

Appendix A

CalEEMod Assumptions and Output Files

EBRPD Anthony Chabot Sewer Improvements Construction Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	EBRPD Anthony Chabot Sewer Improvements Construction
Construction Start Date	4/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	42.6
Location	37.72732788755455, -122.08502560874142
County	Alameda
City	Unincorporated
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1415
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Construction	1.83	Mile	2.22	0.00	0.00	—	—	—
General Light Industry	2.50	1000sqft	0.06	2,500	0.00	0.00	—	Pump Stations

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.85	9.11	37.9	45.6	0.12	1.41	5.62	6.99	1.29	2.72	3.99	—	12,860	12,860	0.51	0.14	2.35	12,918
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.66	1.41	10.3	11.6	0.03	0.38	0.43	0.81	0.35	0.13	0.48	—	3,333	3,333	0.13	0.04	0.25	3,348
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.30	0.26	1.88	2.12	0.01	0.07	0.08	0.15	0.06	0.02	0.09	—	552	552	0.02	0.01	0.04	554

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	9.85	9.11	37.9	45.6	0.12	1.41	5.62	6.99	1.29	2.72	3.99	—	12,860	12,860	0.51	0.14	2.35	12,918
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	1.66	1.41	10.3	11.6	0.03	0.38	0.43	0.81	0.35	0.13	0.48	—	3,333	3,333	0.13	0.04	0.25	3,348
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.30	0.26	1.88	2.12	0.01	0.07	0.08	0.15	0.06	0.02	0.09	—	552	552	0.02	0.01	0.04	554

3. Construction Emissions Details

3.1. Linear - Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.17	0.99	6.13	7.85	0.03	0.21	—	0.21	0.20	—	0.20	—	2,957	2,957	0.12	0.02	—	2,967
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.37	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	178	178	0.01	< 0.005	—	179

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Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.31	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	74.8	74.8	< 0.005	< 0.005	0.28	75.9
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45.8	45.8	< 0.005	0.01	0.12	48.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.21	4.21	< 0.005	< 0.005	0.01	4.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	< 0.005	2.89
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.70	0.70	< 0.005	< 0.005	< 0.005	0.71

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear - Abandon Existing Line (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	2.26	1.90	14.5	14.9	0.04	0.58	—	0.58	0.54	—	0.54	—	4,336	4,336	0.18	0.04	—	4,351
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.14	0.11	0.87	0.90	< 0.005	0.04	—	0.04	0.03	—	0.03	—	261	261	0.01	< 0.005	—	262
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.3	43.3	< 0.005	< 0.005	—	43.4
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.8	99.8	< 0.005	< 0.005	0.37	101
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	68.7	68.7	< 0.005	0.01	0.18	72.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.61	5.61	< 0.005	< 0.005	0.01	5.69
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.14	4.14	< 0.005	< 0.005	< 0.005	4.33
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.72
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Linear - Excavation/Installation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	2.60	2.18	16.7	16.9	0.06	0.63	—	0.63	0.58	—	0.58	—	5,964	5,964	0.24	0.05	—	5,984
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.78	0.65	5.00	5.06	0.02	0.19	—	0.19	0.17	—	0.17	—	1,781	1,781	0.07	0.01	—	1,787
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.14	0.12	0.91	0.92	< 0.005	0.03	—	0.03	0.03	—	0.03	—	295	295	0.01	< 0.005	—	296

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.73	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	175	175	< 0.005	0.01	0.64	177
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	68.7	68.7	< 0.005	0.01	0.18	72.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	48.7	48.7	< 0.005	< 0.005	0.08	49.4
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.5	20.5	< 0.005	< 0.005	0.02	21.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.06	8.06	< 0.005	< 0.005	0.01	8.17
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.40	3.40	< 0.005	< 0.005	< 0.005	3.55
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Linear - Restore Disturbed Areas (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.59	6.88	0.01	0.19	—	0.19	0.18	—	0.18	—	1,046	1,046	0.04	0.01	—	1,049
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.28	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.0	63.0	< 0.005	< 0.005	—	63.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.4	10.4	< 0.005	< 0.005	—	10.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.8	99.8	< 0.005	< 0.005	0.37	101
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45.8	45.8	< 0.005	0.01	0.12	48.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.61	5.61	< 0.005	< 0.005	0.01	5.69
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	< 0.005	2.89
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Linear - Testing (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.17	0.99	6.13	7.85	0.03	0.21	—	0.21	0.20	—	0.20	—	2,957	2,957	0.12	0.02	—	2,967
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipm	0.07	0.06	0.37	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	178	178	0.01	< 0.005	—	179
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.31	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	74.8	74.8	< 0.005	< 0.005	0.28	75.9
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45.8	45.8	< 0.005	0.01	0.12	48.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.21	4.21	< 0.005	< 0.005	0.01	4.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	< 0.005	2.89
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.70	0.70	< 0.005	< 0.005	< 0.005	0.71
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.66	1.39	12.9	14.6	0.02	0.51	—	0.51	0.47	—	0.47	—	2,494	2,494	0.10	0.02	—	2,503
Demolition	—	—	—	—	—	—	0.25	0.25	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	68.3	68.3	< 0.005	< 0.005	—	68.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.52	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	125	125	< 0.005	< 0.005	0.46	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.24	0.10	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	200	200	0.01	0.03	0.43	210
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.19	3.19	< 0.005	< 0.005	0.01	3.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.47	5.47	< 0.005	< 0.005	0.01	5.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	0.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.95

3.13. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.34	1.13	9.84	10.8	0.03	0.42	—	0.42	0.39	—	0.39	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.44	7.44	< 0.005	< 0.005	—	7.47
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.23	1.23	< 0.005	< 0.005	—	1.24
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.31	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	74.8	74.8	< 0.005	< 0.005	0.28	75.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.19	0.19	< 0.005	< 0.005	< 0.005	0.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.70	1.42	12.9	14.0	0.02	0.58	—	0.58	0.53	—	0.53	—	2,455	2,455	0.10	0.02	—	2,463

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Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.5	13.5	< 0.005	< 0.005	—	13.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.23	2.23	< 0.005	< 0.005	—	2.23
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.8	99.8	< 0.005	< 0.005	0.37	101

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.51	0.51	< 0.005	< 0.005	< 0.005	0.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	1.41	1.18	10.1	11.8	0.02	0.36	—	0.36	0.33	—	0.33	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	2.77	3.22	0.01	0.10	—	0.10	0.09	—	0.09	—	603	603	0.02	< 0.005	—	605
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.51	0.59	< 0.005	0.02	—	0.02	0.02	—	0.02	—	99.8	99.8	< 0.005	< 0.005	—	100
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.66	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	160	160	< 0.005	0.01	0.59	162
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.9	22.9	< 0.005	< 0.005	0.06	24.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.8	40.8	< 0.005	< 0.005	0.07	41.4
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.27	6.27	< 0.005	< 0.005	0.01	6.56
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.76	6.76	< 0.005	< 0.005	0.01	6.85
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.09
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	0.67	5.88	8.19	0.01	0.25	—	0.25	0.23	—	0.23	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.0	17.0	< 0.005	< 0.005	—	17.1
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.82	2.82	< 0.005	< 0.005	—	2.83
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.62	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	150	150	< 0.005	0.01	0.55	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.91	1.91	< 0.005	< 0.005	< 0.005	1.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.32	0.32	< 0.005	< 0.005	< 0.005	0.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134

