND	0.50
Styrene	ND	0.50
Tert-amyl methyl ether (TAME)	ND	0.50
Tert-butyl alcohol (TBA)	ND	10
tert-Butylbenzene	ND	0.50
Tetrachloroethene	ND	0.50
Toluene	ND	0.50
trans-1,2-Dichloroethene	ND	0.50
trans-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	0.50
Trichlorofluoromethane	ND	0.50

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Vinyl chloride	ND	0.50							
Surrogate: 1,2-Dichloroethane-d4	1.05	0.10	1.00	0	105%	89	114	0	
Surrogate: Dibromofluoromethane	0.953	0.10	1.00	0	95.3%	88	113	0	
Surrogate: Toluene-d8	0.955	0.10	1.00	0	95.5%	89	109	0	

Sample ID: **MB 021623** Batch ID: **R112860** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **2/16/2023 5:22:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230216B** SeqNo: **1621822**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	ND	50									

Sample ID: **MB** Batch ID: **42449** Test Code: **NFRW** Units: **mg/L** Analysis Date **2/17/2023 10:30:00 AM** Prep Date: **2/16/2023**
Client ID: Run ID: **WC_230216B** SeqNo: **1621891**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Non-Filterable Residue(TSS)	ND	1.0									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Attachment 3

North Coast Laboratories, Ltd.

Date: 2/27/2023

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **2302222-02AMS** Batch ID: **42463** Test Code: **1664GOW** Units: **mg/L** Analysis Date **2/21/2023 1:30:00 PM** Prep Date: **2/20/2023**

Client ID: **7170.05 - D#2** Run ID: **WC_230221A** SeqNo: **1622337**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	29.80	5.0	39.6	3.96	65.3%	80	107	0			S

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **2302222-01CMS** Batch ID: **R112870** Test Code: **8260EW** Units: **µg/L** Analysis Date **2/17/2023 7:13:00 PM** Prep Date: **N/A**
Client ID: **7170.05 - D#1** Run ID: **ORGCMS2_230217A** SeqNo: **1622064**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.11	0.50	20.0	0	95.6%	79	120	0			
1,1,1-Trichloroethane	15.32	0.50	20.0	0	76.6%	79	120	0			S
1,1,2,2-Tetrachloroethane	21.25	0.50	20.0	0	106%	67	120	0			
1,1,2-Trichloroethane	19.12	0.50	20.0	0	95.6%	75	116	0			
1,1-Dichloroethane	15.99	0.50	20.0	0	79.9%	74	128	0			
1,1-Dichloroethene	13.62	0.50	20.0	0	68.1%	59	122	0			
1,1-Dichloropropene	15.30	0.50	20.0	0	76.5%	78	126	0			S
1,2,3-Trichlorobenzene	23.77	0.50	20.0	0	119%	62	123	0			
1,2,3-Trichloropropane	20.26	1.0	20.0	0	101%	67	124	0			
1,2,4-Trichlorobenzene	21.81	0.50	20.0	0	109%	66	125	0			
1,2,4-Trimethylbenzene	17.73	0.50	20.0	0	88.6%	82	123	0			
1,2-Dibromo-3-chloropropane (DBCP)	20.21	2.0	20.0	0	101%	61	126	0			
1,2-Dibromoethane (EDB)	20.10	1.0	20.0	0	100%	76	123	0			
1,2-Dichlorobenzene	18.81	0.50	20.0	0	94.1%	71	117	0			
1,2-Dichloroethane	18.72	0.50	20.0	0	93.6%	73	121	0			
1,2-Dichloropropane	19.08	1.0	20.0	0	95.4%	74	127	0			
1,3,5-Trimethylbenzene	17.15	0.50	20.0	0	85.8%	82	123	0			
1,3-Dichlorobenzene	18.43	0.50	20.0	0	92.1%	72	121	0			
1,3-Dichloropropane	19.85	1.0	20.0	0	99.2%	74	129	0			
1,4-Dichlorobenzene	18.40	0.50	20.0	0	92.0%	72	119	0			
2,2-Dichloropropane	15.91	0.50	20.0	0	79.5%	66	158	0			
2-Chlorotoluene	17.57	0.50	20.0	0	87.9%	81	123	0			
4-Chlorotoluene	18.08	0.50	20.0	0	90.4%	82	126	0			
4-Isopropyltoluene	16.85	0.50	20.0	0	84.3%	74	121	0			
Benzene	17.07	0.50	20.0	0	85.4%	78	121	0			
Bromobenzene	18.78	0.50	20.0	0	93.9%	71	123	0			
Bromochloromethane	17.88	0.50	20.0	0	89.4%	70	115	0			
Bromodichloromethane	18.87	0.50	20.0	0	94.3%	80	119	0			
Bromoform	18.91	0.50	20.0	0	94.6%	72	125	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Sample Matrix Spike

Bromomethane	19.13	0.50	20.0	0	95.6%	47	140	0	
Carbon Tetrachloride	14.34	0.50	20.0	0	71.7%	75	120	0	S
Chlorobenzene	18.58	0.50	20.0	0	92.9%	78	117	0	
Chloroethane	15.69	0.50	20.0	0	78.5%	57	128	0	
Chloroform	16.03	0.50	20.0	0	80.1%	80	116	0	
Chloromethane	20.23	0.50	20.0	0	101%	58	136	0	
cis-1,2-Dichloroethene	16.76	0.50	20.0	0	83.8%	75	121	0	
cis-1,3-Dichloropropene	18.15	1.0	20.0	0	90.7%	78	130	0	
Dibromochloromethane	19.64	0.50	20.0	0	98.2%	81	120	0	
Dibromomethane	19.34	0.50	20.0	0	96.7%	73	116	0	
Dichlorodifluoromethane	14.25	0.50	20.0	0	71.3%	33	163	0	
Di-isopropyl ether (DIPE)	19.38	1.0	20.0	0	96.9%	72	117	0	
Ethyl tert-butyl ether (ETBE)	21.08	1.0	20.0	0	105%	78	118	0	
Ethylbenzene	17.46	0.50	20.0	0	87.3%	81	126	0	
Hexachlorobutadiene	16.15	0.50	20.0	0	80.8%	56	134	0	
Isopropylbenzene	16.92	0.50	20.0	0	84.6%	81	125	0	
m,p-Xylene	35.37	0.50	40.0	0	88.4%	82	125	0	
Methyl tert-butyl ether (MTBE)	19.61	0.50	20.0	0	98.0%	75	118	0	
Methylene chloride	16.70	0.50	20.0	0	83.5%	75	114	0	
Naphthalene	22.76	1.0	20.0	0	114%	68	124	0	
n-Butylbenzene	17.13	0.50	20.0	0	85.7%	66	123	0	
n-Propylbenzene	16.87	0.50	20.0	0	84.3%	82	128	0	
o-Xylene	17.62	0.50	20.0	0	88.1%	81	123	0	
sec-Butylbenzene	16.28	0.50	20.0	0	81.4%	79	125	0	
Styrene	18.78	0.50	20.0	0	93.9%	83	123	0	
Tert-amyl methyl ether (TAME)	20.59	0.50	20.0	0	103%	75	122	0	
Tert-butyl alcohol (TBA)	391.0	10	400	0	97.8%	45	132	0	
tert-Butylbenzene	16.67	0.50	20.0	0	83.3%	77	123	0	
Tetrachloroethene	15.46	0.50	20.0	0	77.3%	60	134	0	
Toluene	16.44	0.50	20.0	0	82.2%	80	118	0	
trans-1,2-Dichloroethene	15.62	0.50	20.0	0	78.1%	78	118	0	S
trans-1,3-Dichloropropene	19.18	1.0	20.0	0	95.9%	78	125	0	
Trichloroethene	16.63	0.50	20.0	0	83.2%	77	118	0	
Trichlorofluoromethane	15.86	0.50	20.0	0	79.3%	41	140	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Sample Matrix Spike

Vinyl chloride	13.70	0.50	20.0	0	68.5%	36	140	0
Surrogate: 1,2-Dichloroethane-d4	0.989	0.10	1.00	0	98.9%	89	114	0
Surrogate: Dibromofluoromethane	0.937	0.10	1.00	0	93.7%	88	113	0
Surrogate: Toluene-d8	0.970	0.10	1.00	0	97.0%	89	109	0

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Attachment 3

North Coast Laboratories, Ltd.

Date: 2/27/2023

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-42463** Batch ID: **42463** Test Code: **1664GOW** Units: **mg/L** Analysis Date **2/21/2023 1:30:00 PM** Prep Date: **2/20/2023**
Client ID: Run ID: **WC_230221A** SeqNo: **1622335**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	39.40	5.0	40.0	0	98.5%	80	107	0			

Sample ID: **LCSD-42463** Batch ID: **42463** Test Code: **1664GOW** Units: **mg/L** Analysis Date **2/21/2023 1:30:00 PM** Prep Date: **2/20/2023**
Client ID: Run ID: **WC_230221A** SeqNo: **1622336**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	39.50	5.0	40.0	0	98.8%	80	107	39.4	0.3%	18	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-23042** Batch ID: **R112870** Test Code: **8260EW** Units: **µg/L** Analysis Date **2/17/2023 11:39:00 AM** Prep Date: **N/A**

Client ID: Run ID: **ORGCMS2_230217A** SeqNo: **1622054**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	22.72	0.50	20.0	0	114%	79	120	0			
1,1,1-Trichloroethane	20.16	0.50	20.0	0	101%	79	120	0			
1,1,2,2-Tetrachloroethane	24.33	0.50	20.0	0	122%	67	120	0			S
1,1,2-Trichloroethane	20.96	0.50	20.0	0	105%	75	116	0			
1,1-Dichloroethane	18.88	0.50	20.0	0	94.4%	74	128	0			
1,1-Dichloroethene	17.92	0.50	20.0	0	89.6%	59	122	0			
1,1-Dichloropropene	21.03	0.50	20.0	0	105%	78	126	0			
1,2,3-Trichlorobenzene	26.77	0.50	20.0	0	134%	62	123	0			S
1,2,3-Trichloropropane	22.91	1.0	20.0	0	115%	67	124	0			
1,2,4-Trichlorobenzene	24.65	0.50	20.0	0	123%	66	125	0			
1,2,4-Trimethylbenzene	21.31	0.50	20.0	0	107%	82	123	0			
1,2-Dibromo-3-chloropropane (DBCP)	22.12	2.0	20.0	0	111%	61	126	0			
1,2-Dibromoethane (EDB)	22.54	1.0	20.0	0	113%	76	123	0			
1,2-Dichlorobenzene	20.85	0.50	20.0	0	104%	71	117	0			
1,2-Dichloroethane	20.09	0.50	20.0	0	100%	73	121	0			
1,2-Dichloropropane	21.30	1.0	20.0	0	107%	74	127	0			
1,3,5-Trimethylbenzene	21.32	0.50	20.0	0	107%	82	123	0			
1,3-Dichlorobenzene	21.11	0.50	20.0	0	106%	72	121	0			
1,3-Dichloropropane	22.49	1.0	20.0	0	112%	74	129	0			
1,4-Dichlorobenzene	21.80	0.50	20.0	0	109%	72	119	0			
2,2-Dichloropropane	22.91	0.50	20.0	0	115%	66	158	0			
2-Chlorotoluene	21.70	0.50	20.0	0	109%	81	123	0			
4-Chlorotoluene	21.52	0.50	20.0	0	108%	82	126	0			
4-Isopropyltoluene	21.66	0.50	20.0	0	108%	74	121	0			
Benzene	20.71	0.50	20.0	0	104%	78	121	0			
Bromobenzene	21.56	0.50	20.0	0	108%	71	123	0			
Bromochloromethane	18.97	0.50	20.0	0	94.9%	70	115	0			
Bromodichloromethane	21.28	0.50	20.0	0	106%	80	119	0			
Bromoform	21.66	0.50	20.0	0	108%	72	125	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Bromomethane	19.16	0.50	20.0	0	95.8%	47	140	0	
Carbon Tetrachloride	20.02	0.50	20.0	0	100%	75	120	0	
Chlorobenzene	21.55	0.50	20.0	0	108%	78	117	0	
Chloroethane	20.67	0.50	20.0	0	103%	57	128	0	
Chloroform	18.31	0.50	20.0	0	91.6%	80	116	0	
Chloromethane	22.04	0.50	20.0	0	110%	58	136	0	
cis-1,2-Dichloroethene	19.37	0.50	20.0	0	96.8%	75	121	0	
cis-1,3-Dichloropropene	20.30	1.0	20.0	0	101%	78	130	0	
Dibromochloromethane	22.27	0.50	20.0	0	111%	81	120	0	
Dibromomethane	20.81	0.50	20.0	0	104%	73	116	0	
Dichlorodifluoromethane	17.20	0.50	20.0	0	86.0%	33	163	0	
Di-isopropyl ether (DIPE)	22.71	1.0	20.0	0	114%	72	117	0	
Ethyl tert-butyl ether (ETBE)	24.94	1.0	20.0	0	125%	78	118	0	S
Ethylbenzene	22.33	0.50	20.0	0	112%	81	126	0	
Hexachlorobutadiene	20.78	0.50	20.0	0	104%	56	134	0	
Isopropylbenzene	21.95	0.50	20.0	0	110%	81	125	0	
m,p-Xylene	44.88	0.50	40.0	0	112%	82	125	0	
Methyl tert-butyl ether (MTBE)	23.08	0.50	20.0	0	115%	75	118	0	
Methylene chloride	18.09	0.50	20.0	0	90.5%	75	114	0	
Naphthalene	27.10	1.0	20.0	0	135%	68	124	0	S
n-Butylbenzene	22.19	0.50	20.0	0	111%	66	123	0	
n-Propylbenzene	21.75	0.50	20.0	0	109%	82	128	0	
o-Xylene	21.63	0.50	20.0	0	108%	81	123	0	
sec-Butylbenzene	21.26	0.50	20.0	0	106%	79	125	0	
Styrene	22.16	0.50	20.0	0	111%	83	123	0	
Tert-amyl methyl ether (TAME)	24.66	0.50	20.0	0	123%	75	122	0	S
Tert-butyl alcohol (TBA)	640.3	10	400	0	160%	45	132	0	S
tert-Butylbenzene	21.41	0.50	20.0	0	107%	77	123	0	
Tetrachloroethene	20.51	0.50	20.0	0	103%	60	134	0	
Toluene	20.49	0.50	20.0	0	102%	80	118	0	
trans-1,2-Dichloroethene	19.35	0.50	20.0	0	96.8%	78	118	0	
trans-1,3-Dichloropropene	21.26	1.0	20.0	0	106%	78	125	0	
Trichloroethene	20.89	0.50	20.0	0	104%	77	118	0	
Trichlorofluoromethane	20.75	0.50	20.0	0	104%	41	140	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Vinyl chloride	18.96	0.50	20.0	0	94.8%	36	140	0
Surrogate: 1,2-Dichloroethane-d4	1.01	0.10	1.00	0	101%	89	114	0
Surrogate: Dibromofluoromethane	0.921	0.10	1.00	0	92.1%	88	113	0
Surrogate: Toluene-d8	0.973	0.10	1.00	0	97.3%	89	109	0

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-23042** Batch ID: **R112870** Test Code: **8260EW** Units: **µg/L** Analysis Date **2/17/2023 12:05:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230217A** SeqNo: **1622055**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	22.30	0.50	20.0	0	111%	79	120	22.7	1.9%	30	
1,1,1-Trichloroethane	19.03	0.50	20.0	0	95.2%	79	120	20.2	5.7%	30	
1,1,2,2-Tetrachloroethane	24.34	0.50	20.0	0	122%	67	120	24.3	0.0%	30	S
1,1,2-Trichloroethane	20.91	0.50	20.0	0	105%	75	116	21.0	0.2%	30	
1,1-Dichloroethane	18.17	0.50	20.0	0	90.9%	74	128	18.9	3.8%	30	
1,1-Dichloroethene	17.16	0.50	20.0	0	85.8%	59	122	17.9	4.3%	30	
1,1-Dichloropropene	19.78	0.50	20.0	0	98.9%	78	126	21.0	6.1%	30	
1,2,3-Trichlorobenzene	27.22	0.50	20.0	0	136%	62	123	26.8	1.7%	30	S
1,2,3-Trichloropropane	23.06	1.0	20.0	0	115%	67	124	22.9	0.6%	30	
1,2,4-Trichlorobenzene	24.51	0.50	20.0	0	123%	66	125	24.6	0.6%	30	
1,2,4-Trimethylbenzene	20.66	0.50	20.0	0	103%	82	123	21.3	3.1%	30	
1,2-Dibromo-3-chloropropane (DBCP)	23.58	2.0	20.0	0	118%	61	126	22.1	6.4%	30	
1,2-Dibromoethane (EDB)	22.57	1.0	20.0	0	113%	76	123	22.5	0.2%	30	
1,2-Dichlorobenzene	20.71	0.50	20.0	0	104%	71	117	20.8	0.7%	30	
1,2-Dichloroethane	20.28	0.50	20.0	0	101%	73	121	20.1	1.0%	30	
1,2-Dichloropropane	21.10	1.0	20.0	0	106%	74	127	21.3	1.0%	30	
1,3,5-Trimethylbenzene	20.49	0.50	20.0	0	102%	82	123	21.3	3.9%	30	
1,3-Dichlorobenzene	20.57	0.50	20.0	0	103%	72	121	21.1	2.6%	30	
1,3-Dichloropropane	22.42	1.0	20.0	0	112%	74	129	22.5	0.3%	30	
1,4-Dichlorobenzene	21.72	0.50	20.0	0	109%	72	119	21.8	0.4%	30	
2,2-Dichloropropane	21.38	0.50	20.0	0	107%	66	158	22.9	6.9%	30	
2-Chlorotoluene	20.78	0.50	20.0	0	104%	81	123	21.7	4.3%	30	
4-Chlorotoluene	20.70	0.50	20.0	0	103%	82	126	21.5	3.9%	30	
4-Isopropyltoluene	20.46	0.50	20.0	0	102%	74	121	21.7	5.7%	30	
Benzene	20.24	0.50	20.0	0	101%	78	121	20.7	2.3%	30	
Bromobenzene	21.19	0.50	20.0	0	106%	71	123	21.6	1.8%	30	
Bromochloromethane	19.59	0.50	20.0	0	97.9%	70	115	19.0	3.2%	30	
Bromodichloromethane	21.40	0.50	20.0	0	107%	80	119	21.3	0.6%	30	
Bromoform	22.11	0.50	20.0	0	111%	72	125	21.7	2.1%	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Bromomethane	22.18	0.50	20.0	0	111%	47	140	19.2	14.6%	30	
Carbon Tetrachloride	18.72	0.50	20.0	0	93.6%	75	120	20.0	6.8%	30	
Chlorobenzene	21.05	0.50	20.0	0	105%	78	117	21.6	2.4%	30	
Chloroethane	22.49	0.50	20.0	0	112%	57	128	20.7	8.4%	30	
Chloroform	18.06	0.50	20.0	0	90.3%	80	116	18.3	1.4%	30	
Chloromethane	24.95	0.50	20.0	0	125%	58	136	22.0	12.4%	30	
cis-1,2-Dichloroethene	19.33	0.50	20.0	0	96.6%	75	121	19.4	0.2%	30	
cis-1,3-Dichloropropene	23.04	1.0	20.0	0	115%	78	130	20.3	12.7%	30	
Dibromochloromethane	21.91	0.50	20.0	0	110%	81	120	22.3	1.6%	30	
Dibromomethane	21.07	0.50	20.0	0	105%	73	116	20.8	1.2%	30	
Dichlorodifluoromethane	17.24	0.50	20.0	0	86.2%	33	163	17.2	0.2%	30	
Di-isopropyl ether (DIPE)	22.93	1.0	20.0	0	115%	72	117	22.7	1.0%	30	
Ethyl tert-butyl ether (ETBE)	25.24	1.0	20.0	0	126%	78	118	24.9	1.2%	30	S
Ethylbenzene	21.23	0.50	20.0	0	106%	81	126	22.3	5.1%	30	
Hexachlorobutadiene	19.17	0.50	20.0	0	95.9%	56	134	20.8	8.1%	30	
Isopropylbenzene	20.75	0.50	20.0	0	104%	81	125	22.0	5.6%	30	
m,p-Xylene	42.78	0.50	40.0	0	107%	82	125	44.9	4.8%	30	
Methyl tert-butyl ether (MTBE)	23.40	0.50	20.0	0	117%	75	118	23.1	1.4%	30	
Methylene chloride	18.13	0.50	20.0	0	90.6%	75	114	18.1	0.2%	30	
Naphthalene	28.03	1.0	20.0	0	140%	68	124	27.1	3.4%	30	S
n-Butylbenzene	21.06	0.50	20.0	0	105%	66	123	22.2	5.2%	30	
n-Propylbenzene	20.55	0.50	20.0	0	103%	82	128	21.8	5.7%	30	
o-Xylene	20.92	0.50	20.0	0	105%	81	123	21.6	3.4%	30	
sec-Butylbenzene	19.57	0.50	20.0	0	97.8%	79	125	21.3	8.3%	30	
Styrene	21.56	0.50	20.0	0	108%	83	123	22.2	2.8%	30	
Tert-amyl methyl ether (TAME)	24.87	0.50	20.0	0	124%	75	122	24.7	0.8%	30	S
Tert-butyl alcohol (TBA)	650.7	10	400	0	163%	45	132	640	1.6%	30	S
tert-Butylbenzene	20.38	0.50	20.0	0	102%	77	123	21.4	4.9%	30	
Tetrachloroethene	19.13	0.50	20.0	0	95.6%	60	134	20.5	7.0%	30	
Toluene	19.28	0.50	20.0	0	96.4%	80	118	20.5	6.1%	30	
trans-1,2-Dichloroethene	18.42	0.50	20.0	0	92.1%	78	118	19.4	4.9%	30	
trans-1,3-Dichloropropene	21.46	1.0	20.0	0	107%	78	125	21.3	0.9%	30	
Trichloroethene	20.06	0.50	20.0	0	100%	77	118	20.9	4.0%	30	
Trichlorofluoromethane	21.42	0.50	20.0	0	107%	41	140	20.8	3.2%	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302222
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Vinyl chloride	19.79	0.50	20.0	0	99.0%	36	140	19.0	4.3%	30	
Surrogate: 1,2-Dichloroethane-d4	0.999	0.10	1.00	0	99.9%	89	114	1.01	0.8%	30	
Surrogate: Dibromofluoromethane	0.944	0.10	1.00	0	94.4%	88	113	0.921	2.4%	30	
Surrogate: Toluene-d8	0.966	0.10	1.00	0	96.6%	89	109	0.973	0.7%	30	