Architectural	5.22	5.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.83	1.83	< 0.005	< 0.005	—	1.84
Architectural Coatings	0.07	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.30	0.30	< 0.005	< 0.005	—	0.30
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.9	39.9	< 0.005	< 0.005	0.15	40.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.51	0.51	< 0.005	< 0.005	< 0.005	0.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear - Site Preparation	Linear, Grubbing & Land Clearing	4/1/2026	4/30/2026	5.00	22.0	—

Linear - Abandon Existing Line	Linear, Grading & Excavation	4/1/2026	4/30/2026	5.00	22.0	—
Linear - Excavation/Installation	Linear, Drainage, Utilities, & Sub-Grade	5/1/2026	9/30/2026	5.00	109	—
Linear - Restore Disturbed Areas	Linear, Paving	9/1/2026	9/30/2026	5.00	22.0	—
Linear - Testing	Linear, Trenching	9/1/2026	9/30/2026	5.00	22.0	—
Demolition	Demolition	4/1/2026	4/14/2026	5.00	10.0	—
Site Preparation	Site Preparation	4/15/2026	4/15/2026	5.00	1.00	—
Grading	Grading	4/16/2026	4/17/2026	5.00	2.00	—
Building Construction	Building Construction	4/18/2026	9/4/2026	5.00	100	—
Paving	Paving	9/5/2026	9/11/2026	5.00	5.00	—
Architectural Coating	Architectural Coating	9/12/2026	9/18/2026	5.00	5.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear - Site Preparation	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Linear - Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Linear - Abandon Existing Line	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Linear - Abandon Existing Line	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Linear - Abandon Existing Line	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Linear - Excavation/Installation	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
Linear - Excavation/Installation	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37

Linear - Excavation/Installation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Linear - Excavation/Installation	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Linear - Excavation/Installation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Linear - Restore Disturbed Areas	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Linear - Restore Disturbed Areas	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear - Restore Disturbed Areas	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear - Restore Disturbed Areas	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Linear - Testing	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Linear - Testing	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Demolition	Tractors/Loaders/Back hoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Back	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	13.8	LDA,LDT1,LDT2
Demolition	Vendor	—	7.30	HHDT,MHDT
Demolition	Hauling	2.90	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	13.8	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.30	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	13.8	LDA,LDT1,LDT2
Grading	Vendor	—	7.30	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT

Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	16.0	13.8	LDA,LDT1,LDT2
Building Construction	Vendor	1.00	7.30	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	13.8	LDA,LDT1,LDT2
Paving	Vendor	—	7.30	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Linear - Site Preparation	—	—	—	—
Linear - Site Preparation	Worker	7.50	13.8	LDA,LDT1,LDT2
Linear - Site Preparation	Vendor	2.00	7.30	HHDT,MHDT
Linear - Site Preparation	Hauling	0.00	20.0	HHDT
Linear - Site Preparation	Onsite truck	—	—	HHDT
Linear - Abandon Existing Line	—	—	—	—
Linear - Abandon Existing Line	Worker	10.0	13.8	LDA,LDT1,LDT2
Linear - Abandon Existing Line	Vendor	3.00	7.30	HHDT,MHDT
Linear - Abandon Existing Line	Hauling	0.00	20.0	HHDT
Linear - Abandon Existing Line	Onsite truck	—	—	HHDT
Linear - Excavation/Installation	—	—	—	—
Linear - Excavation/Installation	Worker	17.5	13.8	LDA,LDT1,LDT2
Linear - Excavation/Installation	Vendor	3.00	7.30	HHDT,MHDT
Linear - Excavation/Installation	Hauling	0.00	20.0	HHDT
Linear - Excavation/Installation	Onsite truck	—	—	HHDT
Linear - Testing	—	—	—	—
Linear - Testing	Worker	7.50	13.8	LDA,LDT1,LDT2

Linear - Testing	Vendor	2.00	7.30	HHDT,MHDT
Linear - Testing	Hauling	0.00	20.0	HHDT
Linear - Testing	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.00	13.8	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.30	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Linear - Restore Disturbed Areas	—	—	—	—
Linear - Restore Disturbed Areas	Worker	10.0	13.8	LDA,LDT1,LDT2
Linear - Restore Disturbed Areas	Vendor	2.00	7.30	HHDT,MHDT
Linear - Restore Disturbed Areas	Hauling	0.00	20.0	HHDT
Linear - Restore Disturbed Areas	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	3,750	1,250	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
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Linear - Site Preparation	—	—	2.22	0.00	—
Linear - Abandon Existing Line	—	—	2.22	0.00	—
Linear - Excavation/Installation	—	—	2.22	0.00	—
Demolition	0.00	0.00	0.00	2,500	—
Site Preparation	—	—	1.50	0.00	—
Grading	—	—	2.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	0.00	100%
General Light Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	13.9	annual days of extreme heat
Extreme Precipitation	7.05	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	23.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	1	1	3
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	11.6
AQ-PM	28.0
AQ-DPM	9.37
Drinking Water	4.21
Lead Risk Housing	50.6
Pesticides	19.3
Toxic Releases	46.7
Traffic	6.41
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	7.35
Impaired Water Bodies	66.7
Solid Waste	0.00
Sensitive Population	—
Asthma	70.6

Cardio-vascular	58.2
Low Birth Weights	0.80
Socioeconomic Factor Indicators	—
Education	32.2
Housing	21.1
Linguistic	35.3
Poverty	5.35
Unemployment	13.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	98.57564481
Employed	90.79943539
Median HI	88.50250225
Education	—
Bachelor's or higher	85.1790068
High school enrollment	100
Preschool enrollment	30.63005261
Transportation	—
Auto Access	81.29090209
Active commuting	87.79674066
Social	—
2-parent households	85.20467086
Voting	84.12678044
Neighborhood	—
Alcohol availability	92.96804825

Park access	33.8380598
Retail density	7.66072116
Supermarket access	19.47901963
Tree canopy	96.85615296
Housing	—
Homeownership	95.07250096
Housing habitability	89.96535352
Low-inc homeowner severe housing cost burden	85.62812781
Low-inc renter severe housing cost burden	96.86898499
Uncrowded housing	90.74810728
Health Outcomes	—
Insured adults	72.88592326
Arthritis	0.0
Asthma ER Admissions	89.1
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	36.9
Cognitively Disabled	22.1
Physically Disabled	24.6
Heart Attack ER Admissions	68.5
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6

Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	3.2
SLR Inundation Area	0.0
Children	83.0
Elderly	4.4
English Speaking	58.4
Foreign-born	42.8
Outdoor Workers	70.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	89.8
Traffic Density	9.6
Traffic Access	23.0
Other Indices	—
Hardship	4.9
Other Decision Support	—
2016 Voting	83.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	9.00
Healthy Places Index Score for Project Location (b)	95.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Updated construction schedule based on project specific details.
Construction: Off-Road Equipment	Updated linear construction equipment and number based on project details received 2/7/24.
Construction: Trips and VMT	Updated vendor trips based on project details received 2/7/24.
Construction: Paving	Assumed no paved area for linear construction.