Sample ID: **LCS-23038** Batch ID: **R112860** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **2/16/2023 12:06:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230216B** SeqNo: **1621819**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,077	50	1,000	0	108%	74	125	0			

Sample ID: **LCSD-23038** Batch ID: **R112860** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **2/16/2023 1:54:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230216B** SeqNo: **1621820**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,204	50	1,000	0	120%	74	125	1,080	11.1%	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Attachment 3
P. 1 of 1

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER: 2302222

Attention: Account Payable
Results & Invoice to: ap@dlacoassociates.com
Address: 21 W 4th St.
Eureka, CA
Phone: 707-443-5054
Copies of Report to: manhartc@lacoassociates.com
Christine Manhart
Sampler (Sign & Print): Angela Cook

PROJECT INFORMATION
Project Number: 7170.05
Project Name: Tirsbeck Stormwater Compliance
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*
	7170.05-D#1	2/14/23	8:45AM	GW
	7170.05-D#2	2/14/23	8:45AM	GW

ANALYSIS	2 Oil + Grease	TSS	8260 List 7-VOC
CONTAINER	2	1	3
PRESERVATIVE			b
	2	1	3

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5-7 Day
☒ STD (2-3 Wk) ☐ Other: _____
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☐ Verbal ☐ By: ___
Final Report: FAX ☐ Verbal ☐ By: ___

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

SAMPLE CONDITION/SPECIAL INSTRUCTIONS
Geotracker Report
3.8°C On Ice

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
	2/14/23 11:25AM	BAS	2/14/23 1125

SAMPLE DISPOSAL
☒ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus (Hand)

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Attachment 3

NORTH COAST LABORATORIES LTD.

March 13, 2023

LACO Associates
P.O. Box 1023
Eureka, CA 95502

Attn: Christine Manhart

Order No.: 2302373
Invoice No.: 169305
PO No.:
ELAP No.1247-Expires July 2024

RE: 7170.05 Tirsbeck Stormwater Compliance

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	7170.05 - D#1
01C	7170.05 - D#1
02A	7170.05 - D#2
02C	7170.05 - D#2

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

Flag = Explanation in Case Narrative

All solid results are expressed on a wet-weight basis unless otherwise noted.

Approved for release by:

Roxanne Golich, Project Manager

Attachment 3

Date: 13-Mar-2023
WorkOrder: 2302373

CASE NARRATIVE

J Flags:
Test results that fall below the reporting limit and above the method detection limit are considered approximate values.

S12: Surrogate recovery outside the acceptance limits. The data was accepted based on valid recovery of the remaining surrogate(s).

EPA 1664B:
The samples were not preserved within four hours of sample collection.

Attachment 3

Date: 13-Mar-2023
WorkOrder: 2302373

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#1
Lab ID: 2302373-01A **Matrix:** Groundwater
Test Name: Hexane Extractable Oil and Grease
Reference: EPA 1664B

Received: 2/27/2023
Collected 2/27/2023 8:15
Analyst: MRB

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Oil and Grease	ND			5.2	2.7	mg/L	1.0	03/08/2023	03/10/23 13:00

Attachment 3

Date: 13-Mar-2023
WorkOrder: 2302373

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#1
Lab ID: 2302373-01C **Matrix:** Groundwater
Test Name: EPA 8260B
Reference: EPA 8260B

Received: 2/27/2023
Collected 2/27/2023 8:15
Analyst: JWP

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
1,1,1,2-Tetrachloroethane	ND			0.50	0.17	µg/L	1.0	N/A	03/02/23 6:39
1,1,1-Trichloroethane	ND			0.50	0.2	µg/L	1.0	N/A	03/02/23 6:39
1,1,2,2-Tetrachloroethane	ND			0.50	0.28	µg/L	1.0	N/A	03/02/23 6:39
1,1,2-Trichloroethane	ND			0.50	0.15	µg/L	1.0	N/A	03/02/23 6:39
1,1-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	03/02/23 6:39
1,1-Dichloroethene	ND			0.50	0.2	µg/L	1.0	N/A	03/02/23 6:39
1,1-Dichloropropene	ND			0.50	0.22	µg/L	1.0	N/A	03/02/23 6:39
1,2,3-Trichlorobenzene	ND			0.50	0.5	µg/L	1.0	N/A	03/02/23 6:39
1,2,3-Trichloropropane	ND			1.0	0.29	µg/L	1.0	N/A	03/02/23 6:39
1,2,4-Trichlorobenzene	ND			0.50	0.3	µg/L	1.0	N/A	03/02/23 6:39
1,2,4-Trimethylbenzene	ND			0.50	0.5	µg/L	1.0	N/A	03/02/23 6:39
1,2-Dibromo-3-chloropropane (DBCP)	ND			2.0	0.83	µg/L	1.0	N/A	03/02/23 6:39
1,2-Dibromoethane (EDB)	ND			1.0	0.21	µg/L	1.0	N/A	03/02/23 6:39
1,2-Dichlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	03/02/23 6:39
1,2-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	03/02/23 6:39
1,2-Dichloropropane	ND			1.0	0.38	µg/L	1.0	N/A	03/02/23 6:39
1,3,5-Trimethylbenzene	ND			0.50	0.44	µg/L	1.0	N/A	03/02/23 6:39
1,3-Dichlorobenzene	ND			0.50	0.27	µg/L	1.0	N/A	03/02/23 6:39
1,3-Dichloropropane	ND			1.0	0.24	µg/L	1.0	N/A	03/02/23 6:39
1,4-Dichlorobenzene	ND			0.50	0.29	µg/L	1.0	N/A	03/02/23 6:39
2,2-Dichloropropane	ND			0.50	0.42	µg/L	1.0	N/A	03/02/23 6:39
2-Chlorotoluene	ND			0.50	0.35	µg/L	1.0	N/A	03/02/23 6:39
4-Chlorotoluene	ND			0.50	0.34	µg/L	1.0	N/A	03/02/23 6:39
4-Isopropyltoluene	ND			0.50	0.34	µg/L	1.0	N/A	03/02/23 6:39
Benzene	ND			0.50	0.3	µg/L	1.0	N/A	03/02/23 6:39
Bromobenzene	ND			0.50	0.25	µg/L	1.0	N/A	03/02/23 6:39
Bromochloromethane	ND			0.50	0.29	µg/L	1.0	N/A	03/02/23 6:39
Bromodichloromethane	ND			0.50	0.26	µg/L	1.0	N/A	03/02/23 6:39
Bromoform	ND			0.50	0.21	µg/L	1.0	N/A	03/02/23 6:39
Bromomethane	ND			0.50	0.27	µg/L	1.0	N/A	03/02/23 6:39
Carbon Tetrachloride	ND			0.50	0.24	µg/L	1.0	N/A	03/02/23 6:39
Chlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	03/02/23 6:39
Chloroethane	ND			0.50	0.47	µg/L	1.0	N/A	03/02/23 6:39
Chloroform	ND			0.50	0.28	µg/L	1.0	N/A	03/02/23 6:39
Chloromethane	ND			0.50	0.28	µg/L	1.0	N/A	03/02/23 6:39
cis-1,2-Dichloroethene	ND			0.50	0.27	µg/L	1.0	N/A	03/02/23 6:39
cis-1,3-Dichloropropene	ND			1.0	0.27	µg/L	1.0	N/A	03/02/23 6:39
Dibromochloromethane	ND			0.50	0.2	µg/L	1.0	N/A	03/02/23 6:39
Dibromomethane	ND			0.50	0.24	µg/L	1.0	N/A	03/02/23 6:39

Attachment 3

Date: 13-Mar-2023

ANALYTICAL REPORT

WorkOrder: 2302373

Dichlorodifluoromethane	ND			0.50	0.46	µg/L	1.0	N/A	03/02/23 6:39
Di-isopropyl ether (DIPE)	ND			1.0	0.26	µg/L	1.0	N/A	03/02/23 6:39
Ethyl tert-butyl ether (ETBE)	ND			1.0	0.25	µg/L	1.0	N/A	03/02/23 6:39
Ethylbenzene	ND			0.50	0.23	µg/L	1.0	N/A	03/02/23 6:39
Hexachlorobutadiene	ND			0.50	0.41	µg/L	1.0	N/A	03/02/23 6:39
Isopropylbenzene	ND			0.50	0.19	µg/L	1.0	N/A	03/02/23 6:39
m,p-Xylene	ND			0.50	0.5	µg/L	1.0	N/A	03/02/23 6:39
Methyl tert-butyl ether (MTBE)	ND			0.50	0.32	µg/L	1.0	N/A	03/02/23 6:39
Methylene chloride	ND			0.50	0.35	µg/L	1.0	N/A	03/02/23 6:39
Naphthalene	ND			1.0	0.78	µg/L	1.0	N/A	03/02/23 6:39
n-Butylbenzene	ND			0.50	0.36	µg/L	1.0	N/A	03/02/23 6:39
n-Propylbenzene	ND			0.50	0.36	µg/L	1.0	N/A	03/02/23 6:39
o-Xylene	ND			0.50	0.21	µg/L	1.0	N/A	03/02/23 6:39
sec-Butylbenzene	ND			0.50	0.39	µg/L	1.0	N/A	03/02/23 6:39
Styrene	ND			0.50	0.22	µg/L	1.0	N/A	03/02/23 6:39
Tert-amyl methyl ether (TAME)	ND			0.50	0.33	µg/L	1.0	N/A	03/02/23 6:39
Tert-butyl alcohol (TBA)	ND			10	8.3	µg/L	1.0	N/A	03/02/23 6:39
tert-Butylbenzene	ND			0.50	0.16	µg/L	1.0	N/A	03/02/23 6:39
Tetrachloroethene	ND			0.50	0.15	µg/L	1.0	N/A	03/02/23 6:39
Toluene	ND			0.50	0.38	µg/L	1.0	N/A	03/02/23 6:39
trans-1,2-Dichloroethene	ND			0.50	0.22	µg/L	1.0	N/A	03/02/23 6:39
trans-1,3-Dichloropropene	ND			1.0	0.26	µg/L	1.0	N/A	03/02/23 6:39
Trichloroethene	ND			0.50	0.24	µg/L	1.0	N/A	03/02/23 6:39
Trichlorofluoromethane	ND			0.50	0.42	µg/L	1.0	N/A	03/02/23 6:39
Vinyl chloride	ND			0.50	0.42	µg/L	1.0	N/A	03/02/23 6:39
Surrogate: 1,2-Dichloroethane-d4	88.4	S	S12	89.4-114	0.1	% Rec	1.0	N/A	03/02/23 6:39
Surrogate: Dibromofluoromethane	94.8			87.9-113	0.1	% Rec	1.0	N/A	03/02/23 6:39
Surrogate: Toluene-d8	99.3			88.5-109	0.1	% Rec	1.0	N/A	03/02/23 6:39

Test Name: TPH as Gasoline **Analyst:** JWP

Reference: EPA 8260B Modified / LUFT

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
TPHC Gasoline	ND			50	30	µg/L	1.0	N/A	03/01/23 20:20

Client Sample ID: 7170.05 - D#2 **Received:** 2/27/2023

Lab ID: 2302373-02A **Matrix:** Groundwater **Collected** 2/27/2023 8:15

Test Name: Hexane Extractable Oil and Grease **Analyst:** MRB

Reference: EPA 1664B

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Oil and Grease	***2.8***	J		4.6	2.4	mg/L	0.92	03/08/2023	03/10/23 13:00

Attachment 3

Date: 13-Mar-2023
WorkOrder: 2302373

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#2
Lab ID: 2302373-02C **Matrix:** Groundwater
Test Name: EPA 8260B
Reference: EPA 8260B

Received: 2/27/2023
Collected 2/27/2023 8:15
Analyst: JWP

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
1,1,1,2-Tetrachloroethane	ND			0.50	0.17	µg/L	1.0	N/A	03/02/23 7:05
1,1,1-Trichloroethane	ND			0.50	0.2	µg/L	1.0	N/A	03/02/23 7:05
1,1,2,2-Tetrachloroethane	ND			0.50	0.28	µg/L	1.0	N/A	03/02/23 7:05
1,1,2-Trichloroethane	ND			0.50	0.15	µg/L	1.0	N/A	03/02/23 7:05
1,1-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	03/02/23 7:05
1,1-Dichloroethene	ND			0.50	0.2	µg/L	1.0	N/A	03/02/23 7:05
1,1-Dichloropropene	ND			0.50	0.22	µg/L	1.0	N/A	03/02/23 7:05
1,2,3-Trichlorobenzene	ND			0.50	0.5	µg/L	1.0	N/A	03/02/23 7:05
1,2,3-Trichloropropane	ND			1.0	0.29	µg/L	1.0	N/A	03/02/23 7:05
1,2,4-Trichlorobenzene	ND			0.50	0.3	µg/L	1.0	N/A	03/02/23 7:05
1,2,4-Trimethylbenzene	ND			0.50	0.5	µg/L	1.0	N/A	03/02/23 7:05
1,2-Dibromo-3-chloropropane (DBCP)	ND			2.0	0.83	µg/L	1.0	N/A	03/02/23 7:05
1,2-Dibromoethane (EDB)	ND			1.0	0.21	µg/L	1.0	N/A	03/02/23 7:05
1,2-Dichlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	03/02/23 7:05
1,2-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	03/02/23 7:05
1,2-Dichloropropane	ND			1.0	0.38	µg/L	1.0	N/A	03/02/23 7:05
1,3,5-Trimethylbenzene	ND			0.50	0.44	µg/L	1.0	N/A	03/02/23 7:05
1,3-Dichlorobenzene	ND			0.50	0.27	µg/L	1.0	N/A	03/02/23 7:05
1,3-Dichloropropane	ND			1.0	0.24	µg/L	1.0	N/A	03/02/23 7:05
1,4-Dichlorobenzene	ND			0.50	0.29	µg/L	1.0	N/A	03/02/23 7:05
2,2-Dichloropropane	ND			0.50	0.42	µg/L	1.0	N/A	03/02/23 7:05
2-Chlorotoluene	ND			0.50	0.35	µg/L	1.0	N/A	03/02/23 7:05
4-Chlorotoluene	ND			0.50	0.34	µg/L	1.0	N/A	03/02/23 7:05
4-Isopropyltoluene	ND			0.50	0.34	µg/L	1.0	N/A	03/02/23 7:05
Benzene	ND			0.50	0.3	µg/L	1.0	N/A	03/02/23 7:05
Bromobenzene	ND			0.50	0.25	µg/L	1.0	N/A	03/02/23 7:05
Bromochloromethane	ND			0.50	0.29	µg/L	1.0	N/A	03/02/23 7:05
Bromodichloromethane	ND			0.50	0.26	µg/L	1.0	N/A	03/02/23 7:05
Bromoform	ND			0.50	0.21	µg/L	1.0	N/A	03/02/23 7:05
Bromomethane	ND			0.50	0.27	µg/L	1.0	N/A	03/02/23 7:05
Carbon Tetrachloride	ND			0.50	0.24	µg/L	1.0	N/A	03/02/23 7:05
Chlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	03/02/23 7:05
Chloroethane	ND			0.50	0.47	µg/L	1.0	N/A	03/02/23 7:05
Chloroform	ND			0.50	0.28	µg/L	1.0	N/A	03/02/23 7:05
Chloromethane	ND			0.50	0.28	µg/L	1.0	N/A	03/02/23 7:05
cis-1,2-Dichloroethene	ND			0.50	0.27	µg/L	1.0	N/A	03/02/23 7:05
cis-1,3-Dichloropropene	ND			1.0	0.27	µg/L	1.0	N/A	03/02/23 7:05
Dibromochloromethane	ND			0.50	0.2	µg/L	1.0	N/A	03/02/23 7:05
Dibromomethane	ND			0.50	0.24	µg/L	1.0	N/A	03/02/23 7:05

Attachment 3

Date: 13-Mar-2023

ANALYTICAL REPORT

WorkOrder: 2302373

Dichlorodifluoromethane	ND		0.50	0.46	µg/L	1.0	N/A	03/02/23 7:05
Di-isopropyl ether (DIPE)	ND		1.0	0.26	µg/L	1.0	N/A	03/02/23 7:05
Ethyl tert-butyl ether (ETBE)	ND		1.0	0.25	µg/L	1.0	N/A	03/02/23 7:05
Ethylbenzene	ND		0.50	0.23	µg/L	1.0	N/A	03/02/23 7:05
Hexachlorobutadiene	ND		0.50	0.41	µg/L	1.0	N/A	03/02/23 7:05
Isopropylbenzene	ND		0.50	0.19	µg/L	1.0	N/A	03/02/23 7:05
m,p-Xylene	ND		0.50	0.5	µg/L	1.0	N/A	03/02/23 7:05
Methyl tert-butyl ether (MTBE)	ND		0.50	0.32	µg/L	1.0	N/A	03/02/23 7:05
Methylene chloride	ND		0.50	0.35	µg/L	1.0	N/A	03/02/23 7:05
Naphthalene	ND		1.0	0.78	µg/L	1.0	N/A	03/02/23 7:05
n-Butylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	03/02/23 7:05
n-Propylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	03/02/23 7:05
o-Xylene	ND		0.50	0.21	µg/L	1.0	N/A	03/02/23 7:05
sec-Butylbenzene	ND		0.50	0.39	µg/L	1.0	N/A	03/02/23 7:05
Styrene	ND		0.50	0.22	µg/L	1.0	N/A	03/02/23 7:05
Tert-amyl methyl ether (TAME)	ND		0.50	0.33	µg/L	1.0	N/A	03/02/23 7:05
Tert-butyl alcohol (TBA)	ND		10	8.3	µg/L	1.0	N/A	03/02/23 7:05
tert-Butylbenzene	ND		0.50	0.16	µg/L	1.0	N/A	03/02/23 7:05
Tetrachloroethene	ND		0.50	0.15	µg/L	1.0	N/A	03/02/23 7:05
Toluene	ND		0.50	0.38	µg/L	1.0	N/A	03/02/23 7:05
trans-1,2-Dichloroethene	ND		0.50	0.22	µg/L	1.0	N/A	03/02/23 7:05
trans-1,3-Dichloropropene	ND		1.0	0.26	µg/L	1.0	N/A	03/02/23 7:05
Trichloroethene	ND		0.50	0.24	µg/L	1.0	N/A	03/02/23 7:05
Trichlorofluoromethane	ND		0.50	0.42	µg/L	1.0	N/A	03/02/23 7:05
Vinyl chloride	ND		0.50	0.42	µg/L	1.0	N/A	03/02/23 7:05
Surrogate: 1,2-Dichloroethane-d4	90.5		89.4-114	0.1	% Rec	1.0	N/A	03/02/23 7:05
Surrogate: Dibromofluoromethane	99.4		87.9-113	0.1	% Rec	1.0	N/A	03/02/23 7:05
Surrogate: Toluene-d8	100		88.5-109	0.1	% Rec	1.0	N/A	03/02/23 7:05

Test Name: TPH as Gasoline **Analyst:** JWP

Reference: EPA 8260B Modified / LUFT

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
TPHC Gasoline	ND			50	30	µg/L	1.0	N/A	03/01/23 20:46

Attachment 3

North Coast Laboratories, Ltd.