Appendix B

Phase I Environmental Site Assessment and Limited Hazardous Building Materials Survey

Phase I Environmental Site Assessment
Anthony Chabot Sewer Line
Redwood Road
Castro Valley, California

MIG

2055 Junction Avenue, Suite 205 | San Jose, CA 94533

February 09, 2024 | Project No. 404752001



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness
Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Phase I Environmental Site Assessment

Anthony Chabot Sewer Line
Redwood Road
Castro Valley, California

Mr. Mike Campbell

MIG

2055 Junction Avenue, Suite 205 | San Jose, CA 94533

February 09, 2024 | Project No. 404752001



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EXECUTIVE SUMMARY

CONCLUSIONS

Ninyo & Moore has performed this Phase I ESA in conformance with the scope and limitations of ASTM E1527-21 of the Anthony Chabot Sewer Line property located at Redwood Road in Castro Valley, Alameda County, California (the Site). Based on the information compiled during the preparation of this report, this assessment has revealed no evidence of Recognized Environmental Conditions (RECs), Controlled RECs (CRECs), or Historical RECs (HRECs) in connection with the Site, and no RECs were identified on the adjoining properties.

FINDINGS AND OPINIONS

Ninyo & Moore performed a Phase I Environmental Site Assessment (ESA) on the Site located at Redwood Road, in Castro Valley, Alameda County, California. A Summary of Findings is provided below. It should be recognized that all report details are not included in this Summary, and the report should be read in its entirety.

Site Location and Use

The approximately 1.8-mile-long Site is located along Redwood Road. The Site consisted of vacant land, Redwood Canyon Golf Course, and Anthony Chabot Regional Park.

Historical Information

Review of historical resources, such as aerial photographs, topographic maps, fire insurance maps, and available City Directory listings, as well as through review of historical records, interviews, and research, revealed that the Site ran along vacant land, consisting of Anthony Chabot Regional Park, with Redwood Road adjacent to the southern portion of the Site since the late 1930s. By the late 1960s, a golf course was constructed adjacent to the central portion of the Site.

Adjoining properties have primarily been vacant land and a golf course from at least the 1960s until the present. No RECs were identified in the historical review.

Records Review

Review of an environmental database report obtained for this project indicated that the Site was not listed on any of the *Standard Federal, State, and Tribal Environmental Record sources*. The Site was listed on the *Additional Federal, State, Tribal and Local Environmental Record sources* regulatory databases researched by EDR, including the HWTS, HAZNET, FINDS, ECHO, and RCRA NonGen / NLR. Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed, as available. Based on the available EDR information and the nature of these specific databases listing types, no RECs were identified at the Site in connection with these database listings.

Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed, as available. Several off-Site facilities were located within the EDR search radius from the Site. None of the listed facilities are considered to be a REC to the Site based on several factors, including distance from the Site, location relative to the regional groundwater flow direction (e.g. hydraulically downgradient or crossgradient to the Site), database listing type, and/or affected media (soil only).

Based on the completion of the Vapor Encroachment Condition (VEC) screening matrix, it is presumed unlikely that a VEC currently exists beneath the Site.

Site Reconnaissance

On January 23, 2024, Mr. Luke Swickard with Ninyo & Moore conducted a Site reconnaissance of the property that included a visual inspection of the Site, and observations of adjoining properties. At the time of the reconnaissance, the Site consisted of the planned new Anthony Chabot Sewer Line pathway, part of the Anthony Chabot Sewer Line Replacement Project, which begins in Anthony Chabot Regional Park along Huck's Trail to the northeast of Lake Chabot and south of Marciel Road. The pathway runs south along Huck's Trail, consisting of soil and gravel, for approximately 260 feet, and then continues east across undeveloped ground for approximately 630 feet, then continues east along Honker Bay Trail for approximately 1,600 feet. Then the pathway continues southeast and east through the Redwood Canyon Golf Course parking lot and driveway, on asphalt pavement, for approximately 4,200 feet, then continues southeast along Proctor Trail, adjacent to Redwood Road, for approximately 2,800 feet, concluding with a discharge manhole just to the west of the intersection of Redwood Road and Camino Alta Mira. The pathway is approximately 1.8-miles in length. Improvements along or adjacent to the pathway included the comminutor at the beginning of the pathway on Huck's Trail, the Redwood Canyon Golf Course Clubhouse, and a pump station adjacent to the Redwood Canyon Golf Course turnoff from Redwood Road and the pond. Additionally, an existing sewer line, serving the Anthony Chabot Family Campground to the north, is present along the portions of the pathway including Huck's Trail and Honker Bay Trail. Existing water and sewer lines, serving the Redwood Canyon Golf Course, are present along the portion of the pathway including Redwood Road.

Adjoining Properties

The areas surrounding the Site consisted of Anthony Chabot Regional Park to the north; Lake Chabot, Anthony Chabot Regional Park, and Redwood Canyon Golf Course (17007 Redwood Road) to the south; vacant land, and residential development (17260-17288 Redwood Road) to the east; and Anthony Chabot Regional Park and vacant land to the west.

Based on observations made during the Site reconnaissance and review of agency file information, the adjoining properties were not identified as a REC.

Recognized Environmental Conditions:

This assessment has revealed no evidence of RECs in connection with the Site or adjoining properties.

Controlled Recognized Environmental Conditions:

This assessment has revealed no evidence of CRECs in connection with the Site.

Historical Recognized Environmental Conditions:

This assessment has revealed no evidence of HRECs in connection with the Site.

Business Environmental Risks:

This assessment has revealed no evidence of additional environmental concerns for the Site.

RECOMMENDATIONS

Based on the findings of this ESA, no further investigation is recommended at this time.

Certification Statement

This report has been prepared by the staff of Ninyo & Moore for MIG under the professional supervision of the principal and/or senior staff whose signatures appear hereon. Neither Ninyo & Moore, nor any staff member assigned to this assessment, has any interest or contemplated interest, financial or otherwise, in the subject or surrounding properties, or in any entity which owns, leases, or occupies the subject or surrounding properties or which may be responsible for environmental issues observed during the course of this assessment, and has no personal bias with respect to the parties involved. The information contained in this report has received appropriate technical review and approval. The conclusions represent professional judgments founded upon the findings of the assessment summarized in the report and the interpretation of such data based on our experience and expertise according to the existing standard of care. No other warranty or limitation exists, either expressed or implied. Anyone seeking defenses to Comprehensive Environmental Response, Compensation and Liability Act liability must take independent action to protect their position.

1 INTRODUCTION

Ninyo & Moore has performed this Phase I Environmental Site Assessment (ESA) of the Anthony Chabot Sewer Line project located at Redwood Road in Castro Valley, Alameda County, California (Site). This ESA was conducted for MIG as part of their due diligence on the property. This Phase I ESA meets the criteria set forth in the ASTM International (ASTM) E1527-21 Standard, was conducted by an Environmental Professional as defined by §312.10 of 40 CFR 312 and satisfies all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. The following sections identify the purpose, the involved parties, the scope of services, and the limitations and exceptions associated with this Phase I ESA.

1.1 Purpose

In accordance with the ASTM Standard Practice for ESAs on Commercial Real Estate E1527-21, the objective of the Phase I ESA is to identify recognized environmental conditions (RECs). The term recognized environmental conditions means: *"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."*

Identification of RECs fall into three categories: an existing REC (as defined above), a Historical REC, or a Controlled REC, as defined below.