Date: 3/13/2023

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-42520** Batch ID: **42520** Test Code: **1664GOW** Units: **mg/L** Analysis Date **3/10/2023 1:00:00 PM** Prep Date: **3/8/2023**

Client ID: Run ID: **WC_230308H** SeqNo: **1623955**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	ND	5.0									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Attachment 3

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Sample ID: **MB 030123** Batch ID: **R112955** Test Code: **8260EW** Units: **µg/L** Analysis Date **3/2/2023 5:22:00 AM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230301B** SeqNo: **1623170**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	1.0									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0									
1,2-Dibromoethane (EDB)	ND	1.0									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromochloromethane	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Bromomethane	ND	0.50
Carbon Tetrachloride	ND	0.50
Chlorobenzene	ND	0.50
Chloroethane	ND	0.50
Chloroform	ND	0.50
Chloromethane	ND	0.50
cis-1,2-Dichloroethene	ND	0.50
cis-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	0.50
Dibromomethane	ND	0.50
Dichlorodifluoromethane	ND	0.50
Di-isopropyl ether (DIPE)	ND	1.0
Ethyl tert-butyl ether (ETBE)	ND	1.0
Ethylbenzene	ND	0.50
Hexachlorobutadiene	ND	0.50
Isopropylbenzene	ND	0.50
m,p-Xylene	ND	0.50
Methyl tert-butyl ether (MTBE)	ND	0.50
Methylene chloride	ND	0.50
Naphthalene	ND	1.0
n-Butylbenzene	ND	0.50
n-Propylbenzene	ND	0.50
o-Xylene	ND	0.50
sec-Butylbenzene	ND	0.50
Styrene	ND	0.50
Tert-amyl methyl ether (TAME)	ND	0.50
Tert-butyl alcohol (TBA)	ND	10
tert-Butylbenzene	ND	0.50
Tetrachloroethene	ND	0.50
Toluene	ND	0.50
trans-1,2-Dichloroethene	ND	0.50
trans-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	0.50
Trichlorofluoromethane	ND	0.50

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Attachment 3

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Vinyl chloride	ND	0.50							
Surrogate: 1,2-Dichloroethane-d4	0.912	0.10	1.00	0	91.2%	89	114	0	
Surrogate: Dibromofluoromethane	1.00	0.10	1.00	0	100%	88	113	0	
Surrogate: Toluene-d8	0.995	0.10	1.00	0	99.5%	89	109	0	

Sample ID: **MB 030123** Batch ID: **R112956** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/1/2023 4:51:00 PM** Prep Date: **N/A**

Client ID: Run ID: **ORGCMS2_230301C** SeqNo: **1623181**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	ND	50									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Attachment 3

North Coast Laboratories, Ltd.

Date: 3/13/2023

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-42520** Batch ID: **42520** Test Code: **1664GOW** Units: **mg/L** Analysis Date **3/10/2023 1:00:00 PM** Prep Date: **3/8/2023**
Client ID: Run ID: **WC_230308H** SeqNo: **1623956**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	37.40	5.0	40.0	0	93.5%	80	107	0			

Sample ID: **LCSD-42520** Batch ID: **42520** Test Code: **1664GOW** Units: **mg/L** Analysis Date **3/10/2023 1:00:00 PM** Prep Date: **3/8/2023**
Client ID: Run ID: **WC_230308H** SeqNo: **1623957**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	39.50	5.0	40.0	0	98.8%	80	107	37.4	5.5%	18	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Attachment 3

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-23049** Batch ID: **R112955** Test Code: **8260EW** Units: **µg/L** Analysis Date **3/2/2023 4:05:00 AM** Prep Date: **N/A**

Client ID: Run ID: **ORGCMS2_230301B** SeqNo: **1623168**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	17.49	0.50	20.0	0	87.5%	79	120	0			
1,1,1-Trichloroethane	19.81	0.50	20.0	0	99.0%	79	120	0			
1,1,2,2-Tetrachloroethane	18.81	0.50	20.0	0	94.0%	67	120	0			
1,1,2-Trichloroethane	16.78	0.50	20.0	0	83.9%	75	116	0			
1,1-Dichloroethane	19.77	0.50	20.0	0	98.9%	74	128	0			
1,1-Dichloroethene	20.02	0.50	20.0	0	100%	59	122	0			
1,1-Dichloropropene	20.17	0.50	20.0	0	101%	78	126	0			
1,2,3-Trichlorobenzene	19.18	0.50	20.0	0	95.9%	62	123	0			
1,2,3-Trichloropropane	18.71	1.0	20.0	0	93.5%	67	124	0			
1,2,4-Trichlorobenzene	19.42	0.50	20.0	0	97.1%	66	125	0			
1,2,4-Trimethylbenzene	20.26	0.50	20.0	0	101%	82	123	0			
1,2-Dibromo-3-chloropropane (DBCP)	19.67	2.0	20.0	0	98.3%	61	126	0			
1,2-Dibromoethane (EDB)	16.67	1.0	20.0	0	83.3%	76	123	0			
1,2-Dichlorobenzene	18.82	0.50	20.0	0	94.1%	71	117	0			
1,2-Dichloroethane	19.01	0.50	20.0	0	95.1%	73	121	0			
1,2-Dichloropropane	19.91	1.0	20.0	0	99.6%	74	127	0			
1,3,5-Trimethylbenzene	19.76	0.50	20.0	0	98.8%	82	123	0			
1,3-Dichlorobenzene	19.18	0.50	20.0	0	95.9%	72	121	0			
1,3-Dichloropropane	17.70	1.0	20.0	0	88.5%	74	129	0			
1,4-Dichlorobenzene	18.87	0.50	20.0	0	94.3%	72	119	0			
2,2-Dichloropropane	19.44	0.50	20.0	0	97.2%	66	158	0			
2-Chlorotoluene	19.40	0.50	20.0	0	97.0%	81	123	0			
4-Chlorotoluene	19.36	0.50	20.0	0	96.8%	82	126	0			
4-Isopropyltoluene	19.87	0.50	20.0	0	99.3%	74	121	0			
Benzene	19.00	0.50	20.0	0	95.0%	78	121	0			
Bromobenzene	18.79	0.50	20.0	0	93.9%	71	123	0			
Bromochloromethane	19.47	0.50	20.0	0	97.4%	70	115	0			
Bromodichloromethane	19.44	0.50	20.0	0	97.2%	80	119	0			
Bromoform	17.36	0.50	20.0	0	86.8%	72	125	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Bromomethane	16.77	0.50	20.0	0	83.9%	47	140	0
Carbon Tetrachloride	20.67	0.50	20.0	0	103%	75	120	0
Chlorobenzene	19.27	0.50	20.0	0	96.3%	78	117	0
Chloroethane	19.97	0.50	20.0	0	99.9%	57	128	0
Chloroform	18.49	0.50	20.0	0	92.4%	80	116	0
Chloromethane	17.77	0.50	20.0	0	88.9%	58	136	0
cis-1,2-Dichloroethene	19.50	0.50	20.0	0	97.5%	75	121	0
cis-1,3-Dichloropropene	17.56	1.0	20.0	0	87.8%	78	130	0
Dibromochloromethane	17.33	0.50	20.0	0	86.6%	81	120	0
Dibromomethane	19.24	0.50	20.0	0	96.2%	73	116	0
Dichlorodifluoromethane	16.37	0.50	20.0	0	81.9%	33	163	0
Di-isopropyl ether (DIPE)	18.97	1.0	20.0	0	94.8%	72	117	0
Ethyl tert-butyl ether (ETBE)	18.10	1.0	20.0	0	90.5%	78	118	0
Ethylbenzene	19.83	0.50	20.0	0	99.1%	81	126	0
Hexachlorobutadiene	18.51	0.50	20.0	0	92.5%	56	134	0
Isopropylbenzene	19.90	0.50	20.0	0	99.5%	81	125	0
m,p-Xylene	39.68	0.50	40.0	0	99.2%	82	125	0
Methyl tert-butyl ether (MTBE)	17.77	0.50	20.0	0	88.9%	75	118	0
Methylene chloride	19.56	0.50	20.0	0	97.8%	75	114	0
Naphthalene	19.21	1.0	20.0	0	96.0%	68	124	0
n-Butylbenzene	20.36	0.50	20.0	0	102%	66	123	0
n-Propylbenzene	19.49	0.50	20.0	0	97.5%	82	128	0
o-Xylene	19.94	0.50	20.0	0	99.7%	81	123	0
sec-Butylbenzene	19.68	0.50	20.0	0	98.4%	79	125	0
Styrene	20.04	0.50	20.0	0	100%	83	123	0
Tert-amyl methyl ether (TAME)	18.69	0.50	20.0	0	93.4%	75	122	0
Tert-butyl alcohol (TBA)	390.0	10	400	0	97.5%	45	132	0
tert-Butylbenzene	19.71	0.50	20.0	0	98.5%	77	123	0
Tetrachloroethene	19.07	0.50	20.0	0	95.3%	60	134	0
Toluene	19.27	0.50	20.0	0	96.4%	80	118	0
trans-1,2-Dichloroethene	20.06	0.50	20.0	0	100%	78	118	0
trans-1,3-Dichloropropene	18.75	1.0	20.0	0	93.7%	78	125	0
Trichloroethene	19.34	0.50	20.0	0	96.7%	77	118	0
Trichlorofluoromethane	19.02	0.50	20.0	0	95.1%	41	140	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Vinyl chloride	18.65	0.50	20.0	0	93.2%	36	140	0
Surrogate: 1,2-Dichloroethane-d4	0.958	0.10	1.00	0	95.8%	89	114	0
Surrogate: Dibromofluoromethane	0.999	0.10	1.00	0	99.9%	88	113	0
Surrogate: Toluene-d8	1.02	0.10	1.00	0	102%	89	109	0

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-23049** Batch ID: **R112955** Test Code: **8260EW** Units: **µg/L** Analysis Date **3/2/2023 4:31:00 AM** Prep Date: **N/A**

Client ID: Run ID: **ORGCMS2_230301B** SeqNo: **1623169**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	17.94	0.50	20.0	0	89.7%	79	120	17.5	2.5%	30	
1,1,1-Trichloroethane	19.53	0.50	20.0	0	97.6%	79	120	19.8	1.4%	30	
1,1,2,2-Tetrachloroethane	18.90	0.50	20.0	0	94.5%	67	120	18.8	0.5%	30	
1,1,2-Trichloroethane	16.50	0.50	20.0	0	82.5%	75	116	16.8	1.7%	30	
1,1-Dichloroethane	16.82	0.50	20.0	0	84.1%	74	128	19.8	16.2%	30	
1,1-Dichloroethene	18.04	0.50	20.0	0	90.2%	59	122	20.0	10.4%	30	
1,1-Dichloropropene	19.84	0.50	20.0	0	99.2%	78	126	20.2	1.6%	30	
1,2,3-Trichlorobenzene	18.23	0.50	20.0	0	91.2%	62	123	19.2	5.1%	30	
1,2,3-Trichloropropane	18.46	1.0	20.0	0	92.3%	67	124	18.7	1.3%	30	
1,2,4-Trichlorobenzene	18.60	0.50	20.0	0	93.0%	66	125	19.4	4.3%	30	
1,2,4-Trimethylbenzene	19.85	0.50	20.0	0	99.3%	82	123	20.3	2.0%	30	
1,2-Dibromo-3-chloropropane (DBCP)	17.35	2.0	20.0	0	86.8%	61	126	19.7	12.5%	30	
1,2-Dibromoethane (EDB)	16.83	1.0	20.0	0	84.2%	76	123	16.7	1.0%	30	
1,2-Dichlorobenzene	18.32	0.50	20.0	0	91.6%	71	117	18.8	2.7%	30	
1,2-Dichloroethane	18.50	0.50	20.0	0	92.5%	73	121	19.0	2.7%	30	
1,2-Dichloropropane	19.63	1.0	20.0	0	98.1%	74	127	19.9	1.4%	30	
1,3,5-Trimethylbenzene	19.66	0.50	20.0	0	98.3%	82	123	19.8	0.5%	30	
1,3-Dichlorobenzene	18.88	0.50	20.0	0	94.4%	72	121	19.2	1.5%	30	
1,3-Dichloropropane	18.03	1.0	20.0	0	90.1%	74	129	17.7	1.8%	30	
1,4-Dichlorobenzene	18.52	0.50	20.0	0	92.6%	72	119	18.9	1.8%	30	
2,2-Dichloropropane	17.22	0.50	20.0	0	86.1%	66	158	19.4	12.2%	30	
2-Chlorotoluene	19.26	0.50	20.0	0	96.3%	81	123	19.4	0.7%	30	
4-Chlorotoluene	19.27	0.50	20.0	0	96.3%	82	126	19.4	0.5%	30	
4-Isopropyltoluene	19.56	0.50	20.0	0	97.8%	74	121	19.9	1.6%	30	
Benzene	18.68	0.50	20.0	0	93.4%	78	121	19.0	1.7%	30	
Bromobenzene	18.40	0.50	20.0	0	92.0%	71	123	18.8	2.1%	30	
Bromochloromethane	16.86	0.50	20.0	0	84.3%	70	115	19.5	14.4%	30	
Bromodichloromethane	19.34	0.50	20.0	0	96.7%	80	119	19.4	0.5%	30	
Bromoform	17.84	0.50	20.0	0	89.2%	72	125	17.4	2.7%	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Bromomethane	16.43	0.50	20.0	0	82.1%	47	140	16.8	2.1%	30
Carbon Tetrachloride	19.22	0.50	20.0	0	96.1%	75	120	20.7	7.3%	30
Chlorobenzene	19.34	0.50	20.0	0	96.7%	78	117	19.3	0.4%	30
Chloroethane	19.80	0.50	20.0	0	99.0%	57	128	20.0	0.9%	30
Chloroform	16.84	0.50	20.0	0	84.2%	80	116	18.5	9.3%	30
Chloromethane	17.15	0.50	20.0	0	85.7%	58	136	17.8	3.6%	30
cis-1,2-Dichloroethene	16.88	0.50	20.0	0	84.4%	75	121	19.5	14.4%	30
cis-1,3-Dichloropropene	17.53	1.0	20.0	0	87.7%	78	130	17.6	0.1%	30
Dibromochloromethane	17.75	0.50	20.0	0	88.8%	81	120	17.3	2.4%	30
Dibromomethane	19.05	0.50	20.0	0	95.3%	73	116	19.2	1.0%	30
Dichlorodifluoromethane	18.67	0.50	20.0	0	93.3%	33	163	16.4	13.1%	30
Di-isopropyl ether (DIPE)	16.95	1.0	20.0	0	84.8%	72	117	19.0	11.2%	30
Ethyl tert-butyl ether (ETBE)	16.41	1.0	20.0	0	82.1%	78	118	18.1	9.8%	30
Ethylbenzene	19.67	0.50	20.0	0	98.4%	81	126	19.8	0.8%	30
Hexachlorobutadiene	18.53	0.50	20.0	0	92.7%	56	134	18.5	0.1%	30
Isopropylbenzene	20.06	0.50	20.0	0	100%	81	125	19.9	0.8%	30
m,p-Xylene	38.80	0.50	40.0	0	97.0%	82	125	39.7	2.2%	30
Methyl tert-butyl ether (MTBE)	16.17	0.50	20.0	0	80.9%	75	118	17.8	9.4%	30
Methylene chloride	16.46	0.50	20.0	0	82.3%	75	114	19.6	17.2%	30
Naphthalene	17.84	1.0	20.0	0	89.2%	68	124	19.2	7.4%	30
n-Butylbenzene	20.18	0.50	20.0	0	101%	66	123	20.4	0.9%	30
n-Propylbenzene	19.30	0.50	20.0	0	96.5%	82	128	19.5	1.0%	30
o-Xylene	19.63	0.50	20.0	0	98.1%	81	123	19.9	1.6%	30
sec-Butylbenzene	19.22	0.50	20.0	0	96.1%	79	125	19.7	2.4%	30
Styrene	19.57	0.50	20.0	0	97.8%	83	123	20.0	2.4%	30
Tert-amyl methyl ether (TAME)	18.99	0.50	20.0	0	94.9%	75	122	18.7	1.6%	30
Tert-butyl alcohol (TBA)	337.2	10	400	0	84.3%	45	132	390	14.5%	30
tert-Butylbenzene	19.62	0.50	20.0	0	98.1%	77	123	19.7	0.5%	30
Tetrachloroethene	18.57	0.50	20.0	0	92.9%	60	134	19.1	2.6%	30
Toluene	18.65	0.50	20.0	0	93.3%	80	118	19.3	3.3%	30
trans-1,2-Dichloroethene	17.11	0.50	20.0	0	85.6%	78	118	20.1	15.9%	30
trans-1,3-Dichloropropene	18.73	1.0	20.0	0	93.7%	78	125	18.8	0.1%	30
Trichloroethene	19.29	0.50	20.0	0	96.4%	77	118	19.3	0.3%	30
Trichlorofluoromethane	17.52	0.50	20.0	0	87.6%	41	140	19.0	8.2%	30

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2302373
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Vinyl chloride	20.48	0.50	20.0	0	102%	36	140	18.6	9.4%	30
Surrogate: 1,2-Dichloroethane-d4	0.954	0.10	1.00	0	95.4%	89	114	0.958	0.3%	30
Surrogate: Dibromofluoromethane	0.973	0.10	1.00	0	97.3%	88	113	0.999	2.7%	30
Surrogate: Toluene-d8	1.00	0.10	1.00	0	100%	89	109	1.02	1.7%	30

Sample ID: **LCS-23048** Batch ID: **R112956** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/1/2023 3:54:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230301C** SeqNo: **1623179**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	908.8	50	1,000	0	90.9%	74	125	0			

Sample ID: **LCSD-23048** Batch ID: **R112956** Test Code: **GASW-MS** Units: **µg/L** Analysis Date **3/1/2023 4:22:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230301C** SeqNo: **1623180**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	957.9	50	1,000	0	95.8%	74	125	909	5.3%	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Attachment 3

P. 1 of 1

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER: 2302373

Attention: Account Payable
Results & Invoice to: ap@lacoassociates.com
Address: 21 W 4th St. Eureka, CA 95501

Phone: (707) 443-5054
Copies of Report to: manhartc@lacoassociates.com
Christine Manhart
Sampler (Sign & Print): Angela Cook

TAT: [ ] 24 Hr [ ] 48 Hr [ ] 5 Day [ ] 5–7 Day
[✓] STD (2–3 Wk) [ ] Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms [ ]
Preliminary: FAX [ ] Verbal [ ] By:
Final Report: FAX [ ] Verbal [ ] By:

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

PROJECT INFORMATION

Project Number: 7170.05
Project Name: Tirsbeck Stormwater Compliance
Purchase Order Number:

	Oil & Grease	TSS	8260 List 7 - VOC
PRESERVATIVE			b
CONTAINER	7	2	9

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	Oil & Grease	TSS	8260 List 7 - VOC
	7170.05 - D#1	02/27/2023	08:15	GW	2	1	3
	7170.05 - D#2	02/27/2023	08:15	GW	2	1	3

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

GEOTRACKER REPORT

3.0°C On Ice

J.Flags per CM. 2/27/23

Global ID: T0602300134

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
Angela Cook	2/27/23 11:50AM	BAS	2/27/23 11:50

SAMPLE DISPOSAL
[✓] NCL Disposal of Non-Contaminated
[ ] Return [ ] Pickup

CHAIN OF CUSTODY SEALS Y/(N)/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus (Hand)

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Attachment 3

NORTH COAST LABORATORIES LTD.

March 06, 2023

LACO Associates
P.O. Box 1023
Eureka, CA 95502

Attn: Christine Manhart

Order No.: 2302385
Invoice No.: 169196
PO No.:
ELAP No.1247-Expires July 2024

RE: 7170.05 Tirsbeck Stormwater Compliance

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	7170.05 - D#1
02A	7170.05 - D#2

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

Flag = Explanation in Case Narrative

All solid results are expressed on a wet-weight basis unless otherwise noted.

Approved for release by:

Roxanne Golich, Project Manager

Attachment 3

Date: 06-Mar-2023
WorkOrder: 2302385

CASE NARRATIVE

The samples were received on ice with a temperature above the EPA recommended temperature of less than or equal to 6° C.

Attachment 3

Date: 06-Mar-2023
WorkOrder: 2302385

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#1 **Received:** 2/27/2023
Lab ID: 2302385-01A **Matrix:** Groundwater **Collected:** 2/27/2023 15:00
Test Name: Total Suspended Solids (TSS/NFR) **Reference:** SM 2540 D, 1997. Revs 2011

Parameter	Result	Flag	Limit	Units	DF	Prepared	Analyzed
Non-Filterable Residue(TSS)	120		1.0	mg/L	1.0	03/02/2023	3/3/2023 16:12

Client Sample ID: 7170.05 - D#2 **Received:** 2/27/2023
Lab ID: 2302385-02A **Matrix:** Groundwater **Collected:** 2/27/2023 15:00
Test Name: Total Suspended Solids (TSS/NFR) **Reference:** SM 2540 D, 1997. Revs 2011

Parameter	Result	Flag	Limit	Units	DF	Prepared	Analyzed
Non-Filterable Residue(TSS)	50		1.0	mg/L	1.0	03/02/2023	3/3/2023 16:12

Attachment 3

North Coast Laboratories, Ltd.

Date: 3/6/2023

CLIENT: LACO Associates
Work Order: 2302385
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-42500** Batch ID: **42500** Test Code: **NFRW** Units: **mg/L** Analysis Date **3/3/2023 4:12:00 PM** Prep Date: **3/2/2023**

Client ID: Run ID: **WC_230302B** SeqNo: **1623299**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Non-Filterable Residue(TSS)	ND	1.0									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Attachment 3
P. 1 of 1

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER: 2302385

Attention: LACO Accounts Payable
Results & Invoice to: ap@lacoassociates.com
Address: 21 W 4th St. Eureka, CA 95501

Phone: (707) 443-5054
Copies of Report to: manhartc@lacoassociates.com
Christine Manhart
Sampler (Sign & Print): Angela Cook

TAT: [ ] 24 Hr [ ] 48 Hr [ ] 5 Day [ ] 5-7 Day
[✓] STD (2-3 Wk) [ ] Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms [ ]
Preliminary: FAX [ ] Verbal [ ] By:
Final Report: FAX [ ] Verbal [ ] By:

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_1O_2Cl$; g—other

PROJECT INFORMATION

Project Number: 7170.05
Project Name: Tirsbeck Stormwater Compliance
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	PRESERVATIVE	CONTAINER	ANALYSIS: TSS
	7170.05 - D#1	02/27/2023	15:00	GW		7	2
	7170.05 - D#2	02/27/2023	15:00	GW		7	2

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

GEOTRACKER REPORT

8.2°C On Ice

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
Angela Cook	2/27/23 4:20PM	BAS	2/27/23 1620

SAMPLE DISPOSAL
[✓] NCL Disposal of Non-Contaminated
[ ] Return [ ] Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus (Hand)

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Attachment 3

NORTH COAST LABORATORIES LTD.

March 13, 2023

LACO Associates
P.O. Box 1023
Eureka, CA 95502

Attn: Christine Manhart

Order No.: 2302396
Invoice No.: 169300
PO No.:
ELAP No.1247-Expires July 2024

RE: 7170.05 Tirsbeck Stormwater Compliance

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	7170.05 - D#1
02A	7170.05 - D#2

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

Flag = Explanation in Case Narrative

All solid results are expressed on a wet-weight basis unless otherwise noted.

Approved for release by:

Roxanne Golich, Project Manager

Attachment 3

Date: 13-Mar-2023
WorkOrder: 2302396

CASE NARRATIVE

The samples were received on ice with a temperature above the EPA recommended temperature of less than or equal to 6° C.

J Flags:
Test results that fall below the reporting limit and above the method detection limit are considered approximate values.

Attachment 3

Date: 13-Mar-2023
WorkOrder: 2302396

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#1 **Received:** 2/28/2023
Lab ID: 2302396-01A **Matrix:** Groundwater **Collected:** 2/28/2023 10:00
Test Name: Hexane Extractable Oil and Grease **Reference:** EPA 1664B

Parameter	Result	Flag	Limit	Units	DF	Prepared	Analyzed
Oil and Grease	ND		4.8	mg/L	0.96	03/08/2023	3/10/2023 13:00

Client Sample ID: 7170.05 - D#2 **Received:** 2/28/2023
Lab ID: 2302396-02A **Matrix:** Groundwater **Collected:** 2/28/2023 10:00
Test Name: Hexane Extractable Oil and Grease **Reference:** EPA 1664B

Parameter	Result	Flag	Limit	Units	DF	Prepared	Analyzed
Oil and Grease	ND		4.7	mg/L	0.94	03/08/2023	3/10/2023 13:00

Attachment 3

North Coast Laboratories, Ltd.

Date: 3/13/2023

CLIENT: LACO Associates
Work Order: 2302396
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-42520** Batch ID: **42520** Test Code: **1664GOW** Units: **mg/L** Analysis Date **3/10/2023 1:00:00 PM** Prep Date: **3/8/2023**

Client ID: Run ID: **WC_230308H** SeqNo: **1623955**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	ND	5.0									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Attachment 3

North Coast Laboratories, Ltd.

Date: 3/13/2023

CLIENT: LACO Associates
Work Order: 2302396
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-42520** Batch ID: **42520** Test Code: **1664GOW** Units: **mg/L** Analysis Date **3/10/2023 1:00:00 PM** Prep Date: **3/8/2023**
Client ID: Run ID: **WC_230308H** SeqNo: **1623956**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	37.40	5.0	40.0	0	93.5%	80	107	0			

Sample ID: **LCSD-42520** Batch ID: **42520** Test Code: **1664GOW** Units: **mg/L** Analysis Date **3/10/2023 1:00:00 PM** Prep Date: **3/8/2023**
Client ID: Run ID: **WC_230308H** SeqNo: **1623957**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	39.50	5.0	40.0	0	98.8%	80	107	37.4	5.5%	18	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Attachment 3
P. 1 of 1

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER:

Attention: LACO Accounts Payable
Results & Invoice to: ap@lacoassociates.com
Address: 21 W 4th St.

Phone: (707)443-5054
Copies of Report to: manhartc@lacoassociates.com
Christine Manhart
Sampler (Sign & Print): Angela Cook

TAT: [ ] 24 Hr [ ] 48 Hr [ ] 5 Day [ ] 5–7 Day
[✓] STD (2–3 Wk) [ ] Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms [ ]
Preliminary: FAX [ ] Verbal [ ] By:
Final Report: FAX [ ] Verbal [ ] By:

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_4$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

PROJECT INFORMATION

Project Number: 7170.05
Project Name: Tirsbeck Stormwater Compliance
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	PRESERVATIVE	CONTAINER	ANALYSIS: Oil & Grease
	7170.05 - D#1	02/28/2023	10:00	GW		7	2
	7170.05 - D#2	02/28/2023	10:00	GW		7	2

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

GEOTRACKER REPORT

6.4 °C on ice

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
	2/28/23 10:35		2/28/23 1035

SAMPLE DISPOSAL
[✓] NCL Disposal of Non-Contaminated
[ ] Return [ ] Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Attachment 3

NORTH COAST LABORATORIES LTD.

April 13, 2023

LACO Associates
P.O. Box 1023
Eureka, CA 95502

Attn: Accounts Payable

Order No.: 2303390
Invoice No.: 169785
PO No.:
ELAP No.1247-Expires July 2024

RE: 7170.05 Tirsbeck Stormwater Compliance

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	7170.05 - D#1
01B	7170.05 - D#1
01C	7170.05 - D#1
02A	7170.05 - D#2
02B	7170.05 - D#2
02C	7170.05 - D#2

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

Flag = Explanation in Case Narrative

All solid results are expressed on a wet-weight basis unless otherwise noted.

Approved for release by:

Roxanne Golich-Moore,

Attachment 3

Date: 13-Apr-2023
WorkOrder: 2303390

CASE NARRATIVE

J Flags:
Test results that fall below the reporting limit and above the method detection limit are considered approximate values.

EPA 8260:
The laboratory control sample duplicate LCSD) recovery was above the upper acceptance limit for bromochloromethane. The elevated recovery equates to a high bias. There were no detectable levels of the analyte in the sample; therefore, the data were accepted.

Attachment 3

Date: 13-Apr-2023
WorkOrder: 2303390

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#1
Lab ID: 2303390-01A **Matrix:** Groundwater
Test Name: Hexane Extractable Oil and Grease
Reference: EPA 1664B

Received: 3/24/2023
Collected: 3/23/2024 14:30
Analyst: MRB

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Oil and Grease	***3.5***	J		4.6	2.4	mg/L	0.92	04/05/2023	04/07/23 13:00

Client Sample ID: 7170.05 - D#1
Lab ID: 2303390-01B **Matrix:** Groundwater
Test Name: Total Suspended Solids (TSS/NFR)
Reference: SM 2540 D, 1997. Revs 2011

Received: 3/24/2023
Collected: 3/23/2024 14:30
Analyst: LL

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Non-Filterable Residue(TSS)	340			1.0	0.78	mg/L	1.0	03/29/2023	03/30/23 0:00

Attachment 3

Date: 13-Apr-2023
WorkOrder: 2303390

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#1
Lab ID: 2303390-01C **Matrix:** Groundwater
Test Name: EPA 8260B
Reference: EPA 8260B

Received: 3/24/2023
Collected: 3/23/2024 14:30
Analyst: JWP

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
1,1,1,2-Tetrachloroethane	ND			0.50	0.17	µg/L	1.0	N/A	03/28/23 14:54
1,1,1-Trichloroethane	ND			0.50	0.2	µg/L	1.0	N/A	03/28/23 14:54
1,1,2,2-Tetrachloroethane	ND			0.50	0.28	µg/L	1.0	N/A	03/28/23 14:54
1,1,2-Trichloroethane	ND			0.50	0.15	µg/L	1.0	N/A	03/28/23 14:54
1,1-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	03/28/23 14:54
1,1-Dichloroethene	ND			0.50	0.2	µg/L	1.0	N/A	03/28/23 14:54
1,1-Dichloropropene	ND			0.50	0.22	µg/L	1.0	N/A	03/28/23 14:54
1,2,3-Trichlorobenzene	ND			0.50	0.5	µg/L	1.0	N/A	03/28/23 14:54
1,2,3-Trichloropropane	ND			1.0	0.29	µg/L	1.0	N/A	03/28/23 14:54
1,2,4-Trichlorobenzene	ND			0.50	0.3	µg/L	1.0	N/A	03/28/23 14:54
1,2,4-Trimethylbenzene	ND			0.50	0.5	µg/L	1.0	N/A	03/28/23 14:54
1,2-Dibromo-3-chloropropane (DBCP)	ND			2.0	0.83	µg/L	1.0	N/A	03/28/23 14:54
1,2-Dibromoethane (EDB)	ND			1.0	0.21	µg/L	1.0	N/A	03/28/23 14:54
1,2-Dichlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	03/28/23 14:54
1,2-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	03/28/23 14:54
1,2-Dichloropropane	ND			1.0	0.38	µg/L	1.0	N/A	03/28/23 14:54
1,3,5-Trimethylbenzene	ND			0.50	0.44	µg/L	1.0	N/A	03/28/23 14:54
1,3-Dichlorobenzene	ND			0.50	0.27	µg/L	1.0	N/A	03/28/23 14:54
1,3-Dichloropropane	ND			1.0	0.24	µg/L	1.0	N/A	03/28/23 14:54
1,4-Dichlorobenzene	ND			0.50	0.29	µg/L	1.0	N/A	03/28/23 14:54
2,2-Dichloropropane	ND			0.50	0.42	µg/L	1.0	N/A	03/28/23 14:54
2-Chlorotoluene	ND			0.50	0.35	µg/L	1.0	N/A	03/28/23 14:54
4-Chlorotoluene	ND			0.50	0.34	µg/L	1.0	N/A	03/28/23 14:54
4-Isopropyltoluene	ND			0.50	0.34	µg/L	1.0	N/A	03/28/23 14:54
Benzene	ND			0.50	0.3	µg/L	1.0	N/A	03/28/23 14:54
Bromobenzene	ND			0.50	0.25	µg/L	1.0	N/A	03/28/23 14:54
Bromochloromethane	ND			0.50	0.29	µg/L	1.0	N/A	03/28/23 14:54
Bromodichloromethane	ND			0.50	0.26	µg/L	1.0	N/A	03/28/23 14:54
Bromoform	ND			0.50	0.21	µg/L	1.0	N/A	03/28/23 14:54
Bromomethane	ND			0.50	0.27	µg/L	1.0	N/A	03/28/23 14:54
Carbon Tetrachloride	ND			0.50	0.24	µg/L	1.0	N/A	03/28/23 14:54
Chlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	03/28/23 14:54
Chloroethane	ND			0.50	0.47	µg/L	1.0	N/A	03/28/23 14:54
Chloroform	ND			0.50	0.28	µg/L	1.0	N/A	03/28/23 14:54
Chloromethane	ND			0.50	0.28	µg/L	1.0	N/A	03/28/23 14:54
cis-1,2-Dichloroethene	ND			0.50	0.27	µg/L	1.0	N/A	03/28/23 14:54
cis-1,3-Dichloropropene	ND			1.0	0.27	µg/L	1.0	N/A	03/28/23 14:54
Dibromochloromethane	ND			0.50	0.2	µg/L	1.0	N/A	03/28/23 14:54
Dibromomethane	ND			0.50	0.24	µg/L	1.0	N/A	03/28/23 14:54

Attachment 3

Date: 13-Apr-2023

ANALYTICAL REPORT

WorkOrder: 2303390

Dichlorodifluoromethane	ND		0.50	0.46	µg/L	1.0	N/A	03/28/23 14:54
Di-isopropyl ether (DIPE)	ND		1.0	0.26	µg/L	1.0	N/A	03/28/23 14:54
Ethyl tert-butyl ether (ETBE)	ND		1.0	0.25	µg/L	1.0	N/A	03/28/23 14:54
Ethylbenzene	ND		0.50	0.23	µg/L	1.0	N/A	03/28/23 14:54
Hexachlorobutadiene	ND		0.50	0.41	µg/L	1.0	N/A	03/28/23 14:54
Isopropylbenzene	ND		0.50	0.19	µg/L	1.0	N/A	03/28/23 14:54
m,p-Xylene	ND		0.50	0.5	µg/L	1.0	N/A	03/28/23 14:54
Methyl tert-butyl ether (MTBE)	ND		0.50	0.32	µg/L	1.0	N/A	03/28/23 14:54
Methylene chloride	ND		0.50	0.35	µg/L	1.0	N/A	03/28/23 14:54
Naphthalene	ND		1.0	0.78	µg/L	1.0	N/A	03/28/23 14:54
n-Butylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	03/28/23 14:54
n-Propylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	03/28/23 14:54
o-Xylene	ND		0.50	0.21	µg/L	1.0	N/A	03/28/23 14:54
sec-Butylbenzene	ND		0.50	0.39	µg/L	1.0	N/A	03/28/23 14:54
Styrene	ND		0.50	0.22	µg/L	1.0	N/A	03/28/23 14:54
Tert-amyl methyl ether (TAME)	ND		0.50	0.33	µg/L	1.0	N/A	03/28/23 14:54
Tert-butyl alcohol (TBA)	ND		10	8.3	µg/L	1.0	N/A	03/28/23 14:54
tert-Butylbenzene	ND		0.50	0.16	µg/L	1.0	N/A	03/28/23 14:54
Tetrachloroethene	ND		0.50	0.15	µg/L	1.0	N/A	03/28/23 14:54
Toluene	***0.60***		0.50	0.38	µg/L	1.0	N/A	03/28/23 14:54
trans-1,2-Dichloroethene	ND		0.50	0.22	µg/L	1.0	N/A	03/28/23 14:54
trans-1,3-Dichloropropene	ND		1.0	0.26	µg/L	1.0	N/A	03/28/23 14:54
Trichloroethene	ND		0.50	0.24	µg/L	1.0	N/A	03/28/23 14:54
Trichlorofluoromethane	ND		0.50	0.42	µg/L	1.0	N/A	03/28/23 14:54
Vinyl chloride	ND		0.50	0.42	µg/L	1.0	N/A	03/28/23 14:54
Surrogate: 1,2-Dichloroethane-d4	100		89.4-114	0.1	% Rec	1.0	N/A	03/28/23 14:54
Surrogate: Dibromofluoromethane	102		87.9-113	0.1	% Rec	1.0	N/A	03/28/23 14:54
Surrogate: Toluene-d8	101		88.5-109	0.1	% Rec	1.0	N/A	03/28/23 14:54

Test Name: TPH as Gasoline **Analyst:** JWP

Reference: EPA 8260B Modified / LUFT

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
TPHC Gasoline	ND			50	30	µg/L	1.0	N/A	03/28/23 14:54

Client Sample ID: 7170.05 - D#2 **Received:** 3/24/2023

Lab ID: 2303390-02A **Matrix:** Groundwater **Collected:** 3/23/2023 14:30

Test Name: Hexane Extractable Oil and Grease **Analyst:** MRB

Reference: EPA 1664B

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Oil and Grease	***14***			4.5	2.4	mg/L	0.90	04/05/2023	04/07/23 13:00

Attachment 3

Date: 13-Apr-2023
WorkOrder: 2303390

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#2
Lab ID: 2303390-02B **Matrix:** Groundwater
Test Name: Total Suspended Solids (TSS/NFR)
Reference: SM 2540 D, 1997. Revs 2011

Received: 3/24/2023
Collected: 3/23/2023 14:30
Analyst: LL

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
Non-Filterable Residue(TSS)	260			1.0	0.78	mg/L	1.0	03/29/2023	03/30/23 0:00

Attachment 3

Date: 13-Apr-2023
WorkOrder: 2303390

ANALYTICAL REPORT

Client Sample ID: 7170.05 - D#2
Lab ID: 2303390-02C **Matrix:** Groundwater
Test Name: EPA 8260B
Reference: EPA 8260B

Received: 3/24/2023
Collected: 3/23/2023 14:30
Analyst: JWP

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
1,1,1,2-Tetrachloroethane	ND			0.50	0.17	µg/L	1.0	N/A	03/28/23 15:20
1,1,1-Trichloroethane	ND			0.50	0.2	µg/L	1.0	N/A	03/28/23 15:20
1,1,2,2-Tetrachloroethane	ND			0.50	0.28	µg/L	1.0	N/A	03/28/23 15:20
1,1,2-Trichloroethane	ND			0.50	0.15	µg/L	1.0	N/A	03/28/23 15:20
1,1-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	03/28/23 15:20
1,1-Dichloroethene	ND			0.50	0.2	µg/L	1.0	N/A	03/28/23 15:20
1,1-Dichloropropene	ND			0.50	0.22	µg/L	1.0	N/A	03/28/23 15:20
1,2,3-Trichlorobenzene	ND			0.50	0.5	µg/L	1.0	N/A	03/28/23 15:20
1,2,3-Trichloropropane	ND			1.0	0.29	µg/L	1.0	N/A	03/28/23 15:20
1,2,4-Trichlorobenzene	ND			0.50	0.3	µg/L	1.0	N/A	03/28/23 15:20
1,2,4-Trimethylbenzene	ND			0.50	0.5	µg/L	1.0	N/A	03/28/23 15:20
1,2-Dibromo-3-chloropropane (DBCP)	ND			2.0	0.83	µg/L	1.0	N/A	03/28/23 15:20
1,2-Dibromoethane (EDB)	ND			1.0	0.21	µg/L	1.0	N/A	03/28/23 15:20
1,2-Dichlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	03/28/23 15:20
1,2-Dichloroethane	ND			0.50	0.31	µg/L	1.0	N/A	03/28/23 15:20
1,2-Dichloropropane	ND			1.0	0.38	µg/L	1.0	N/A	03/28/23 15:20
1,3,5-Trimethylbenzene	ND			0.50	0.44	µg/L	1.0	N/A	03/28/23 15:20
1,3-Dichlorobenzene	ND			0.50	0.27	µg/L	1.0	N/A	03/28/23 15:20
1,3-Dichloropropane	ND			1.0	0.24	µg/L	1.0	N/A	03/28/23 15:20
1,4-Dichlorobenzene	ND			0.50	0.29	µg/L	1.0	N/A	03/28/23 15:20
2,2-Dichloropropane	ND			0.50	0.42	µg/L	1.0	N/A	03/28/23 15:20
2-Chlorotoluene	ND			0.50	0.35	µg/L	1.0	N/A	03/28/23 15:20
4-Chlorotoluene	ND			0.50	0.34	µg/L	1.0	N/A	03/28/23 15:20
4-Isopropyltoluene	ND			0.50	0.34	µg/L	1.0	N/A	03/28/23 15:20
Benzene	ND			0.50	0.3	µg/L	1.0	N/A	03/28/23 15:20
Bromobenzene	ND			0.50	0.25	µg/L	1.0	N/A	03/28/23 15:20
Bromochloromethane	ND			0.50	0.29	µg/L	1.0	N/A	03/28/23 15:20
Bromodichloromethane	ND			0.50	0.26	µg/L	1.0	N/A	03/28/23 15:20
Bromoform	ND			0.50	0.21	µg/L	1.0	N/A	03/28/23 15:20
Bromomethane	ND			0.50	0.27	µg/L	1.0	N/A	03/28/23 15:20
Carbon Tetrachloride	ND			0.50	0.24	µg/L	1.0	N/A	03/28/23 15:20
Chlorobenzene	ND			0.50	0.26	µg/L	1.0	N/A	03/28/23 15:20
Chloroethane	ND			0.50	0.47	µg/L	1.0	N/A	03/28/23 15:20
Chloroform	ND			0.50	0.28	µg/L	1.0	N/A	03/28/23 15:20
Chloromethane	ND			0.50	0.28	µg/L	1.0	N/A	03/28/23 15:20
cis-1,2-Dichloroethene	ND			0.50	0.27	µg/L	1.0	N/A	03/28/23 15:20
cis-1,3-Dichloropropene	ND			1.0	0.27	µg/L	1.0	N/A	03/28/23 15:20
Dibromochloromethane	ND			0.50	0.2	µg/L	1.0	N/A	03/28/23 15:20
Dibromomethane	ND			0.50	0.24	µg/L	1.0	N/A	03/28/23 15:20