Historical Recognized Environmental Condition (HREC) An HREC is defined as "a previous release of *hazardous substances* or *petroleum products* affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, *activity and use limitations* or *other property use limitations*). A historical recognized environmental condition is not a recognized environmental condition."

Controlled Recognized Environmental Condition (CREC) A CREC is defined as a "recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with *hazardous substances* or *petroleum products* allowed to remain in place subject to implementation of required controls (for example, *activity and use limitations* or *other property use limitations*)."

Business Environmental Risk (BER) - A BER is defined as a "risk which can have a *material environmental* or *environmentally-driven impact* on the business associated with the current or

planned use of *commercial real estate*, not necessarily related to those *environmental issues* required to be investigated in this practice." BERs include risks to the subject property that are outside the scope of the ASTM standard. BERs are not considered RECs.

1.2 Involved Parties

Mr. Luke Swickard, Project Manager with Ninyo & Moore, conducted the Site visit and performed the project reporting and research. Mr. Brandon Wilken, Principal Geologist with Ninyo & Moore, was the environmental professional assigned to this project, and performed project oversight and quality review. Resumes of these individuals are included in Appendix A.

1.3 Scope of Services

Ninyo & Moore's scope of services for this Phase I ESA included the following:

- Performed a Site reconnaissance to visually and/or physically observe the interior and exterior of structures and other features on the Site, as well as observe visible exterior features of adjoining properties to observe areas of possibly contaminated surface soil or surface water, improperly stored hazardous materials, and possible risks of contamination from activities at the Site and adjoining properties.
- Reviewed reasonably ascertainable standard and additional environmental record sources including federal, state, local, and tribal regulatory agency databases for the Site and for properties located within a specified radius of the Site.
- Reviewed reasonably ascertainable standard physical setting sources including a current United States Geological Survey (USGS) topographic map, or historical 7.5-minute topographic map, and possibly including USGS and/or state groundwater and geologic maps, and soil maps. The purpose of this review was to note information about the geologic, hydrologic, or topographic characteristics of the Site and Site vicinity.
- Reviewed reasonably ascertainable standard historical resources, including aerial photographs, historical fire insurance rate maps, and city directories, as available. The purpose of this review was to review obvious uses of the Site from the present, back to the Site's first developed use, or back to 1940, whichever is earlier. The term "developed use" includes agricultural uses and placement of fill dirt, and other uses that may not involve structures.
- Conducted interviews with present owners, operators, and/or occupants, or a designated representative, of the Site, as well as other knowledgeable parties as appropriate. The purpose of these interviews was to obtain information regarding potential RECs in connection with the Site.
- Performed a preliminary vapor encroachment screening assessment on the Site and adjoining properties.
- Prepared this ESA report documenting the methodology, significant data gaps, and findings and opinions regarding identified RECs, HRECs, and CRECs.

1.4 Tasks Not Undertaken

Non-scope considerations, as noted in ASTM E 1527-21, are discussed in Section 7 as appropriate. Ninyo & Moore did not address interpretations of zoning regulations, building code requirements, or property title issues.

1.5 Limitations and Exceptions

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No other warranty, expressed or implied, is made regarding the professional opinions presented in this report.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

Our conclusions, recommendations, and opinions are based on an analysis of the observed Site conditions and the referenced literature. It should be understood that the conditions of a Site could change with time as a result of natural processes or the activities of man at the subject property or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

Per Section 4.6 of the ASTM E1527-21 Standard, "an environmental Site assessment meeting or exceeding this practice is presumed to be viable when it is completed within 180 days prior to the date of acquisition of the subject property (or for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction). The dates of the components (*interviews, review of government records, visual Site inspections, and declaration by the environmental professional*, shall be identified in the report."

All of the following components must be conducted or updated within 180 days prior to the date of acquisition or prior to the date of the transaction:

- (i) interviews with owners, operators, and occupants;
- (ii) searches for recorded environmental cleanup liens;
- (iii) reviews of federal, tribal, state, and local government records;
- (iv) visual inspections of the subject property and of adjoining properties; and
- (v) the declaration by the environmental professional responsible for the assessment or update.

1.6 Special Terms and Conditions

Ninyo & Moore was not made aware of any special terms and conditions associated with the Site.

1.7 Reliance

This report may be relied upon by, and is intended exclusively for, the *Users* of this report, including MIG, and any of its affiliates. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the aforementioned *Users* is undertaken at said parties’ sole risk.

2 PROPERTY OVERVIEW

The following sections describe the location and the current uses of the Site and adjoining properties. The Site Location is presented on Figure 1 and the Site Vicinity with additional information concerning the Site and surrounding properties is presented on Figure 2. At the time of the Site reconnaissance, the Site consisted of the planned pathway for the new Anthony Chabot Sewer Line and consisted of an approximately 1.8-mile-long pathway that included portions of Anthony Chabot Regional Park, the Redwood Canyon Golf Course, and Redwood Road. The Site is generally located in Castro Valley, Alameda County, California. The 1.8-mile-long path is designated by portions of Alameda County Assessor's Parcel Numbers 84D-1400-2-22, 84D-1400-2-27, and 85-1000-2 .

2.1 Property Location and Land Use(s)

2.1.1 Property Location

The Site is located along Redwood Road in Castro Valley, Alameda County, California.

2.1.2 Adjacent Property Location and Land Uses

Table 1 lists the properties adjoining the Site and associated land use. Based on the nature of the current uses of the adjoining properties and observations made during the Site reconnaissance, it is unlikely that the current uses of these properties have impacted the environmental integrity of the Site.

Table 1 - Adjoining Properties	
Location	Description
North	Anthony Chabot Regional Park
South	Lake Chabot, Anthony Chabot Regional Park, and Redwood Canyon Golf Course (17007 Redwood Road)
East	Vacant land, and residential development (17260-17288 Redwood Road)
West	Anthony Chabot Regional Park and vacant land

2.1.3 Utilities

2.1.3.1 Potable Water

The Site does not appear to be connected to a potable water source.

2.1.3.2 Sewage Disposal System

The East Bay Municipal Utilities District (EBMUD) provides municipal sewer service to the Site and surrounding areas.

2.1.3.3 Source of Fuel for Heating and Cooling

Heating and cooling systems were not used on the Site.

2.1.4 Description of Structures, Roads, and Other Improvements

As shown on Figure 2, the Site is accessible from Redwood Road. The Site consists of the planned new Anthony Chabot Sewer Line pathway, part of the Anthony Chabot Sewer Line Replacement Project, which begins in Anthony Chabot Regional Park along Huck's Trail to the northeast of Lake Chabot and south of Marciel Road. The pathway runs south along Huck's Trail, consisting of soil and gravel, for approximately 260 feet, and then continues east across undeveloped ground for approximately 630 feet, then continues east along Honker Bay Trail for approximately 1,600 feet. Then the pathway continues southeast and east through the Redwood Canyon Golf Course parking lot and driveway, on asphalt pavement, for approximately 4,200 feet, then continues southeast along Proctor Trail, adjacent to Redwood Road, for approximately 2,800 feet, concluding with a discharge manhole just to the west of the intersection of Redwood Road and Camino Alta Mira. The pathway is approximately 1.8-miles in length. Improvements along the pathway include the comminutor at the beginning of the pathway on Huck's Trail, the Redwood Canyon Golf Course Clubhouse, and a pump station adjacent to the Redwood Canyon Golf Course turnoff from Redwood Road and the pond. Additionally, an existing sewer line, serving the Anthony Chabot Family Campground to the north, is present along the portions of the pathway including Huck's Trail and Honker Bay Trail. Existing water and sewer lines, serving the Redwood Canyon Golf Course, are present along the portion of the pathway including Redwood Road.

According to MIG, the Anthony Chabot Sewer Line Replacement Project consists of: removing the comminutor that connects to the Anthony Chabot Family Campground, at the beginning of the Site pathway; removing the aboveground portions of the existing sewer line running along Huck's Trail and Honker Bay Trail and abandoning the underground portions; constructing a new sewer line along Huck's Trail, Honker Bay Trail, and the Redwood Canyon Golf Course, that connects the Anthony Chabot Family Campground to the existing sewer line serving the Redwood Canyon Golf Course; constructing a new lift station and grease interceptor at the Redwood Canyon Golf Course Clubhouse; replacing the pump station adjacent to the Redwood Canyon Golf Course turnoff from Redwood

Road and the pond; and replacing the existing sewer and water lines that run from the pump house to the discharge manhole.

2.2 Physical Setting

The following sections include discussions of topographic, geologic, and hydrologic conditions.

2.2.1 Topography

Based on a review of the United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map Series of the Hayward, California 2021 Quadrangle, the Site is situated at elevations ranging from approximately 240 to 500 feet above mean sea level. The general topographic gradient (EDR 2024a) is in a westerly direction.

2.2.2 Geology/Hydrogeology

The Site is located in the Coast Range geomorphic province of California. The Coast Ranges are northwest-trending mountain ranges (2,000 to 4,000, occasionally 6,000 feet elevation above sea level), and valleys. The ranges and valleys trend northwest, subparallel to the San Andreas Fault. Strata dip beneath alluvium of the Great Valley. To the west is the Pacific Ocean. The coastline is uplifted, terraced and wave-cut. The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary strata. The northern and southern ranges are separated by a depression containing the San Francisco Bay. The northern Coast Ranges are dominated by irregular, knobby, landslide-topography of the Franciscan Complex. The eastern border is characterized by strike-ridges and valleys in Upper Mesozoic strata. In several areas, Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma and Clear Lake volcanic fields. The Coast Ranges are subparallel to the active San Andreas Fault. The San Andreas is more than 600 miles long, extending from Pt. Arena to the Gulf of California. West of the San Andreas is the Salinian Block, a granitic core extending from the southern extremity of the Coast Ranges to the north of the Farallon Islands (CGS, 2002). The 1977 California Division of Mines and Geology, *Geologic Map of California*: (Jennings C.W.) shows the Site to be underlain by Undivided Cretaceous sandstone, shale, and conglomerate (K). Based on our review of the EDR Radius Map report, the primary soil types beneath the Site are mapped as Yolo loam, Los Osos silt loam, and Millsholm silt loam (EDR, 2024a).

2.2.3 Surface Water Bodies

The nearest body of water is the San Leandro Creek, located approximately 50 feet south of the Site.

2.2.4 Groundwater

Groundwater information for the Site was not available. Ninyo & Moore reviewed the State Water Resources Control Board's GeoTracker website (GeoTracker) for groundwater information in the Site vicinity. According to GeoTracker, groundwater information reported in a 2023 Quarterly Monitoring and Annual Groundwater Monitoring and Air Sampling

Report for the Xtra Oil Company located at 3495 Castro Valley Boulevard (approximately 2.2-miles south of the Site), the groundwater flow direction in the Site vicinity was reported to be in a southerly direction and the depth to groundwater was reported to be approximately 7 to 8 feet below ground surface. Groundwater depth at certain portions of the Site is assumed to be shallower, due to the proximity of San Leandro Creek and Lake Chabot. Groundwater depths and flow directions can vary due to seasonal variations, groundwater withdrawal or injection, and other factors.

2.2.6 Flood Maps

According to the FEMA flood maps, the Site lies in the flood zone classified as Zone X. Zone X designates an area that has been determined to be outside of the 0.2% annual chance floodplain.

3 PROPERTY BACKGROUND

3.1 Interviews

Interviews were conducted by Ninyo & Moore with the objective of obtaining information regarding potential RECs in connection with the Site. Interviews with the present owners, operators, and/or occupants of the Site, as available, as well as other knowledgeable parties as appropriate, is mandated by ASTM E1527-21.

3.1.1 Current Owner/Site Manager or Occupant

Mr. Mike Campbell was interviewed via email on January 23, 2024. Mr. Campbell was not aware of any hazardous materials incidents, spills, leaks or violations related to the Site.

3.1.2 Past Owner/Site Manager or Occupant

Past ownership entities were not made available to Ninyo & Moore during the preparation of this ESA. Therefore, interviews with past Site owners were not conducted.

3.1.3 State and/or Local Agencies

State and/or local agencies were contacted regarding available records for the Site. These interviews and the records reviewed are summarized in Section 4.3.

3.2 Review of Aerial Photographs

Ninyo & Moore reviewed the EDR Aerial Photo Decade Package report (EDR, 2024a) dated January 25, 2024. The report included aerial photographs that begin in 1939. A listing of the photographs reviewed is presented in Table 2. Copies of the historical aerial photographs are provided in Appendix D.

Based on the review of the aerial photographs listed below, the Site ran along vacant land, with Redwood Road adjacent to the southern portion of the Site since the late 1930s. By the late 1960s, a golf course was constructed adjacent to the central portion of the Site. The Site

vicinity appeared to be developed since at least the 1960s. No RECs were identified for the Site or adjoining properties based on historical aerial photograph review.

Table 2 -Aerial Photographs Summary			
Date	Sources	Site	Adjoining Properties
1939	EDR	The southern portion of the Site was noted to be along vacant land. The northern portion of the Site was unmapped.	Vacant land was noted to the east and west of the Site. Redwood Road was noted to the east of the southern portion of the Site.
1946	EDR	The northern portion of the Site was noted to be along vacant land.	Vacant land was noted to the north and south of the Site. Hiking trails were noted adjacent to the Site, and Lake Chabot was noted to the west of the Site.
1958-1963	EDR	No significant changes noted.	No significant changes noted.
1968	EDR	The central portion of the Site was noted to be along a golf course.	A golf course, clubhouse, golf course equipment storage area, and a pond were noted adjacent to the central portion of the Site.
1970-2012	EDR	No significant changes noted.	No significant changes noted.
2016	EDR	No significant changes noted.	The golf course clubhouse was expanded.
2020	EDR	No significant changes noted.	No significant changes noted.

3.3 Review of Topographic Maps

Ninyo & Moore reviewed the EDR Historical Topo Map Report, dated January 25, 2024 (EDR, 2024b). A listing of the maps reviewed is presented in Table 3 below. Copies of the historical topographic maps are provided in Appendix D.

The review of topographic maps listed below indicates the Site was undeveloped since at least 1899. No RECs were identified for the Site or adjoining properties based on a review of the historical topographic maps.

Table 3 - Topographic Maps Summary		
Date	Quadrangle	Uses
1899-1959	Concord,Haywards,Hayward	The Site was mapped along vacant land, with a portion of the Site crossing Lake Chabot. Redwood Road was mapped adjacent to the southern portion of the Site.
1968-1996	Hayward	The Willow Park Golf Course was mapped adjacent to the central portion of the Site.
2012-2021	Hayward	No buildings were mapped on the 2012 to 2021 topographic maps.