Attachment 3

Date: 13-Apr-2023

ANALYTICAL REPORT

WorkOrder: 2303390

Dichlorodifluoromethane	ND		0.50	0.46	µg/L	1.0	N/A	03/28/23 15:20
Di-isopropyl ether (DIPE)	ND		1.0	0.26	µg/L	1.0	N/A	03/28/23 15:20
Ethyl tert-butyl ether (ETBE)	ND		1.0	0.25	µg/L	1.0	N/A	03/28/23 15:20
Ethylbenzene	ND		0.50	0.23	µg/L	1.0	N/A	03/28/23 15:20
Hexachlorobutadiene	ND		0.50	0.41	µg/L	1.0	N/A	03/28/23 15:20
Isopropylbenzene	ND		0.50	0.19	µg/L	1.0	N/A	03/28/23 15:20
m,p-Xylene	ND		0.50	0.5	µg/L	1.0	N/A	03/28/23 15:20
Methyl tert-butyl ether (MTBE)	ND		0.50	0.32	µg/L	1.0	N/A	03/28/23 15:20
Methylene chloride	ND		0.50	0.35	µg/L	1.0	N/A	03/28/23 15:20
Naphthalene	ND		1.0	0.78	µg/L	1.0	N/A	03/28/23 15:20
n-Butylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	03/28/23 15:20
n-Propylbenzene	ND		0.50	0.36	µg/L	1.0	N/A	03/28/23 15:20
o-Xylene	ND		0.50	0.21	µg/L	1.0	N/A	03/28/23 15:20
sec-Butylbenzene	ND		0.50	0.39	µg/L	1.0	N/A	03/28/23 15:20
Styrene	ND		0.50	0.22	µg/L	1.0	N/A	03/28/23 15:20
Tert-amyl methyl ether (TAME)	ND		0.50	0.33	µg/L	1.0	N/A	03/28/23 15:20
Tert-butyl alcohol (TBA)	ND		10	8.3	µg/L	1.0	N/A	03/28/23 15:20
tert-Butylbenzene	ND		0.50	0.16	µg/L	1.0	N/A	03/28/23 15:20
Tetrachloroethene	ND		0.50	0.15	µg/L	1.0	N/A	03/28/23 15:20
Toluene	ND		0.50	0.38	µg/L	1.0	N/A	03/28/23 15:20
trans-1,2-Dichloroethene	ND		0.50	0.22	µg/L	1.0	N/A	03/28/23 15:20
trans-1,3-Dichloropropene	ND		1.0	0.26	µg/L	1.0	N/A	03/28/23 15:20
Trichloroethene	ND		0.50	0.24	µg/L	1.0	N/A	03/28/23 15:20
Trichlorofluoromethane	ND		0.50	0.42	µg/L	1.0	N/A	03/28/23 15:20
Vinyl chloride	ND		0.50	0.42	µg/L	1.0	N/A	03/28/23 15:20
Surrogate: 1,2-Dichloroethane-d4	97.3		89.4-114	0.1	% Rec	1.0	N/A	03/28/23 15:20
Surrogate: Dibromofluoromethane	98.7		87.9-113	0.1	% Rec	1.0	N/A	03/28/23 15:20
Surrogate: Toluene-d8	101		88.5-109	0.1	% Rec	1.0	N/A	03/28/23 15:20

Test Name: TPH as Gasoline **Analyst:** JWP

Reference: EPA 8260B Modified / LUFT

Parameter	Result	Qual	Flag	Limit	MDL	Units	DF	Prepared	Analyzed
TPHC Gasoline	ND			50	30	µg/L	1.0	N/A	03/28/23 15:20

Attachment 3

North Coast Laboratories, Ltd.

Date: 4/13/2023

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-42643** Batch ID: **42643** Test Code: **1664GOW** Units: **mg/L** Analysis Date: **4/7/2023 1:00:00 PM** Prep Date: **4/5/2023**

Client ID: Run ID: **WC_230405C** SeqNo: **1627599**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	ND	5.0									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Attachment 3

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Sample ID: **MB 032823** Batch ID: **R113168** Test Code: **8260EW** Units: **µg/L** Analysis Date: **3/28/2023 2:28:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230328A** SeqNo: **1626336**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	1.0									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0									
1,2-Dibromoethane (EDB)	ND	1.0									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromochloromethane	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Bromomethane	ND	0.50
Carbon Tetrachloride	ND	0.50
Chlorobenzene	ND	0.50
Chloroethane	ND	0.50
Chloroform	ND	0.50
Chloromethane	ND	0.50
cis-1,2-Dichloroethene	ND	0.50
cis-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	0.50
Dibromomethane	ND	0.50
Dichlorodifluoromethane	ND	0.50
Di-isopropyl ether (DIPE)	ND	1.0
Ethyl tert-butyl ether (ETBE)	ND	1.0
Ethylbenzene	ND	0.50
Hexachlorobutadiene	ND	0.50
Isopropylbenzene	ND	0.50
m,p-Xylene	ND	0.50
Methyl tert-butyl ether (MTBE)	ND	0.50
Methylene chloride	ND	0.50
Naphthalene	ND	1.0
n-Butylbenzene	ND	0.50
n-Propylbenzene	ND	0.50
o-Xylene	ND	0.50
sec-Butylbenzene	ND	0.50
Styrene	ND	0.50
Tert-amyl methyl ether (TAME)	ND	0.50
Tert-butyl alcohol (TBA)	ND	10
tert-Butylbenzene	ND	0.50
Tetrachloroethene	ND	0.50
Toluene	ND	0.50
trans-1,2-Dichloroethene	ND	0.50
trans-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	0.50
Trichlorofluoromethane	ND	0.50

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Method Blank

Vinyl chloride	ND	0.50							
Surrogate: 1,2-Dichloroethane-d4	1.01	0.10	1.00	0	101%	89	114	0	
Surrogate: Dibromofluoromethane	0.997	0.10	1.00	0	99.7%	88	113	0	
Surrogate: Toluene-d8	1.00	0.10	1.00	0	101%	89	109	0	

Sample ID: **MB 032823** Batch ID: **R113169** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **3/28/2023 2:28:00 PM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230328B** SeqNo: **1626344**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	ND	50									

Sample ID: **MB** Batch ID: **42616** Test Code: **NFRW** Units: **mg/L** Analysis Date: **3/30/2023** Prep Date: **3/29/2023**
Client ID: Run ID: **WC_230329D** SeqNo: **1627018**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Non-Filterable Residue(TSS)	ND	1.0									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Attachment 3

North Coast Laboratories, Ltd.

Date: 4/13/2023

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **2303390-01B** Batch ID: **42616** Test Code: **NFRW** Units: **mg/L** Analysis Date: **3/30/2023** Prep Date: **3/29/2023**

Client ID: **7170.05 - D#1** Run ID: **WC_230329D** SeqNo: **1627024**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Non-Filterable Residue(TSS)	344.3	N/A						337	2.1%	10	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Attachment 3

North Coast Laboratories, Ltd.

Date: 4/13/2023

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **2303390-01CMS** Batch ID: **R113168** Test Code: **8260EW** Units: **µg/L** Analysis Date: **3/28/2023 1:09:00 PM** Prep Date: **N/A**
Client ID: **7170.05 - D#1** Run ID: **ORGCMS2_230328A** SeqNo: **1626335**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.87	0.50	20.0	0	99.4%	79	120	0			
1,1,1-Trichloroethane	21.28	0.50	20.0	0	106%	79	120	0			
1,1,2,2-Tetrachloroethane	17.56	0.50	20.0	0	87.8%	67	120	0			
1,1,2-Trichloroethane	18.48	0.50	20.0	0	92.4%	75	116	0			
1,1-Dichloroethane	19.12	0.50	20.0	0	95.6%	74	128	0			
1,1-Dichloroethene	21.00	0.50	20.0	0	105%	59	122	0			
1,1-Dichloropropene	21.09	0.50	20.0	0	105%	78	126	0			
1,2,3-Trichlorobenzene	16.53	0.50	20.0	0	82.7%	62	123	0			
1,2,3-Trichloropropane	17.11	1.0	20.0	0	85.5%	67	124	0			
1,2,4-Trichlorobenzene	16.65	0.50	20.0	0	83.3%	66	125	0			
1,2,4-Trimethylbenzene	18.74	0.50	20.0	0	93.7%	82	123	0			
1,2-Dibromo-3-chloropropane (DBCP)	17.20	2.0	20.0	0	86.0%	61	126	0			
1,2-Dibromoethane (EDB)	20.47	1.0	20.0	0	102%	76	123	0			
1,2-Dichlorobenzene	18.29	0.50	20.0	0	91.5%	71	117	0			
1,2-Dichloroethane	18.87	0.50	20.0	0	94.4%	73	121	0			
1,2-Dichloropropane	18.74	1.0	20.0	0	93.7%	74	127	0			
1,3,5-Trimethylbenzene	19.50	0.50	20.0	0	97.5%	82	123	0			
1,3-Dichlorobenzene	18.37	0.50	20.0	0	91.8%	72	121	0			
1,3-Dichloropropane	19.08	1.0	20.0	0	95.4%	74	129	0			
1,4-Dichlorobenzene	18.99	0.50	20.0	0	94.9%	72	119	0			
2,2-Dichloropropane	22.33	0.50	20.0	0	112%	66	158	0			
2-Chlorotoluene	19.13	0.50	20.0	0	95.6%	81	123	0			
4-Chlorotoluene	18.93	0.50	20.0	0	94.7%	82	126	0			
4-Isopropyltoluene	18.69	0.50	20.0	0	93.5%	74	121	0			
Benzene	19.51	0.50	20.0	0	97.5%	78	121	0			
Bromobenzene	19.16	0.50	20.0	0	95.8%	71	123	0			
Bromochloromethane	19.59	0.50	20.0	0	98.0%	70	115	0			
Bromodichloromethane	19.52	0.50	20.0	0	97.6%	80	119	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Sample Matrix Spike

Bromoform	18.42	0.50	20.0	0	92.1%	72	125	0
Bromomethane	23.65	0.50	20.0	0	118%	47	140	0
Carbon Tetrachloride	21.63	0.50	20.0	0	108%	75	120	0
Chlorobenzene	19.83	0.50	20.0	0	99.1%	78	117	0
Chloroethane	17.42	0.50	20.0	0	87.1%	57	128	0
Chloroform	18.43	0.50	20.0	0	92.2%	80	116	0
Chloromethane	16.48	0.50	20.0	0	82.4%	58	136	0
cis-1,2-Dichloroethene	19.52	0.50	20.0	0	97.6%	75	121	0
cis-1,3-Dichloropropene	19.39	1.0	20.0	0	96.9%	78	130	0
Dibromochloromethane	19.90	0.50	20.0	0	99.5%	81	120	0
Dibromomethane	18.66	0.50	20.0	0	93.3%	73	116	0
Dichlorodifluoromethane	17.63	0.50	20.0	0	88.2%	33	163	0
Di-isopropyl ether (DIPE)	18.22	1.0	20.0	0	91.1%	72	117	0
Ethyl tert-butyl ether (ETBE)	18.33	1.0	20.0	0	91.6%	78	118	0
Ethylbenzene	20.36	0.50	20.0	0	102%	81	126	0
Hexachlorobutadiene	17.75	0.50	20.0	0	88.7%	56	134	0
Isopropylbenzene	20.70	0.50	20.0	0	103%	81	125	0
m,p-Xylene	39.23	0.50	40.0	0	98.1%	82	125	0
Methyl tert-butyl ether (MTBE)	17.98	0.50	20.0	0	89.9%	75	118	0
Methylene chloride	18.13	0.50	20.0	0	90.6%	75	114	0
Naphthalene	15.93	1.0	20.0	0	79.6%	68	124	0
n-Butylbenzene	18.06	0.50	20.0	0	90.3%	66	123	0
n-Propylbenzene	19.75	0.50	20.0	0	98.7%	82	128	0
o-Xylene	19.37	0.50	20.0	0	96.8%	81	123	0
sec-Butylbenzene	18.90	0.50	20.0	0	94.5%	79	125	0
Styrene	19.63	0.50	20.0	0	98.2%	83	123	0
Tert-amyl methyl ether (TAME)	18.17	0.50	20.0	0	90.8%	75	122	0
Tert-butyl alcohol (TBA)	335.6	10	400	0	83.9%	45	132	0
tert-Butylbenzene	19.29	0.50	20.0	0	96.5%	77	123	0
Tetrachloroethene	20.80	0.50	20.0	0	104%	60	134	0
Toluene	20.34	0.50	20.0	0.602	98.7%	80	118	0
trans-1,2-Dichloroethene	20.31	0.50	20.0	0	102%	78	118	0
trans-1,3-Dichloropropene	19.11	1.0	20.0	0	95.6%	78	125	0
Trichloroethene	20.32	0.50	20.0	0	102%	77	118	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Sample Matrix Spike

Trichlorofluoromethane	21.25	0.50	20.0	0	106%	41	140	0
Vinyl chloride	16.82	0.50	20.0	0	84.1%	36	140	0
Surrogate: 1,2-Dichloroethane-d4	0.971	0.10	1.00	0	97.1%	89	114	0
Surrogate: Dibromofluoromethane	1.00	0.10	1.00	0	101%	88	113	0
Surrogate: Toluene-d8	0.997	0.10	1.00	0	99.7%	89	109	0

Qualifiers:

ND - Not Detected at the Reporting Limit

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Attachment 3

North Coast Laboratories, Ltd.

Date: 4/13/2023

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-42643** Batch ID: **42643** Test Code: **1664GOW** Units: **mg/L** Analysis Date: **4/7/2023 1:00:00 PM** Prep Date: **4/5/2023**
Client ID: Run ID: **WC_230405C** SeqNo: **1627600**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	38.30	5.0	40.0	0	95.7%	80	107	0			

Sample ID: **LCSD-42643** Batch ID: **42643** Test Code: **1664GOW** Units: **mg/L** Analysis Date: **4/7/2023 1:00:00 PM** Prep Date: **4/5/2023**
Client ID: Run ID: **WC_230405C** SeqNo: **1627601**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil and Grease	36.30	5.0	40.0	0	90.7%	80	107	38.3	5.4%	18	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-23077** Batch ID: **R113168** Test Code: **8260EW** Units: **µg/L** Analysis Date: **3/28/2023 12:16:00 PM** Prep Date: **N/A**

Client ID: Run ID: **ORGCMS2_230328A** SeqNo: **1626333**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	22.52	0.50	20.0	0	113%	79	120	0			
1,1,1-Trichloroethane	23.09	0.50	20.0	0	115%	79	120	0			
1,1,2,2-Tetrachloroethane	20.95	0.50	20.0	0	105%	67	120	0			
1,1,2-Trichloroethane	22.02	0.50	20.0	0	110%	75	116	0			
1,1-Dichloroethane	21.43	0.50	20.0	0	107%	74	128	0			
1,1-Dichloroethene	22.11	0.50	20.0	0	111%	59	122	0			
1,1-Dichloropropene	22.50	0.50	20.0	0	113%	78	126	0			
1,2,3-Trichlorobenzene	21.49	0.50	20.0	0	107%	62	123	0			
1,2,3-Trichloropropane	20.52	1.0	20.0	0	103%	67	124	0			
1,2,4-Trichlorobenzene	21.77	0.50	20.0	0	109%	66	125	0			
1,2,4-Trimethylbenzene	22.40	0.50	20.0	0	112%	82	123	0			
1,2-Dibromo-3-chloropropane (DBCP)	21.12	2.0	20.0	0	106%	61	126	0			
1,2-Dibromoethane (EDB)	22.00	1.0	20.0	0	110%	76	123	0			
1,2-Dichlorobenzene	21.76	0.50	20.0	0	109%	71	117	0			
1,2-Dichloroethane	21.62	0.50	20.0	0	108%	73	121	0			
1,2-Dichloropropane	21.56	1.0	20.0	0	108%	74	127	0			
1,3,5-Trimethylbenzene	22.82	0.50	20.0	0	114%	82	123	0			
1,3-Dichlorobenzene	21.93	0.50	20.0	0	110%	72	121	0			
1,3-Dichloropropane	21.99	1.0	20.0	0	110%	74	129	0			
1,4-Dichlorobenzene	22.68	0.50	20.0	0	113%	72	119	0			
2,2-Dichloropropane	24.08	0.50	20.0	0	120%	66	158	0			
2-Chlorotoluene	22.14	0.50	20.0	0	111%	81	123	0			
4-Chlorotoluene	22.03	0.50	20.0	0	110%	82	126	0			
4-Isopropyltoluene	22.68	0.50	20.0	0	113%	74	121	0			
Benzene	21.81	0.50	20.0	0	109%	78	121	0			
Bromobenzene	22.50	0.50	20.0	0	113%	71	123	0			
Bromochloromethane	22.58	0.50	20.0	0	113%	70	115	0			
Bromodichloromethane	22.40	0.50	20.0	0	112%	80	119	0			
Bromoform	22.02	0.50	20.0	0	110%	72	125	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Bromomethane	23.73	0.50	20.0	0	119%	47	140	0
Carbon Tetrachloride	23.03	0.50	20.0	0	115%	75	120	0
Chlorobenzene	22.59	0.50	20.0	0	113%	78	117	0
Chloroethane	18.68	0.50	20.0	0	93.4%	57	128	0
Chloroform	20.99	0.50	20.0	0	105%	80	116	0
Chloromethane	17.59	0.50	20.0	0	87.9%	58	136	0
cis-1,2-Dichloroethene	22.00	0.50	20.0	0	110%	75	121	0
cis-1,3-Dichloropropene	22.49	1.0	20.0	0	112%	78	130	0
Dibromochloromethane	23.01	0.50	20.0	0	115%	81	120	0
Dibromomethane	22.10	0.50	20.0	0	110%	73	116	0
Dichlorodifluoromethane	19.05	0.50	20.0	0	95.2%	33	163	0
Di-isopropyl ether (DIPE)	21.03	1.0	20.0	0	105%	72	117	0
Ethyl tert-butyl ether (ETBE)	21.40	1.0	20.0	0	107%	78	118	0
Ethylbenzene	22.82	0.50	20.0	0	114%	81	126	0
Hexachlorobutadiene	21.80	0.50	20.0	0	109%	56	134	0
Isopropylbenzene	23.67	0.50	20.0	0	118%	81	125	0
m,p-Xylene	43.96	0.50	40.0	0	110%	82	125	0
Methyl tert-butyl ether (MTBE)	21.18	0.50	20.0	0	106%	75	118	0
Methylene chloride	20.85	0.50	20.0	0	104%	75	114	0
Naphthalene	20.46	1.0	20.0	0	102%	68	124	0
n-Butylbenzene	22.38	0.50	20.0	0	112%	66	123	0
n-Propylbenzene	22.98	0.50	20.0	0	115%	82	128	0
o-Xylene	21.97	0.50	20.0	0	110%	81	123	0
sec-Butylbenzene	22.51	0.50	20.0	0	113%	79	125	0
Styrene	22.27	0.50	20.0	0	111%	83	123	0
Tert-amyl methyl ether (TAME)	21.25	0.50	20.0	0	106%	75	122	0
Tert-butyl alcohol (TBA)	397.9	10	400	0	99.5%	45	132	0
tert-Butylbenzene	22.55	0.50	20.0	0	113%	77	123	0
Tetrachloroethene	23.03	0.50	20.0	0	115%	60	134	0
Toluene	22.25	0.50	20.0	0	111%	80	118	0
trans-1,2-Dichloroethene	22.36	0.50	20.0	0	112%	78	118	0
trans-1,3-Dichloropropene	21.78	1.0	20.0	0	109%	78	125	0
Trichloroethene	22.80	0.50	20.0	0	114%	77	118	0
Trichlorofluoromethane	20.54	0.50	20.0	0	103%	41	140	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike

Vinyl chloride	19.89	0.50	20.0	0	99.4%	36	140	0
Surrogate: 1,2-Dichloroethane-d4	1.01	0.10	1.00	0	102%	89	114	0
Surrogate: Dibromofluoromethane	1.02	0.10	1.00	0	102%	88	113	0
Surrogate: Toluene-d8	0.998	0.10	1.00	0	99.8%	89	109	0

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-23077** Batch ID: **R113168** Test Code: **8260EW** Units: **µg/L** Analysis Date: **3/28/2023 12:43:00 PM** Prep Date: **N/A**

Client ID: Run ID: **ORGCMS2_230328A** SeqNo: **1626334**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	22.97	0.50	20.0	0	115%	79	120	22.5	2.0%	30	
1,1,1-Trichloroethane	22.67	0.50	20.0	0	113%	79	120	23.1	1.8%	30	
1,1,2,2-Tetrachloroethane	21.71	0.50	20.0	0	109%	67	120	21.0	3.6%	30	
1,1,2-Trichloroethane	22.29	0.50	20.0	0	111%	75	116	22.0	1.2%	30	
1,1-Dichloroethane	21.29	0.50	20.0	0	106%	74	128	21.4	0.6%	30	
1,1-Dichloroethene	21.23	0.50	20.0	0	106%	59	122	22.1	4.1%	30	
1,1-Dichloropropene	21.88	0.50	20.0	0	109%	78	126	22.5	2.8%	30	
1,2,3-Trichlorobenzene	22.80	0.50	20.0	0	114%	62	123	21.5	5.9%	30	
1,2,3-Trichloropropane	21.24	1.0	20.0	0	106%	67	124	20.5	3.5%	30	
1,2,4-Trichlorobenzene	22.28	0.50	20.0	0	111%	66	125	21.8	2.3%	30	
1,2,4-Trimethylbenzene	22.33	0.50	20.0	0	112%	82	123	22.4	0.3%	30	
1,2-Dibromo-3-chloropropane (DBCP)	22.52	2.0	20.0	0	113%	61	126	21.1	6.4%	30	
1,2-Dibromoethane (EDB)	22.22	1.0	20.0	0	111%	76	123	22.0	1.0%	30	
1,2-Dichlorobenzene	22.00	0.50	20.0	0	110%	71	117	21.8	1.1%	30	
1,2-Dichloroethane	22.23	0.50	20.0	0	111%	73	121	21.6	2.8%	30	
1,2-Dichloropropane	21.49	1.0	20.0	0	107%	74	127	21.6	0.3%	30	
1,3,5-Trimethylbenzene	22.46	0.50	20.0	0	112%	82	123	22.8	1.6%	30	
1,3-Dichlorobenzene	22.08	0.50	20.0	0	110%	72	121	21.9	0.7%	30	
1,3-Dichloropropane	22.13	1.0	20.0	0	111%	74	129	22.0	0.6%	30	
1,4-Dichlorobenzene	22.61	0.50	20.0	0	113%	72	119	22.7	0.3%	30	
2,2-Dichloropropane	23.51	0.50	20.0	0	118%	66	158	24.1	2.4%	30	
2-Chlorotoluene	21.99	0.50	20.0	0	110%	81	123	22.1	0.7%	30	
4-Chlorotoluene	21.98	0.50	20.0	0	110%	82	126	22.0	0.2%	30	
4-Isopropyltoluene	22.57	0.50	20.0	0	113%	74	121	22.7	0.5%	30	
Benzene	21.78	0.50	20.0	0	109%	78	121	21.8	0.1%	30	
Bromobenzene	22.51	0.50	20.0	0	113%	71	123	22.5	0.0%	30	
Bromochloromethane	23.14	0.50	20.0	0	116%	70	115	22.6	2.4%	30	S
Bromodichloromethane	22.67	0.50	20.0	0	113%	80	119	22.4	1.2%	30	
Bromoform	22.31	0.50	20.0	0	112%	72	125	22.0	1.3%	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Bromomethane	24.69	0.50	20.0	0	123%	47	140	23.7	4.0%	30
Carbon Tetrachloride	22.40	0.50	20.0	0	112%	75	120	23.0	2.8%	30
Chlorobenzene	22.28	0.50	20.0	0	111%	78	117	22.6	1.4%	30
Chloroethane	17.89	0.50	20.0	0	89.4%	57	128	18.7	4.3%	30
Chloroform	20.94	0.50	20.0	0	105%	80	116	21.0	0.2%	30
Chloromethane	17.43	0.50	20.0	0	87.1%	58	136	17.6	0.9%	30
cis-1,2-Dichloroethene	21.85	0.50	20.0	0	109%	75	121	22.0	0.7%	30
cis-1,3-Dichloropropene	22.74	1.0	20.0	0	114%	78	130	22.5	1.1%	30
Dibromochloromethane	23.43	0.50	20.0	0	117%	81	120	23.0	1.8%	30
Dibromomethane	22.49	0.50	20.0	0	112%	73	116	22.1	1.8%	30
Dichlorodifluoromethane	17.45	0.50	20.0	0	87.3%	33	163	19.0	8.7%	30
Di-isopropyl ether (DIPE)	21.24	1.0	20.0	0	106%	72	117	21.0	1.0%	30
Ethyl tert-butyl ether (ETBE)	21.91	1.0	20.0	0	110%	78	118	21.4	2.3%	30
Ethylbenzene	22.32	0.50	20.0	0	112%	81	126	22.8	2.2%	30
Hexachlorobutadiene	21.17	0.50	20.0	0	106%	56	134	21.8	2.9%	30
Isopropylbenzene	23.21	0.50	20.0	0	116%	81	125	23.7	2.0%	30
m,p-Xylene	43.40	0.50	40.0	0	109%	82	125	44.0	1.3%	30
Methyl tert-butyl ether (MTBE)	21.99	0.50	20.0	0	110%	75	118	21.2	3.8%	30
Methylene chloride	20.75	0.50	20.0	0	104%	75	114	20.8	0.5%	30
Naphthalene	22.34	1.0	20.0	0	112%	68	124	20.5	8.8%	30
n-Butylbenzene	22.37	0.50	20.0	0	112%	66	123	22.4	0.0%	30
n-Propylbenzene	22.63	0.50	20.0	0	113%	82	128	23.0	1.5%	30
o-Xylene	21.97	0.50	20.0	0	110%	81	123	22.0	0.0%	30
sec-Butylbenzene	21.98	0.50	20.0	0	110%	79	125	22.5	2.4%	30
Styrene	22.73	0.50	20.0	0	114%	83	123	22.3	2.0%	30
Tert-amyl methyl ether (TAME)	21.53	0.50	20.0	0	108%	75	122	21.2	1.3%	30
Tert-butyl alcohol (TBA)	422.3	10	400	0	106%	45	132	398	6.0%	30
tert-Butylbenzene	22.42	0.50	20.0	0	112%	77	123	22.6	0.5%	30
Tetrachloroethene	22.98	0.50	20.0	0	115%	60	134	23.0	0.2%	30
Toluene	22.03	0.50	20.0	0	110%	80	118	22.2	1.0%	30
trans-1,2-Dichloroethene	21.82	0.50	20.0	0	109%	78	118	22.4	2.4%	30
trans-1,3-Dichloropropene	22.55	1.0	20.0	0	113%	78	125	21.8	3.5%	30
Trichloroethene	22.32	0.50	20.0	0	112%	77	118	22.8	2.1%	30
Trichlorofluoromethane	20.57	0.50	20.0	0	103%	41	140	20.5	0.1%	30

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 2303390
Project: 7170.05 Tirsbeck Stormwater Compliance

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Vinyl chloride	17.66	0.50	20.0	0	88.3%	36	140	19.9	11.8%	30	
Surrogate: 1,2-Dichloroethane-d4	1.01	0.10	1.00	0	101%	89	114	1.01	0.8%	30	
Surrogate: Dibromofluoromethane	1.01	0.10	1.00	0	101%	88	113	1.02	0.2%	30	
Surrogate: Toluene-d8	1.00	0.10	1.00	0	100%	89	109	0.998	0.2%	30	

Sample ID: **LCS-23078** Batch ID: **R113169** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **3/28/2023 11:20:00 AM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230328B** SeqNo: **1626341**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,028	50	1,000	0	103%	74	125	0			

Sample ID: **LCSD-23078** Batch ID: **R113169** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **3/28/2023 11:50:00 AM** Prep Date: **N/A**
Client ID: Run ID: **ORGCMS2_230328B** SeqNo: **1626342**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,092	50	1,000	0	109%	74	125	1,030	6.1%	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Attachment 3

P. 1 of 1

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER: 2303390

Attention: Account Payable
Results & Invoice to: ap@lacoassociates.com
Address: 21 W 4th St.
Eureka, CA 95501
Phone: 707-443-5054
Copies of Report to: manhartc@lacoassociates.com
Christine Manhart
Sampler (Sign & Print): Angela Cook

TAT: ☑ STD (2-3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSH SAMPLES.

REPORTING REQUIREMENTS:
☐ State Forms
☑ Geotracker ☐ SWAMP ☐ Other EDD:
☐ Final Report PDF ☐ FAX By:

PROJECT INFORMATION
Project Number: 7170.05
Project Name: Tirsbeck Stormwater Compliance
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	PRESERVATIVE	CONTAINER	ANALYSIS: Oil & Grease	ANALYSIS: TSS	ANALYSIS: 8260 List 7 VOCs
	7170.05 - D#1	03/23/23	14:30	GW	b	7	✓	✓	✓
	7170.05 - D#2	03/23/23	14:30	GW	b	1	✓	✓	✓
						9			

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—40 ml VOA; 9—60 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other
PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

SAMPLE CONDITION/SPECIAL INSTRUCTIONS
2.2°C On Ice

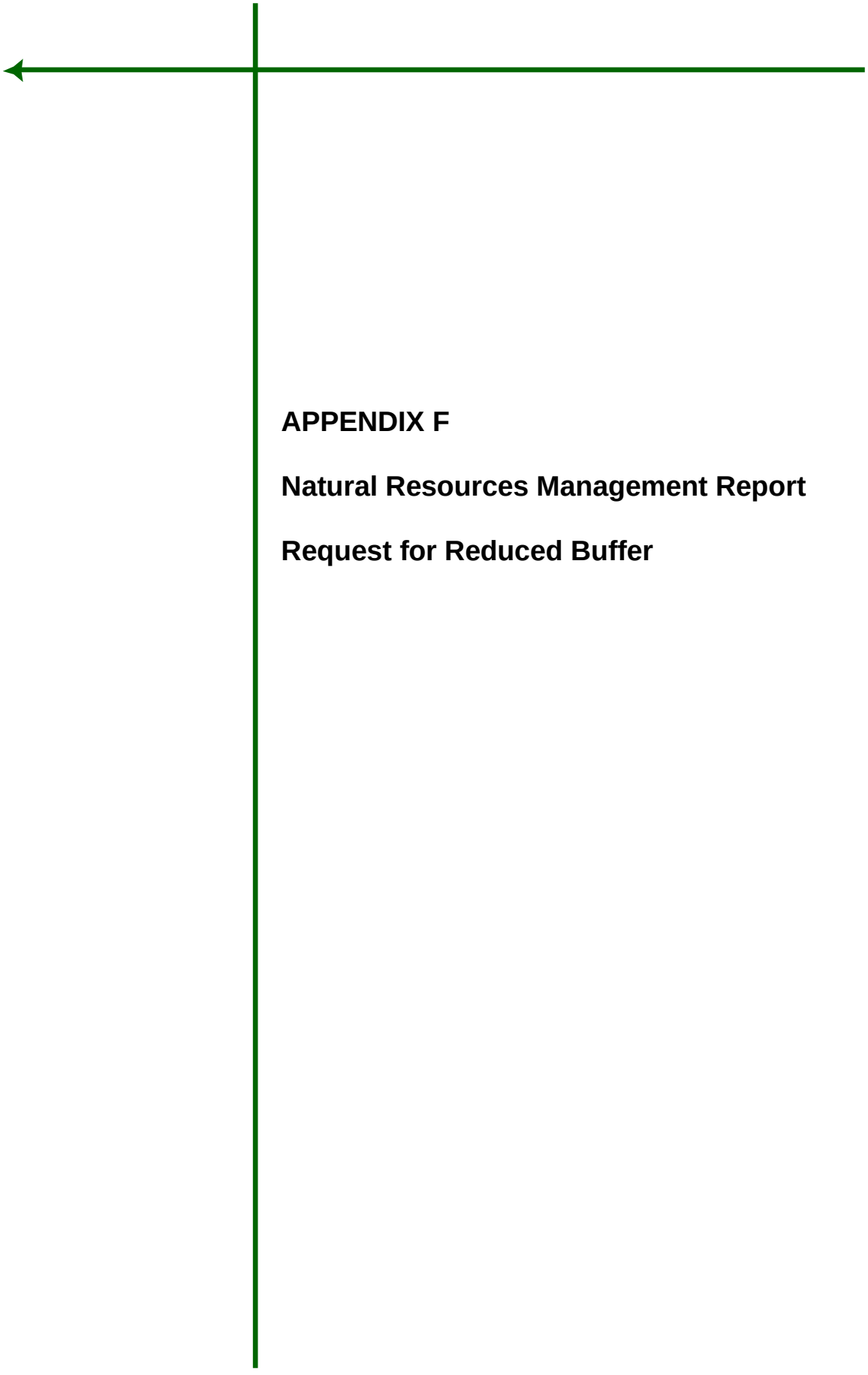
RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
Angela Cook	3/24/23 9:25	BAB 3/24/23	9:25

SAMPLE DISPOSAL
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Fed-Ex Hand

*MATRIX: DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; WW=Waste Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT



APPENDIX F

Natural Resources Management Report

Request for Reduced Buffer

Supplemental Application: Request for Reduced Buffer

Humboldt County APNs 003-182-10 and 003-191-04

Prepared by

Claire Brown

August 7, 2018

Natural Resources Management Corporation

1434 Third Street, Eureka, CA 95501

(707) 798-6386

NRM
NATURAL RESOURCES MANAGEMENT
CORPORATION

Table of Contents

Introduction

This document is intended to provide supplemental information regarding the Coastal Development Permit sought by a client concerning Humboldt County parcel APN 003-182-10. This industrially developed parcel is adjacent to undeveloped lot classified on U.S. Fish and Wildlife Survey National Wetland Inventory (NWI) maps as Palustrine Wetlands (PSS1C and PEM1C) (Appendix A, USFWS 2018). Under the City of Eureka's Local Coastal Program (LCP), environmentally sensitive habitat areas (ESHAs) must be protected. A buffer area sufficient to protect the resources of the habitat area must be established between new developments and the ESHA. The minimum width of this buffer is 100 feet, but a reduced buffer distance may appropriate if existing developments are closer than this minimum width and the habitat resources present may be adequately protected by a smaller buffer. This document seeks to demonstrate a proposed reduced buffer width consistent with the LCP.

Location

The project area is located in Eureka, California, and is accessed from 2000 Broadway Street, near the intersection with W Hawthorne. The legal description of the site is T05N, R01W Sec 28 HB&M within the 7.5' USGS Eureka quadrangle. See Figure 1.

Background

Natural Resources Management (NRM) biologist Claire Brown conducted a site visit on July 20, 2018. During this site visit, a wetland delineation of the border area between APNs 003-182-10 and APN 003-191-04 was conducted (Aquatic Resources Delineation Report, available) and a visual assessment of the habitat on parcel APN 003-191-04 was made. This undeveloped area was found to be consistent with its definition under the NWI (Palustrine Wetland) based on a 1-parameter assessment (dominance of hydrophytes) and therefore should be considered an ESHA (Appendix A). However, this area is heavily utilized by the City of Eureka's homeless population and is impacted by proximity to development and industry. These impacts significantly compromise the habitat value of the area.

An additional 0.0008 acres of Potential Waters of the United States were identified on 003-182-10 (see Aquatic Resources Delineation Report, available). These Waters are highly degraded and heavily impacted by development and industrial land use.

Existing Buffer

The existing buffer between the ESHA and surrounding development is approximately 0 feet on the north, northeast, east and south sides of the ESHA (Figure 2). The adjacent lots to the north, northeast and east are developed as parking, auto-body repair and self-storage services. To the south (across W Hawthorne Street) is developed for light industrial use and parking.

Biological Description of ESHA

The ESHA is vegetated by mature broad leaved deciduous trees such as red alder, Hooker's willow (*Salix hookeriana*) red willow (*Salix laevigata*), and an herbaceous layer composed small fruited

bulrush (*Scirpus microcarpus*), creeping buttercup (*Ranunculus repens*), Italian rye (*Festuca perennis*), bird's foot trefoil (*Lotus corniculatus*), horsetail (*Equisetum arvense*), purple velvet grass (*Holcus lanatus*) and lady fern (*Athyrium filix-femina*). Himalayan blackberry (*Rubus armeniacus)* and English ivy (*Hedera Helix*) form a shrub/vine layer. These wetlands can be characterized as Seasonally Flooded Palustrine Wetlands (Cowardin et al. 1979). In these areas, surface water is present for extended periods during the growing season, but surface water is usually absent by the end of the growing season and is not present for a long enough duration to provide habitat for fish.

Proposed Reduced Buffer

The existing buffer between the ESHA and surrounding development is 0 feet. The infill development of APN 003-182-10 proposed by a client would not significantly alter land use within the existing development footprint adjacent to the ESHA. Current state regulations regarding on-site storm water infiltration would require the proposed development design to include vegetated infiltration features (such as bioswales) to manage storm water runoff. If such features are positioned adjacent to the ESHA, they would provide more than adequate mitigation for potential development impacts and could mitigate non-point source pollutants being carried into the ESHA via storm water runoff.

Hence, a 0-foot development buffer design that includes vegetated infiltration features (sufficient to satisfy state requirements) positioned adjacent to the ESHA is consistent with the habitat protection measures required by the LCP. The design of these features should include the use of native plant species.

Supplemental Information

Item 1. Biological Significance of Adjacent Lands

The current buffer between the ESHA and existing adjacent development is 0 feet (Figure 2). The portion of APN 003-182-10 adjacent to the ESHA is currently used as a parking lot and has been developed for this use by the placement of sand and gravel fill. The adjacent lots to the north of APN 003-182-10 are developed for parking, auto-body repair and self-storage services, with buffers of approximately 0 feet from the ESHA (Figure 2). To the south, across W Hawthorne Street is also developed for light industrial use. An NRM wildlife biologist reviewed of these land use types and determined that these areas provide little to no potential habitat value to animals or plants utilizing the ESHA and are not functionally related the ESHA.

Item 2. Sensitivity of Species to Disturbance

The portion of the ESHA dominated by woody vegetation has the potential to provide nesting, foraging and resting habitat for resident or migratory birds, as current adjacent land use (light industrial/parking) would not necessarily inhibit this use. However, much of the ESHA is heavily utilized by Eureka's homeless population, creating a level of disturbance that is likely inconsistent with use for nesting. However, the ESHA is likely to be used by birds as foraging and resting habitat. Infill development of the adjacent area for parking, self-storage, retail , or other proposed service commercial uses would not inhibit this habitat value or present additional impacts, as development

of this type would represent no change in land use, additional pets, or significant change in noise levels.

Some portions of the ESHA may retain surface water for a long enough period of the year to support breeding populations of native amphibians such as Pacific Tree Frogs. However, the existing level of industrial runoff and human refuse entering the ESHA is likely not conducive to healthy breeding populations. Infill development of the adjacent area that includes vegetated infiltration features would not impact this potential habitat value.

Item 3. Susceptibility of Parcel to Erosion

The parking area on APN 003-182-10 slopes at approximately 1 percent towards the western parcel boundary and is overall between 1 and 2 feet higher in elevation than the adjacent undeveloped lot (APN 003-319104), apparently due to the placement of fill. However, an approximately 20-foot-long linear depression (ditch) extends east to west across the parking area, draining into the adjacent lot to the west. An infill development design that includes vegetated infiltration features adequate to infiltrate the state-required portion of storm water produced on site would mitigate any runoff and potential erosion issues to a condition better than existing.

Item 4. Use of Natural Topographic Features to Locate Development

No significant topographic features lie between the proposed infill development and the ESHA

Item 5. Use of Existing Cultural Features to Locate Buffer Zones

Existing parking lot development is currently 0 feet from the ESHA (Figure 2).

Item 6. Lot Configuration and Location of Existing Development

The existing buffer between the ESHA and surrounding development is 0 feet on the north, northeast, east and south sides of the ESHA (Figure 2). The adjacent lots to the north, northeast and east are developed as auto-body repair and self-storage services. To the south (across W Hawthorne Street) is developed for light industrial use and parking. Hence, a 0-foot buffer would be consistent with the location of existing development. An infill development design that includes vegetated infiltration features positioned adjacent to the ESHA would provide additional protection and improve conditions from current. The vegetated infiltration features design should utilize native plant species.