3.4 Review of Fire Insurance Maps

Ninyo & Moore reviewed the EDR Certified Sanborn Map Report, dated January 25, 2024 (EDR, 2024c) for historical fire insurance rate maps (Sanborn Maps) of the Site. Sanborn Map coverage was not available for the Site and/or adjoining areas. A copy of the EDR Sanborn Map Report is included in Appendix D.

3.5 Review of Reverse City Directories

Ninyo & Moore reviewed EDR City Directory Image Report, dated January 25, 2024 (EDR, 2024d), for the Site and adjoining properties, to evaluate facilities of potential concern, which may have been historically located on or adjoining the Site. The Site has no physical address; therefore, it was not listed in the City Directory Image Report. Ninyo & Moore did not identify RECs associated with the adjoining properties. A copy of the City Directory report is included in Appendix D.

3.6 Title Records

A Preliminary Title Report was not provided to Ninyo & Moore. According to the Alameda County Assessor's website, the Site is currently owned by East Bay Regional Parks District (EBRPD) and East Bay Municipal Utilities District (EDMUD).

3.7 Recorded Environmental Covenants and AULs

The EDR database report included a review of both Federal and State Engineering Control (EC) and Institutional Control (IC) databases, such as the *Engineering Controls Sites List* (US ENG CONTROLS), and *Institutional Controls Sites List* (US INST CONTROLS). Based on a review of the database report, the Site was not listed on the EC or IC databases, and ECs and ICs were not identified through review of the Department of Toxics Substances Control *Land Use Restriction Sites database*, or through review of the State Water Resources, *Sites with Deed Restrictions* database. In addition to these federal and state listings, AULs can be recorded at the county and municipal level that may not be listed in the regulatory database report. Environmental lien and AUL records recorded against the Site were not provided by the client. Performance of a review of these records was not included as part of the Phase I ESA scope of services, and unless notified otherwise, Ninyo & Moore assumes that the client is evaluating this information outside the scope of this report. An environmental lien search report was not requested by the client for review by Ninyo & Moore during the completion of this ESA.

3.8 Previous Investigations

Ninyo & Moore was not provided copies of prior environmental reports completed for the Site.

3.9 User-Provided Information

The following sections summarize information provided by the user to assist the Environmental Professional in identifying the possibility of RECs in connection with the Site and to fulfill the user's responsibilities in accordance with ASTM E1527-21. The User Questionnaire was

completed by Ms. Sara Rieck with EBRPD. A copy of the User Questionnaire is included in Appendix B.

3.9.1 Environmental Lien and Activity and Use Limitations Search Results

Ninyo & Moore was not informed of the existence of environmental liens or AULs associated with the Site.

3.9.2 Specialized Knowledge

Ninyo & Moore was not informed of the existence of specialized knowledge pertaining to the Site that is material to the identification of RECs in connection with the Site.

3.9.3 Relationship of Purchase Price to Fair Market Value

Information pertaining to valuation reduction was not communicated to Ninyo & Moore for the purpose of this assessment.

3.9.4 Commonly Known or Reasonable Ascertainable Information

Ninyo & Moore was not informed of the existence of commonly known or reasonably ascertainable information pertaining to the Site that is material to the identification of RECs in connection with the Site.

3.9.5 Owner, Property Manager, and Occupant Information

According to the Alameda County Assessor’s website, the Site is currently owned by the EBRPD and EBMUD.

4 REGULATORY DATABASE SEARCH AND SIGNIFICANT FINDINGS

REGULATORY DATABASE SEARCH AND FINDINGS

Environmental Data Resources, Inc. (EDR) performed a computerized environmental information database search for the Site and Site vicinity on January 23, 2024 (EDR, 2024e) that included searches of federal, state, tribal, and local databases. The purpose of the database search was to determine if the Site or adjoining properties were listed on one or more of the standard government environmental records resources, and if so, review agency records to determine if a REC, HREC, CREC, or de minimis condition exists at the Site. A summary of the listed properties of potential environmental concern to the Site are presented in Table 6 below. A list of the environmental databases searched, and their corresponding search distance is included in the EDR Radius Map Report provided in Appendix C.

Table 6 - Summary of Environmental Records Sources Database Search								
Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Emergency Response Notification System		0.5	1	0	0	NR	NR	1
Formerly Used Defense Sites		1.5	0	0	0	1	0	1
Incident and Accident Data		0.5	1	0	0	NR	NR	1
Facility Index System/Facility Registry System	2	0.5	1	6	30	NR	NR	39
RCRA - Non Generators / No Longer Regulated	3	0.75	2	7	36	62	NR	110
Enforcement & Compliance History Information	2	0.5	1	8	33	NR	NR	44
EDR Exclusive Historical Auto Stations		0.625	0	0	2	1	NR	3
UST Finder Releases Database		1	0	1	0	1	NR	2
EDR Exclusive Historical Cleaners		0.625	0	0	1	NR	NR	1
Leaking Underground Fuel Tank Report (GEOTRACKER)		1	0	1	0	2	NR	3
Hazardous Waste & Substance Site List		1	0	0	0	1	NR	1
Contaminated Sites		1	0	1	0	4	NR	5
Facility and Manifest Data	3	0.5	2	15	54	NR	NR	74
California Integrated Water Quality System		0.5	0	0	4	NR	NR	4
Statewide SLIC Cases (GEOTRACKER)		1	0	0	0	2	NR	2
California Hazardous Material Incident Report System		0.5	2	1	2	NR	NR	5
"Cortese" Hazardous Waste & Substances Sites List		1	0	1	0	2	NR	3
NPDES Permits Listing		0.5	0	0	3	NR	NR	3
CalEPA Regulated Site Portal Data	1	0.5	0	1	0	NR	NR	2
Emissions Inventory Data		0.5	0	0	1	NR	NR	1
Pesticide Regulation Licenses Listing		0.5	0	0	1	NR	NR	1

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Hazardous Waste Tracking System	6	0.5	2	19	79	NR	NR	106
California Environmental Reporting System (CERS) Tanks	1	0.75	0	0	0	NR	NR	1
Recovered Government Archive Leaking Underground Storage Tank		0.5	0	1	0	NR	NR	1
Hazardous Material Facilities		0.75	0	0	1	NR	NR	1
EnviroStor Database		1.5	0	0	0	0	1	1

4.1 Subject Property

The following Table 7 summarizes the database listings associated with the Site.

Table 7 - On-Site Database Listings	
Site Name	EAST BAY MUNICIPAL UTILITY DISTRICT
Site Address	REDWOOD ROAD
Database	HWTS, HAZNET, FINDS, ECHO, RCRA NonGen / NLR
Comments	The Site is listed on the HWTS, HAZNET, FINDS, ECHO, and RCRA NonGen / NLR databases because the discharge manhole at the end of the Site pathway had 0.05-tons of detergent and soap removed from it in 2020. This is not considered a REC.

4.2 Surrounding Properties

Off-Site properties/facilities listed in the Summary of Environmental Records Sources table above were evaluated for their potential to impact soil, soil vapor, and/or groundwater at the Site. Table 8 below presents the off-Site properties/facilities that were interpreted to represent a potential environmental concern to the Site, based on their proximity to the Site, the nature of the database(s) on which they are listed, and/or the location of the off-Site property in relation to the Site with respect to topography or expected groundwater flow direction (southerly).

Table 8 - Facilities of Potential Concern	
Facility Name	PACIFIC GAS & ELECTRIC CO
Address	17300 REDWOOD RD
Direction from Site	East and crossgradient
Distance from Site	30 feet
Database	ERNS, DOT OPS
Notes/Comments	This property is listed on the ERNS, and DOT OPS databases for a gas leak that caused an explosion and fire to a residential house in 1996. This is not considered a REC.

Facility Name	WILLOW PARK GOLF COURSE
Address	17007 REDWOOD RD
Direction from Site	North-Northeast and upgradient
Distance from Site	20 feet
Database	UST FINDER RELEASE, ENF, Alameda County CS, SWEEPS UST, HWTS, LUST, CERS, CORTESE, HIST CORTESE
Notes/Comments	This property is listed on the UST FINDER RELEASE, Alameda County CS, SWEEPS UST, LUST, CERS, CORTESE, and HIST CORTESE databases for a leaking gasoline UST that affected the soil beneath the property. The case was opened in May 1991, and after remediation and cleanup activities were completed to the satisfaction of regulatory agency, the case was closed in January 1996. Due to the age and closed status of the case, and the media affected (soil) this is not considered a REC. This case is described in greater detail in Section 4.3.1. This property is also listed on the ENF database for having dredged fill on the property; and on the HWTS database for having tracked hazardous waste on the property from 2002 to 2015. These are not considered RECs.

4.3 Additional Environmental Record Sources

Local and state departments were contacted regarding available records for the Site. Results of the contacts and file reviews, as available, are discussed below. Copies of requests and responses, including public records, are included as Appendix E.

4.3.1 State/County Environmental Record Sources

Ninyo & Moore reviewed the Department of Toxic Substances Control (DTSC) EnviroStor and the Regional Water Quality Control Board (RWQCB) GeoTracker websites for hazardous substances or hazardous materials files for the Site address on January 24, 2024. No records were available for the Site through review of these agency databases; however, records were available for the adjacent Redwood Canyon Golf Course and are described below.

The Alameda County Environmental Health Department (ACEHD) was contacted regarding hazardous materials or hazardous wastes records associated with the Site address on January 24, 2024. Files or records were not available for the Site; however, records were available for the adjacent Redwood Canyon Golf Course and are described below.

Records for the adjacent Redwood Canyon Golf Course (17007 Redwood Road) were available through the GeoTracker database and the ACEHD. The records included hazardous materials business plans, environmental health administrative violations, Site maps, photo logs, waste inventory forms, and stormwater inspection forms. Records were also available for a 500-gallon gasoline UST, located approximately 20 feet northeast of

the Site, that was removed from the golf course in August 1990 by KTW & Associates. During the UST removal, soil contamination was detected at 35 parts per million (ppm) of total petroleum hydrocarbons (TPH) as gasoline (TPHg). As a result, the soil was excavated, and a groundwater monitoring well (MW-1) was installed to 25 feet below ground surface (bgs) in May 1991. The groundwater monitoring well was sampled twice in 1991 and was non-detect for all analytes. Therefore, in July 1992 the ACEHD destroyed MW-1, and the case was closed by the RWQCB in January 1996. Due to the closed status and age of the case, the distance from the Site, and the media affected (soil), this is not considered a REC. A copy of the 1991 subsurface investigation by KTW & Associates is included in Appendix E.

4.3.2 Local Environmental Record Sources

In completing this ESA, Ninyo & Moore concluded that contacting additional local record sources would not provide additional useful information in determining if a REC, HREC, CREC or de minimis condition exists at the Site.

4.3.3 Federal Environmental Record Sources

Ninyo & Moore conducted an online search of the USEPA's MyPropertyInfo database for the Site and the vicinity. The Site address was not listed in the database.

4.3.4 Gas & Oil Maps

According to the CalGEM Online Mapping System, the Site does not lie within the administrative boundaries of an oil field and no oil or gas wells are located on the Site.

5 SITE RECONNAISSANCE

SITE RECONNAISSANCE

The following sections provide a general description of the Site and adjoining properties. The Site reconnaissance was conducted on January 23, 2024, by Mr. Luke Swickard with Ninyo & Moore. Table 9 below summarizes key on-Site observations. Conditions of significant concern are discussed following the table. Photographs taken during the Site reconnaissance are provided in Appendix F.

Table 9 - On-Site Observations			
Conditions	Not Observed or Noted	Observed or Noted	Significant Concerns?
Hazardous Substances	X		
Petroleum Products	X		
Underground Storage Tanks (USTs)	X		
Aboveground Storage Tanks (ASTs)	X		
Chemical/Petroleum Odors or Staining	X		
Standing Water/Pools/Sumps	X		
Drums and Totes	X		

Conditions	Not Observed or Noted	Observed or Noted	Significant Concerns?
Unidentified Hazardous Substance Containers	X		
Transformers/Potentially PCB-Containing Materials	X		
Stains or Corrosion on Floors, Walls, or Ceilings	X		
Drains and Sumps	X		
Pits, Ponds, Lagoons	X		
Solid Waste	X		
Stained Soil or Pavement	X		
Stressed Vegetation	X		
Elevators	X		
Waste or Storm Water Discharges	X		
Septic Systems	X		
Wells	X		
Other		X	No

Hazardous Substances

No hazardous substances were observed along the Site.

Other

A sewage comminutor, used to grind the solid sewage waste into smaller pieces, was located at the beginning of the Site pathway, along Huck's Trail. A pump house, used to pressurize and pump the Redwood Canyon Golf Course's sewage, was located adjacent to the Redwood Road turnoff into the Redwood Canyon Golf Course, and the pond.

ASSOCIATED PHOTOGRAPHS



View of the Comminutor at the beginning of the Site pathway.



View of the sewage pump house adjacent to Redwood Road and the pond, that is planned for removal.

5.1 Adjoining Properties

The areas surrounding the Site consisted of Anthony Chabot Regional Park to the north; Lake Chabot, Anthony Chabot Regional Park, and Redwood Canyon Golf Course (17007 Redwood

Road) to the south; vacant land, and residential development (17260-17288 Redwood Road) to the east; and Anthony Chabot Regional Park and vacant land to the west.

6 VAPOR ENCROACHMENT

Ninyo & Moore conducted a preliminary vapor encroachment screen (pVES) for potential chemicals of concern (COCs) that may migrate as vapors onto the Site as a result of contaminated soil and/or groundwater near the Site. The purpose of the pVES is to identify a vapor encroachment condition (VEC), which is the presence or likely presence of COC vapors in subsurface soils at the Site caused by the release of vapors from contaminated soil or groundwater either on or near the Site. The potential for VEC beneath the Site was evaluated using a Vapor Encroachment Screening Matrix (VESM). The VESM included performing a Search Distance Test to identify if there are any known or suspect contaminated properties surrounding or upgradient of the Site within specific search radii, a COC Test (for those known or suspect contaminated properties identified within the Search Distance Test) to evaluate whether or not COCs are likely to be present, and a Critical Distance Test to evaluate whether or not COCs in a contaminated plume may be within the critical distance of the Site (100 feet for non-petroleum contaminants, and 30 feet for petroleum hydrocarbon contaminants).