Item 7. Type and Scale of Development Proposed

The proposed infill development for parking, warehouse , retail or other proposed service commercial uses would represent no change in land use, additional pets, or significant change in noise levels in the area adjacent to the ESHA. The proposed development would therefore not present significant additional impacts to the ESHA.

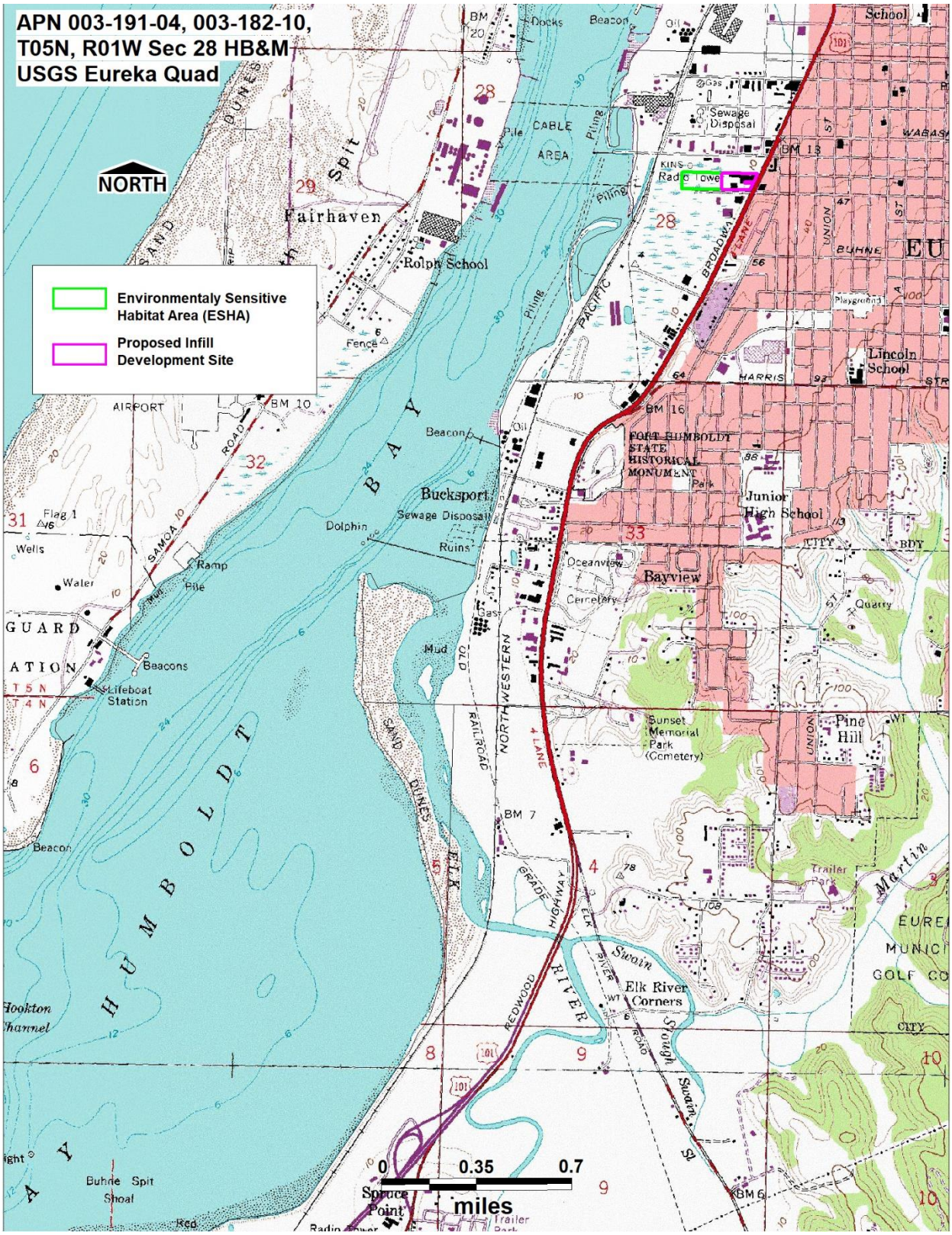


Figure 1. Project Location Map

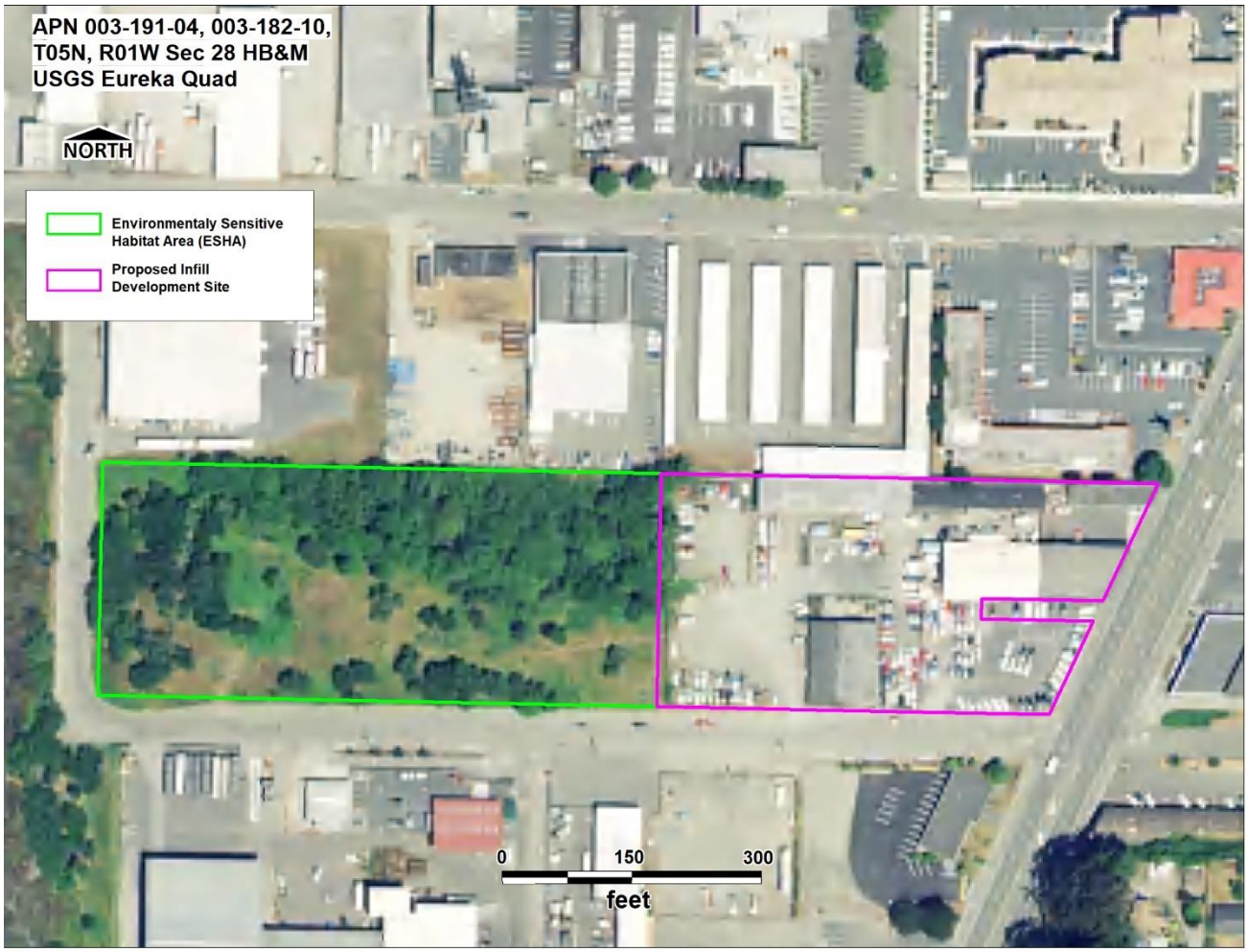


Figure 2. ESHA and Adjacent Site of Proposed Infill Development

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Appendix A: U.S Fish and Wildlife Service National Wetland Inventory (NWI) Map

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands

July 20, 2018

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

APPENDIX G

SOIL AND GROUNDWATER MANAGEMENT PLAN (SGMP)

WEST ASSOCIATES
ENVIRONMENTAL ENGINEERS, INC.

SOIL AND GROUNDWATER MANAGEMENT PLAN

FRED DEO PROPERTY
LEAKING UNDERGROUND TANK SITE
2000-2018 BROADWAY
EUREKA, CA

Submitted to:

REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION
Santa Rosa

Prepared for:

ALAN TIRSBECK
PROPERTY OWNER
Eureka

***Prepared by*:**

West & Associates Environmental Engineers, Inc.
Vacaville

August 2023

WEST ASSOCIATES

ACKNOWLEDGMENTS

This Soil and Groundwater Management Plan was prepared under authorization from our client, Mr. Alan Tirsbeck, and is intended for his exclusive use.

Environmental compliance activities at the Fred Deo leaking underground tank site are under direction of the North Coast Regional Water Quality Control Board located in Santa Rosa. The case has been assigned No. 1THU171.

During this project we have relied on technical reports describing environmental conditions at the Fred Deo site prepared by LACO Associates and SHN Engineers.

The Fred Deo leaking underground tank site has been assigned GeoTracker Global ID No. T0602300136.

This project was completed by West & Associates Environmental Engineers, Inc., located at 112 Pepperell Court, Vacaville, California 95688. The principal author is Mr. Brian W. West PE (RCE No. 32319, expires 12/31/25).

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APPENDICES

WEST ASSOCIATES

1.0 INTRODUCTION

The Fred Deo leaking underground tank site (the Site) is an active motor vehicle sale, towing and repair facility in Eureka, CA. In addition, one of the buildings at the Site houses the Anglin Second Hand Store. Historical underground fuel tank leakage has impacted both soil and groundwater at the site.

The regional location of the Site is illustrated in *Figure 1*. The Site layout is depicted in *Figure 2.* All figures appear in *Appendix A*.

Active remediation has successfully removed a large percentage of both soil and groundwater contamination at the Site. A high vacuum dual phase extraction (HVDPE) system operated at the Site from June through August 2016, removing more than 1,000 pounds of contaminant mass from the subsurface environment. Additional remediation, in the form of soil vapor extraction and air sparging, was conducted periodically from May 2018 to February 2022. This program effectively removed gasoline constituent compounds from soil and groundwater underlying the Site.

As a result of the successful active remediation program, the RWQCB case at this Site (#1THU171) has been closed. Subsequent to issuing the No Further Action Letter for this case, RWQCB requested submittal of the following:

> "A Soil and Groundwater Management Plan is required to address residual contamination should future development or subsurface work on the property occur. Please include provisions regarding the potential for a water supply well on the property."

This technical document has been prepared in response to the RWQCB request.

1.1 Summarized Background

Over the years the Site has been occupied by a variety of commercial/industrial users. Of particular environmental interest is a building fronting Hawthorne Street formerly occupied by the Humboldt Paint Factory. Product leakage from one or more of the former underground gasoline tanks just north of this building resulted in significant groundwater contamination.

In 2003 the Site was acquired by the current owner, Mr. Tirsbeck. The Site was previously owned by Mr. Fred C. Deo. Mr. Tirsbeck operates a used car lot, Eureka Auto Wholesalers, out of the front of the property and leases the rest to various tenants.

Three underground fuel storage tanks were removed from the property in 1989. There currently is no underground fuel storage at the Site. However, historic gasoline and diesel fuel leakage has contaminated soil and groundwater.

Past site assessment activities completed to evaluate the extent of soil and groundwater contamination included collecting soil samples from more than 50 locations and installing 15 groundwater monitoring wells.

The initial remedial investigation report prepared by LACO Associates in November 1990 established that the main area impacted by petroleum compounds released from underground fuel tanks at the Site was underneath the Humboldt Paint Factory (HPF) building.

A work plan to perform HVDPE pilot testing was submitted to HCDEH and approved in April 2010. Two additional wells (MW-14 and MW-15) were installed inside the HPF building in 2011. These 4-inch wells were intended to serve as extraction wells for this HVDPE pilot testing and potential remediation program.

No activities were performed at the HPF site for several years. Groundwater monitoring completed in October 2015 demonstrated that significant contamination remained underneath the HPF building, with the sample from MW-13 containing 33,000 µg/L TPH-g and 2,000 µg/L benzene. HCDEH issued directive letters to Mr. Alan Tirsbeck (owner of the Site) in December 2015 and January 2016, requiring that a pilot test be performed using the wells inside the HPF building.

The 120-hour HVDPE pilot test at HPF was performed during February 2016. Field measurements and laboratory data collected during this pilot test demonstrated that the VOC mass extraction rate was initially close to 40 pounds per day and remained above 14 pounds per day for the duration of the test. Therefore, a full-scale remediation program was warranted to meet the requirements of the HCDEH directive letter.

The HVDPE remediation program at HPF was performed from June through August 2016 in conformance with the HCDEH directive letter dated May 12, 2016. VOC extraction rates remained well above the established performance threshold of 10 pounds per day until the end of the program. The remediation system operated a total of 1,101 hours and removed an estimated 1,063 pounds of contaminant mass from the subsurface environment.

No significant rebound in VOC extraction rate was observed when the system was restarted after being turned off for two weeks. HCDEH placed the case in verification monitoring and requested that at least one round one groundwater monitoring be performed to determine the impact of contaminant mass removal on groundwater concentrations in the source area and downgradient wells. Groundwater concentrations in most of the wells were acceptable, but the sample from MW-13 still had fairly high concentrations of TPH-g and benzene.

In January 2018 regulatory oversight of this case transitioned from HCDEH to the Regional Water Quality Control Board, North Coast Region (RWQCB). A directive letter issued by the RWQCB in April 2018 specified that additional groundwater monitoring be performed and a soil vapor survey work plan be submitted to address remaining impediments to closure under the Low Threat Closure Policy (LTCP). Based on the concentrations of TPH-g and benzene reported in well MW-13, the RWQCB requested that additional remediation be performed to address residual contamination underneath this portion of the HPF building.

During the first quarter of 2018, a remedial system based on air sparging of groundwater coupled with dual phase extraction was installed inside the HPF building. After some delay arranging for PG&E electrical service, the remediation system was started in late May 2018.

The HPF remedial system operated effectively in 2018 and 2019. The system was expanded to the western annex portion of the HPF building in November 2019. By December 2019 remedial goals were achieved in the main warehouse portion of the Site and remedial activities there were discontinued. Active remediation continued in the western annex portion of the Site until February 28, 2020 when the remedial system was intentionally shut down to evaluate post-remediation groundwater concentrations. These results were favorable, so active remediation was discontinued at that time.

Soil vapor screening was performed at the HPF site In November 2020 to determine whether the dual phase extraction remediation program had effectively reduced concentrations of volatile organic compounds (VOCs) in the vadose zone to levels that were supportive of case closure. In this screening program soil vapor samples were collected from five dual phase extraction wells installed in 2019 and the three monitoring wells previously installed inside the HPF building.

The other purpose of this screening program was to see if the selected wells, which were designed as monitoring and extraction wells, could be configured to function as vapor sampling wells. If so, no dedicated soil vapor wells would need to be installed and the project could be completed in a more cost-effective manner. The soil vapor screening results were favorable, so it was concluded that additional dual phase extraction would not likely be required to achieve case closure and that the existing wells could be used to perform the soil vapor survey (SVS) at this Site.

Based on the success of the soil vapor screening program, a formal SVS was performed at the Site using the same eight monitoring and remediation wells that were sampled during the screening program. In June 2021 soil vapor samples were collected from the eight wells in accordance with the soil vapor sampling work plan addendum issued to and approved by the RWQCB in May 2021. Leak detection was accomplished using helium as a tracer gas to ensure that the wells were properly constructed and the sample train components did not leak. Vapor samples were collected after the well and sample train integrity were confirmed using the helium shroud method as described in Appendix C of the Advisory for Active Soil Gas Investigations (July 2015).

The concentrations of benzene, ethylbenzene and naphthalene reported in shallow soil vapor samples collected from these locations within the footprint of the former HPF building were all significantly less than the thresholds established in the LTCP for indoor air exposure at both commercial and residential sites and the current Tier 1 Environmental Screening Levels (ESLs).
.
These sample results were generally lower than those reported during the soil vapor screening program conducted in November 2020. There are two primary reasons for this decline in vapor concentrations. The HPF building had previously been leased to a tenant for vehicle and equipment storage. The property owner (and RP) terminated this lease and had the tenant's equipment removed from the building in between the two sampling events. The owner then cut off extraction well piping at grade, leaving the wellheads exposed to the atmosphere. This accelerated the volatilization of soil vapors underneath the building slab by allowing the wells to vent directly to the atmosphere. This venting process, which occurred for several months between sampling events, resulted in the removal of residual vadose zone contamination from underneath the HPF building.

The other purpose of this screening program was to see if the selected wells, which were designed as monitoring and extraction wells, could be configured to function as vapor sampling wells. If so, no dedicated soil vapor wells would need to be installed and the project could be completed in a more cost-effective manner. The soil vapor screening results were favorable, so it was concluded that additional dual phase extraction would not likely be required to achieve case closure and that the existing wells could be used to perform the soil vapor survey (SVS) at this Site.

Based on the success of the soil vapor screening program, a formal SVS was performed at the Site using the same eight monitoring and remediation wells that were sampled during the screening program. In June 2021 soil vapor samples were collected from the eight wells in accordance with the soil vapor sampling work plan addendum issued to and approved by the RWQCB in May 2021. Leak detection was accomplished using helium as a tracer gas to ensure that the wells were properly constructed and the sample train components did not leak. Vapor samples were collected after the well and sample train integrity were confirmed using the helium shroud method as described in Appendix C of the Advisory for Active Soil Gas Investigations (July 2015).

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In November 2021 five vapor samples were collected from vapor pins installed located within the building footprint at the locations shown on *Figure 5*. These sample results were compared with the thresholds shown in Appendix 4, Scenario 4 of the LTCP and the Tier 1 ESLs to determine whether the concentrations of benzene, ethylbenzene, or naphthalene present an unacceptable risk of exposure, as described in the Petroleum Vapor Intrusion to Indoor Air section of the LTCP. At four of the five vapor pin locations soil vapor data met all applicable thresholds. At the fifth location, midway between extraction wells EW-12 and EW-13, the concentrations of TPH-g and a few VOCs were greater than the LTCP thresholds, indicating that a small area of shallow contamination remained. Additional soil vapor extraction was performed in this area and new soil vapor samples were collected in the vicinity. Results from these samples collected in February 2022 were well below the applicable LTCP thresholds, so the RWQCB agreed to move forward with case closure.

Any UST case requires public notification, involving the distribution of a Case Closure Summary to neighboring property owners and residents and allowing for a 60-day public comment period. No comments were received during this period, which ended November 1, 2022. Subsequently W&A obtained a permit from HCDEH to properly destroy all monitoring and remediation wells associated with this project. This was the last step required to be performed in order for the RWQCB to issue a No Further Action (NFA) Letter for Case #1THU171 in accordance with criteria presented in the Low Threat Closure Policy (LTCP). All work has been completed and the NFA Letter has been issued by the RWQCB. A copy of this letter is included in *Appendix C*.

In summary, extensive environmental investigation at the HPF site over many years largely defined the magnitude and extent of gasoline contamination in soil and groundwater. An extensive DPE/AS remediation project has been completed and groundwater concentrations have been reduced to levels that are acceptable for case closure under the LTCP. After no comments were received during the 60-day public comment period, all wells were properly destroyed. The NFA Letter for Case #1THU171 has been issued by the RWQCB and the case is considered closed.

First encountered groundwater under the Site can be very shallow, sometimes as shallow as 1 to 2 feet bgs. Consequently, worker contact with shallow groundwater is a real possibility during any excavation work.

There is no known presence of gasoline contamination in soil or groundwater beyond the Fred Deo property line. Therefore, this SGMP applies to activities occurring on the property, but not off-site.

1.2 Applicability

Petroleum hydrocarbon contamination remaining in soil and groundwater at the Site consists of TPH-gasoline, BTEX compounds (benzene, toluene, ethylbenzene, xylene) and TPH-diesel. The approximate lateral extent of residual soil and groundwater contamination is shown on *Figure 3*. Any soil excavated within this area should be managed as though it is potentially contaminated until air monitoring and/or soil sampling determine otherwise. Any groundwater extracted during construction activities within this area should be containerized and sampled to determine whether it contains actionable concentrations of these COCs and managed appropriately.

If impacted soil or groundwater is encountered while working at locations not identified in *Figure 3*, it is recommended that subsurface activities cease until the conditions are evaluated by qualified personnel who have completed the OSHA training and are experienced using appropriate air monitoring equipment. RWQCB representatives should be contacted to assess conditions and provide oversight for continued activities at the Site.

This SGMP must be followed by any party disturbing the subsurface at the Fred Deo site, whether by employees at the Site or outside contractors. This Plan should be provided to any contractors asked to submit bids for construction projects at the Site. The complete library of technical documents describing environmental conditions prevailing at the Site is accessible via the internet at https://geotracker.waterboards.ca.gov/. The Fred Deo Global ID is T0602300136.

The current property owner should provide a copy of this SGMP to any new Site owner. It is the owner's responsibility to provide a copy of this SGMP to all employees and contractors whose work and duties may reasonably be expected to result in contact with soil or groundwater contaminated with COCs. Similarly, contractors working at the Site should provide copies of this SMGP to each employee working on the property whose work may put them in contact with contaminated soil and/or groundwater.

1.3 Health & Safety Plan

Prior to starting any project disturbing soil or potentially coming into contact with groundwater, a written Health & Safety Plan should be prepared. The Plan should include a description of work activities to be conducted, a list of potential hazards, measures to minimize worker exposure and environmental impact as well as contingency measures in the event of an accident or other unforeseen event.

The Health & Safety Plan (HASP) should designate a responsible individual as the Site Safety Officer (SSO) and should be made available to workers for reference and revised as necessary during the project to remain applicable to current conditions.

The HASP should describe training requirements, personal protective equipment requirements, and the monitoring program that will be implemented to protect construction workers and the general public from exposure to residual COCs in the soil and/or groundwater. All workers should be required to read the HASP and acknowledge their understanding of its contents in writing.

All workers performing activities in areas known or suspected to be impacted by COCs should wear appropriate personal protective equipment (PPE) as specified in the HASP provided by their employer. If the PPE section of the HASP specifies that respiratory protection is or may be required, personnel working in the impacted areas should be trained in the proper use of these respirators. In addition, they should be given a respirator “fit” test and be medically certified to wear a respirator while working. Respirators should be maintained, inspected, stored and cleaned in accordance with standard NIOSH procedures.

Each HASP prepared for work at this Site should include information on the chemical properties of all known contaminants at the Site. Current information regarding the chemical properties of gasoline, benzene, toluene, ethylbenzene, and xylene is contained on the Material Safety Data Sheets (MSDS) that should be included in the HASP It is the property owner's responsibility to make sure this information is provided to all workers at the Site engaged in activities that may place them contact with these contaminants.

1.4 Notification

If contaminated soil or groundwater is encountered at the Site, notification should be made to the Regional Water Quality Control Board, North Coast Region. The Board is located at 5555 Skylane Boulevard, Suite A, Santa Rosa, California 95403.

2.0 MANAGEMENT OF POTENTIALLY CONTAMINATED SOIL

Contaminated soil could potentially be encountered in any excavation activity located on the impacted portion of the Site. *Figure 3* illustrates areas where contamination is presently known to be present. Both worker safety and environmental protection are concerns arising from the possibility of disturbing contaminated soil.

All excavated soil from the impacted areas or otherwise suspected to contain COCs should be isolated from the environment. Factors that may indicate COC contamination include gasoline odors, a visible sheen, or discoloration (generally green, gray or black) that is inconsistent with the appearance of native soil. Any soil that is planned to be transported off-site for disposal or reuse should be analyzed for COCs so that it can be managed in accordance with current regulations. This work should be performed with notification and approval from the RWQCB. Copies of the associated manifests and weight tickets should be provided to the RWQCB along with a project summary report describing the areas that were excavated and the soil sample analytical results.

2.1 Worker Safety

Prevailing occupational safety and health regulations limit the permissible contaminant exposure to workers. For the contaminants known to be present at the Site the prevailing contaminant thresholds in soil that pose an exposure risk for workers are as follows:

Benzene .....14 ppm
Ethyl Benzene.....314 ppm
Naphthalene .....219 ppm

At this time, it is not known or suspected that any of the compounds listed above are present at the Site above the allowable exposure threshold.

However, for any specific excavation project that may be contemplated at potentially contaminated portions of the Site, soil samples can be collected in advance to determine if objectionable contaminant concentrations will be encountered. Any person collecting soil samples must have Hazwoper training and be properly equipped for protection against potential exposure to contamination.

Soil and or groundwater samples collected to pre-clear an area for worker protection should be analyzed for gasoline compounds, specifically Total Petroleum Hydrocarbons in the gasoline range, benzene, toluene, ethylbenzene, xylenes and naphthalene. Oxygenated additives, such as MtBE, are insignificant contaminants at the Site and can be ignored.

In the absence of pre-testing to clear the work area, workers must be Hazwoper trained to recognize and protect themselves from contaminant exposure. When workers encounter soil contamination, for instance based on odors or soil discoloration, work activities must cease until the hazard can be evaluated. The project HASP will describe specific worker response to the discovery of contamination, which generally includes notifying the SSO or Project Manager and retreating to a safe area until the hazard is evaluated. The use of handheld VOC test instruments to measure VOCs is recommended.

If testing indicates the presence of contaminated soil above the thresholds listed above, personal protective equipment (PPE) can be used to reduce worker exposure to acceptable levels. The project SSO can specify the appropriate PPE for the work activities underway.

Alternatively, a trained hazmat crew can be contracted to remove the contaminated soil in advance of the construction project thus eliminating the possibility of worker exposure.

2.2 Environmental Protection

Contaminated soil excavated for any reason must be properly managed. Soil contaminated above the thresholds listed in Section 2.1 cannot be used as backfill. If stored on site, contaminated soil excavated during a construction project must be containerized or placed in a stockpile where it is protected from rain, wind erosion and human contact.

Proper disposal of contaminated soil must be completed in a timely manner. Proper disposal usually means transport to a permitted landfill. Each landfill has specific requirements for acceptance of contaminated material. Soil testing is almost always required.

The transport of contaminated material is regulated by State and Federal laws. Haulers are required to be licensed based on the type of contaminants and contaminant concentration in the waste. Identification of potential licensed haulers should be a part of the contingency planning for any construction project on the Fred Deo property.

3.0 GROUNDWATER

At the Site there is a possibility of encountering contaminated groundwater any time an excavation is made, no matter how shallow. Proper groundwater management practices must be followed to prevent human contact or environmental impact associated with gasoline compounds.

3.1 Worker Safety

Workers who may come into contact with contaminated groundwater must be properly trained in the equipment and methods for personal protection. It may be necessary to provide air monitoring to ensure that workers are not exposed to objectionable concentrations of airborne volatile organic compounds (VOCs). The permissible airborne VOC concentration for TPH-g is 300 ppm. At concentrations above 300 ppm workers must be fitted with appropriate respirators or work activities must be suspended.

3.2 Environmental Protection

Any groundwater encountered during excavation activities on the Fred Deo property should be treated as contaminated until testing proves otherwise. If it is necessary to discharge groundwater it must be treated to remove gasoline compounds. A NPDES permit from the North Coast Region, Regional Water Quality Control Board, is required for groundwater treatment and discharge. Any contaminated groundwater pumped from an excavation must be properly managed; contaminated groundwater cannot be returned to the excavation.

Alternatively, contaminated groundwater can be transported to a licensed treatment facility for disposal. If stored on site, contaminated groundwater can be temporarily stored in an above ground tank or in 55-gallon drums. All containers used to store contaminated groundwater must be properly labeled.

3.3 No New Groundwater Wells

Groundwater underlying the Site is very shallow, periodically brackish, and potentially contaminated with gasoline compounds. It is unsuitable to use this water for domestic or irrigation purposes. Therefore, no new groundwater wells shall be installed at the Site.

4.0 SUMMARY

Active remediation completed at the Fred Deo site has resulted in the RWQCB issuing a No Further Action letter (i.e. case closure letter) for Case #1THU171. Although the remedial program was effective in removing the vast majority of contaminant mass, low concentrations of gasoline compounds remain in both soil and groundwater. The small residual contaminant mass remaining at the Site poses no threat to human health or the environment if undisturbed. Eventually, all remaining contamination will degrade to non-detectable concentrations. Any excavation activities undertaken while soil and/or groundwater contamination is still present at the Site should be conducted in accordance with this Soil and Groundwater Management Plan to avoid worker exposure or environmental impact.

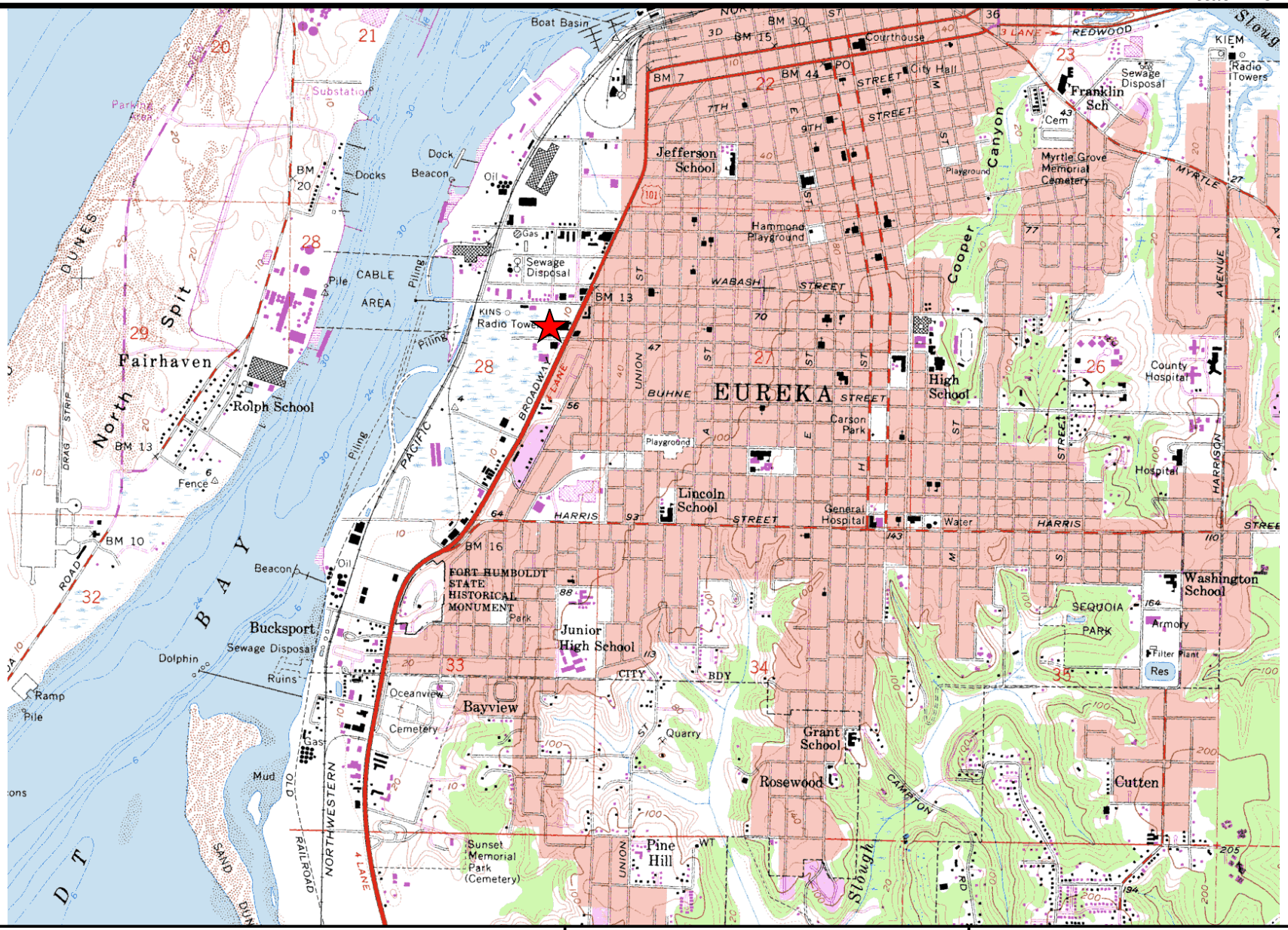
5.0 ELECTRONIC DATA SUBMITTAL COMPLIANCE

State Leaking Underground Tank regulations require responsible parties to make electronic data submittals to the State Water Resources Control Board GeoTracker database. The Fred Deo site is required to comply with these regulations. The Fred Deo GeoTracker domain has been designated with Global ID #T0602300136. Confirmation of the electronic data upload of this Plan is shown in *Appendix B*. Data from the Fred Deo Leaking Underground Tank site can be accessed through https://geotracker.waterboards.ca.gov/.

APPENDIX A

Figures

(OF APPENDIX G - SGMP)



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS
865 Cotting Lane, Ste F, Vacaville, CA 95688

Project Name: Humboldt Paint Factory	Date: April 2016
Location: 936 Hawthorne Street, Eureka	
Drawing By: DLG	Scale: NS

Legend

★ Site Location

FIGURE 1
Regional Location

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS
865 Cotting Lane, Ste F, Vacaville, CA 95688

Project Name: Humboldt Paint Factory	Date: April 2016
Location: 936 West Hawthorne Street, Eureka	
Drawing By: DLG	Scale: NS

Legend

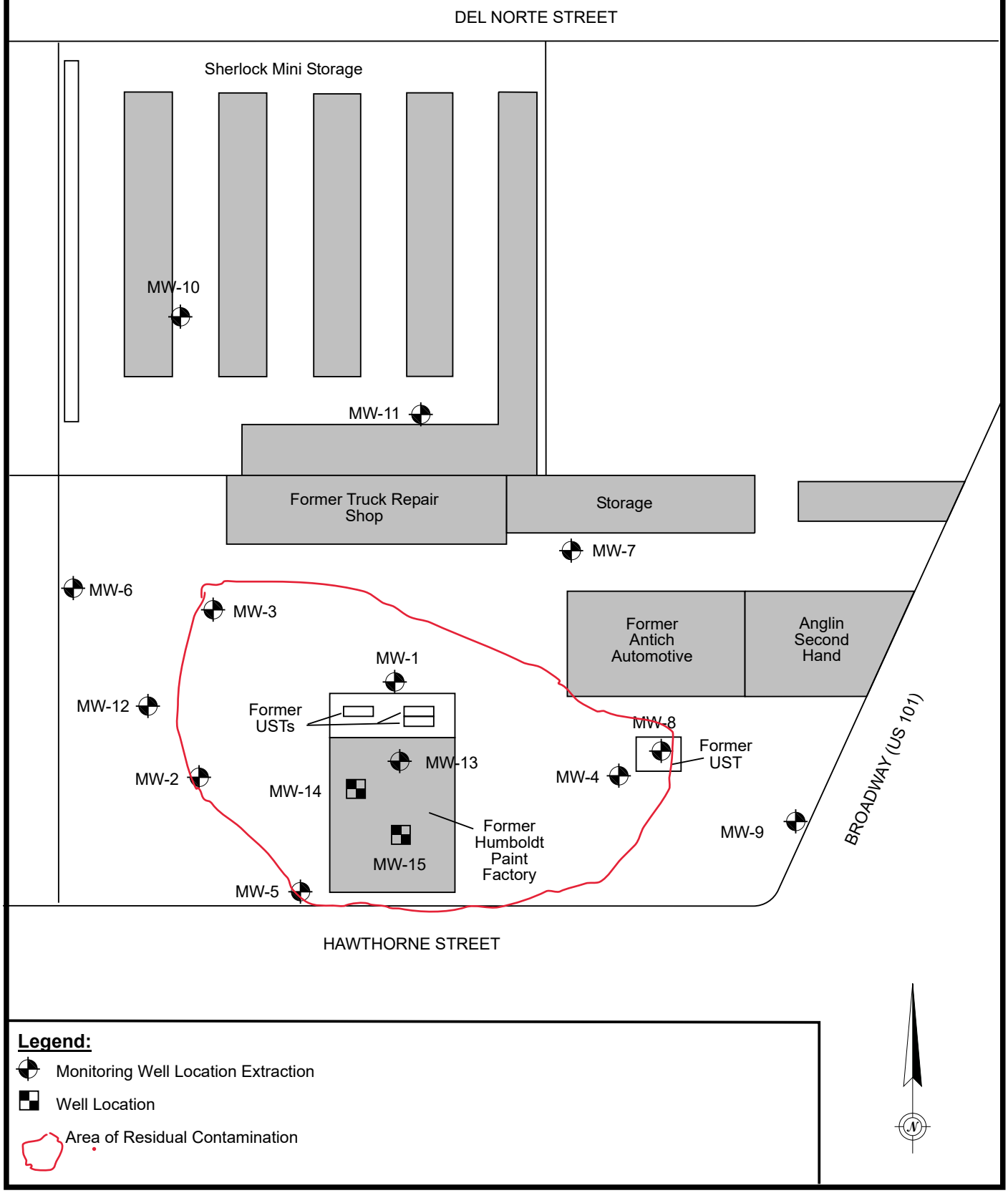
Site Location

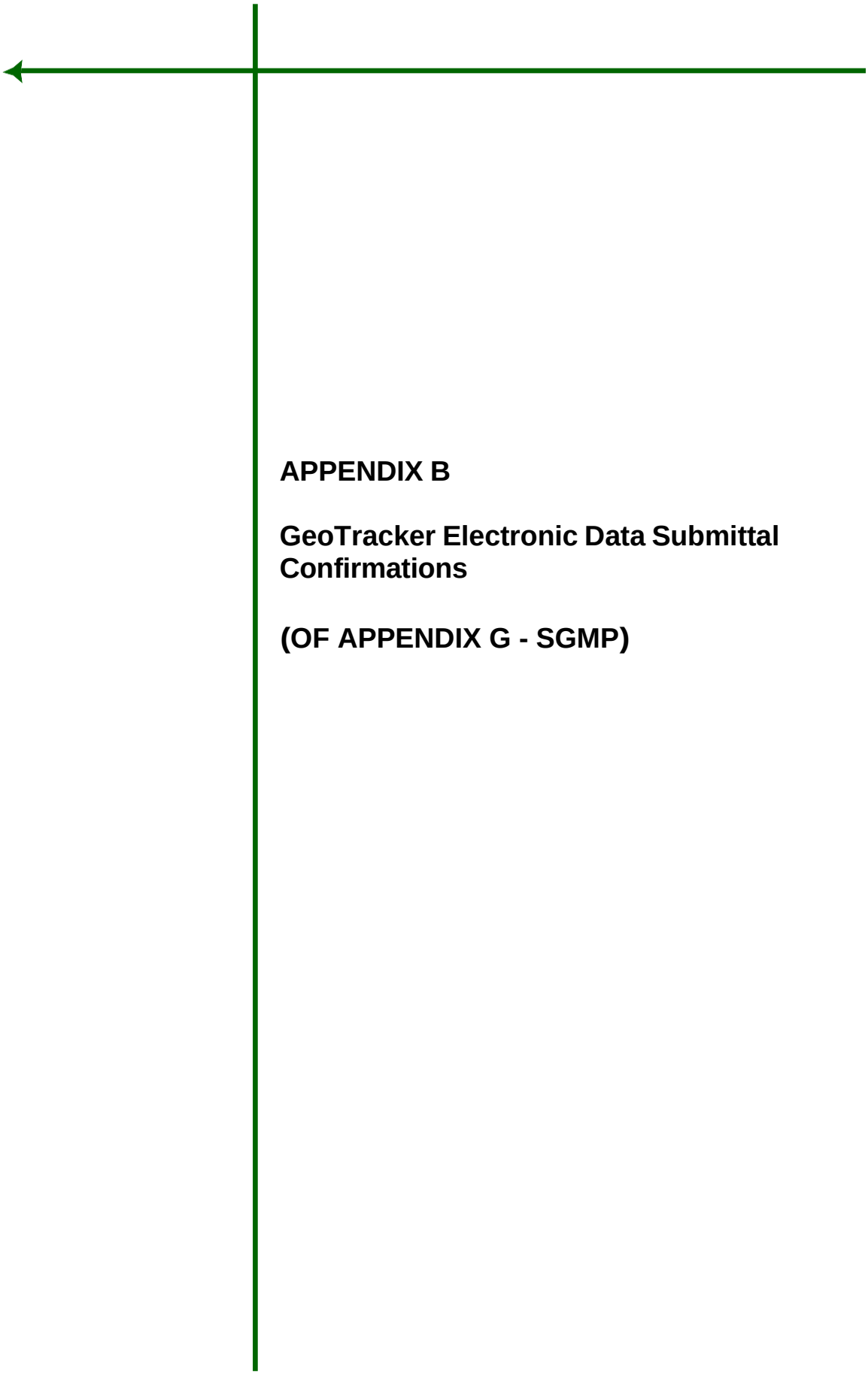
FIGURE 2
Aerial Map

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS Attachment 3

865 Cotting Lane, Ste F, Vacaville, CA 95688

Project Name: Former Humboldt Paint Factory	**Date:** August 2023	**FIGURE 3** Site Plan - Area of Residual Contamination
Location: Broadway & W. Hawthorne, Eureka	**Scale:** NA	
Drawing By: DLG		





APPENDIX B

GeoTracker Electronic Data Submittal Confirmations

(OF APPENDIX G - SGMP)