Based on the results of the VESM, it is unlikely a VEC currently exists beneath the Site. A copy of the VESM is included in Appendix G.

7 NON-SCOPE CONSIDERATIONS

In accordance with ASTM E1527-21, the following, which is not intended to be all inclusive, represent non-scope considerations and, therefore, were not addressed in this Phase I ESA: asbestos, radon, lead-based paint, lead in drinking water, regulatory compliance, cultural and historical risk, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines. In addition, Ninyo & Moore did not address interpretations of zoning regulations, building code requirements, or property title issues.

8 FINDINGS AND OPINIONS

FINDINGS AND OPINIONS

Ninyo & Moore performed a Phase I Environmental Site Assessment (ESA) on the Site located at Redwood Road, in Castro Valley, Alameda County, California. A Summary of Findings is provided below. It should be recognized that all report details are not included in this Summary, and the report should be read in its entirety.

Site Location and Use

The approximately 1.8-mile-long Site is located along Redwood Road. The Site consisted of vacant land, Redwood Canyon Golf Course, and Anthony Chabot Regional Park.

Historical Information

Review of historical resources, such as aerial photographs, topographic maps, fire insurance maps, and available City Directory listings, as well as through review of historical records, interviews, and research, revealed that the Site ran along vacant land, consisting of Anthony Chabot Regional Park, with Redwood Road adjacent to the southern portion of the Site since the late 1930s. By the late 1960s, a golf course was constructed adjacent to the central portion of the Site.

Adjoining properties have primarily been vacant land and a golf course from at least the 1960s until the present. No RECs were identified in the historical review.

Records Review

Review of an environmental database report obtained for this project indicated that the Site was not listed on any of the *Standard Federal, State, and Tribal Environmental Record sources*. The Site was listed on the *Additional Federal, State, Tribal and Local Environmental Record sources* regulatory databases researched by EDR, including the HWTS, HAZNET, FINDS, ECHO, and RCRA NonGen / NLR. Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed, as available. Based on the available EDR information and the nature of these specific databases listing types, no RECs were identified at the Site in connection with these database listings.

Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed, as available. Several off-Site facilities were located within the EDR search radius from the Site. None of the listed facilities are considered to be a REC to the Site based on several factors, including distance from the Site, location relative to the regional groundwater flow direction (e.g. hydraulically downgradient or crossgradient to the Site), database listing type, and/or affected media (soil only).

Based on the completion of the Vapor Encroachment Condition (VEC) screening matrix, it is presumed unlikely that a VEC currently exists beneath the Site.

Site Reconnaissance

On January 23, 2024, Mr. Luke Swickard with Ninyo & Moore conducted a Site reconnaissance of the property that included a visual inspection of the Site, and observations of adjoining properties. At the time of the reconnaissance, the Site consisted of the planned new Anthony Chabot Sewer Line pathway, part of the Anthony Chabot Sewer Line Replacement Project, which begins in Anthony Chabot Regional Park along Huck's Trail to the northeast of Lake Chabot and south of Marciel Road. The pathway runs south along Huck's Trail, consisting of soil and gravel, for approximately 260 feet, and then continues east across undeveloped ground for approximately 630 feet, then continues east along Honker Bay Trail

for approximately 1,600 feet. Then the pathway continues southeast and east through the Redwood Canyon Golf Course parking lot and driveway, on asphalt pavement, for approximately 4,200 feet, then continues southeast along Proctor Trail, adjacent to Redwood Road, for approximately 2,800 feet, concluding with a discharge manhole just to the west of the intersection of Redwood Road and Camino Alta Mira. The pathway is approximately 1.8-miles in length. Improvements along or adjacent to the pathway included the comminutor at the beginning of the pathway on Huck's Trail, the Redwood Canyon Golf Course Clubhouse, and a pump station adjacent to the Redwood Canyon Golf Course turnoff from Redwood Road and the pond. Additionally, an existing sewer line, serving the Anthony Chabot Family Campground to the north, is present along the portions of the pathway including Huck's Trail and Honker Bay Trail. Existing water and sewer lines, serving the Redwood Canyon Golf Course, are present along the portion of the pathway including Redwood Road.

Adjoining Properties

The areas surrounding the Site consisted of Anthony Chabot Regional Park to the north; Lake Chabot, Anthony Chabot Regional Park, and Redwood Canyon Golf Course (17007 Redwood Road) to the south; vacant land, and residential development (17260-17288 Redwood Road) to the east; and Anthony Chabot Regional Park and vacant land to the west.

Based on observations made during the Site reconnaissance and review of agency file information, the adjoining properties were not identified as a REC.

8.1 Recognized Environmental Conditions

Recognized Environmental Conditions:

This assessment has revealed no evidence of RECs in connection with the Site or adjoining properties.

8.2 Controlled Recognized Environmental Conditions

Controlled Recognized Environmental Conditions:

This assessment has revealed no evidence of CRECs in connection with the Site.

8.3 Historical Recognized Environmental Conditions

Historical Recognized Environmental Conditions:

This assessment has revealed no evidence of HRECs in connection with the Site.

8.4 Business Environmental Risks

Business Environmental Risks:

This assessment has revealed no evidence of additional environmental concerns for the Site.

9 DATA GAPS

No data gaps were encountered during this Phase I ESA.

10 CONCLUSIONS

CONCLUSIONS

Ninyo & Moore has performed this Phase I ESA in conformance with the scope and limitations of ASTM E1527-21 of the Anthony Chabot Sewer Line property located at Redwood Road in Castro Valley, Alameda County, California (the Site). Based on the information compiled during the preparation of this report, this assessment has revealed no evidence of Recognized Environmental Conditions (RECs), Controlled RECs (CRECs), or Historical RECs (HRECs) in connection with the Site, and no RECs were identified on the adjoining properties.

11 RECOMMENDATIONS

RECOMMENDATIONS

Based on the findings of this ESA, no further investigation is recommended at this time.

12 LIMITING CONDITIONS/DEVIATIONS

This report was prepared in accordance with ASTM E1527-21. No deviations from the standard occurred in this ESA. Based on the information gathered by Ninyo & Moore for the purposes of this ESA, it is Ninyo & Moore's opinion the data obtained from the Site reconnaissance, records reviewed, and interviews conducted, is adequate to make a conclusion on the environmental condition of the Site with respect to the existence or lack of RECs.

13 REFERENCES

ASTM International, 2021, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E1527-21.

California Department of Conservation, California Geological Survey (CGS), 2010. California Geomorphic Provinces, Note 36.

Environmental Data Resources (EDR 2023a), The Environmental Data Resources Radius Map Report with GeoCheck, dated January 22.

Environmental Data Resources (EDR, 2023b), The Environmental Data Resources Sanborn Map Report, dated January 22.

Environmental Data Resources (EDR 2023c), The Environmental Data Resources Aerial Photo Decade Package, dated January 25.

Environmental Data Resources (EDR, 2023d), The Environmental Data Resources City Directory Report, dated January 25.

Environmental Data Resources (EDR, 2023e), The Environmental Data Resources Historical Topographic Map Report, dated January 22.

US Environmental Protection Agency (EPA). All Appropriate Inquiry (AAI), Title 40 of Code of Federal Regulations (CFR) Section 312.10.

14 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined by 312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

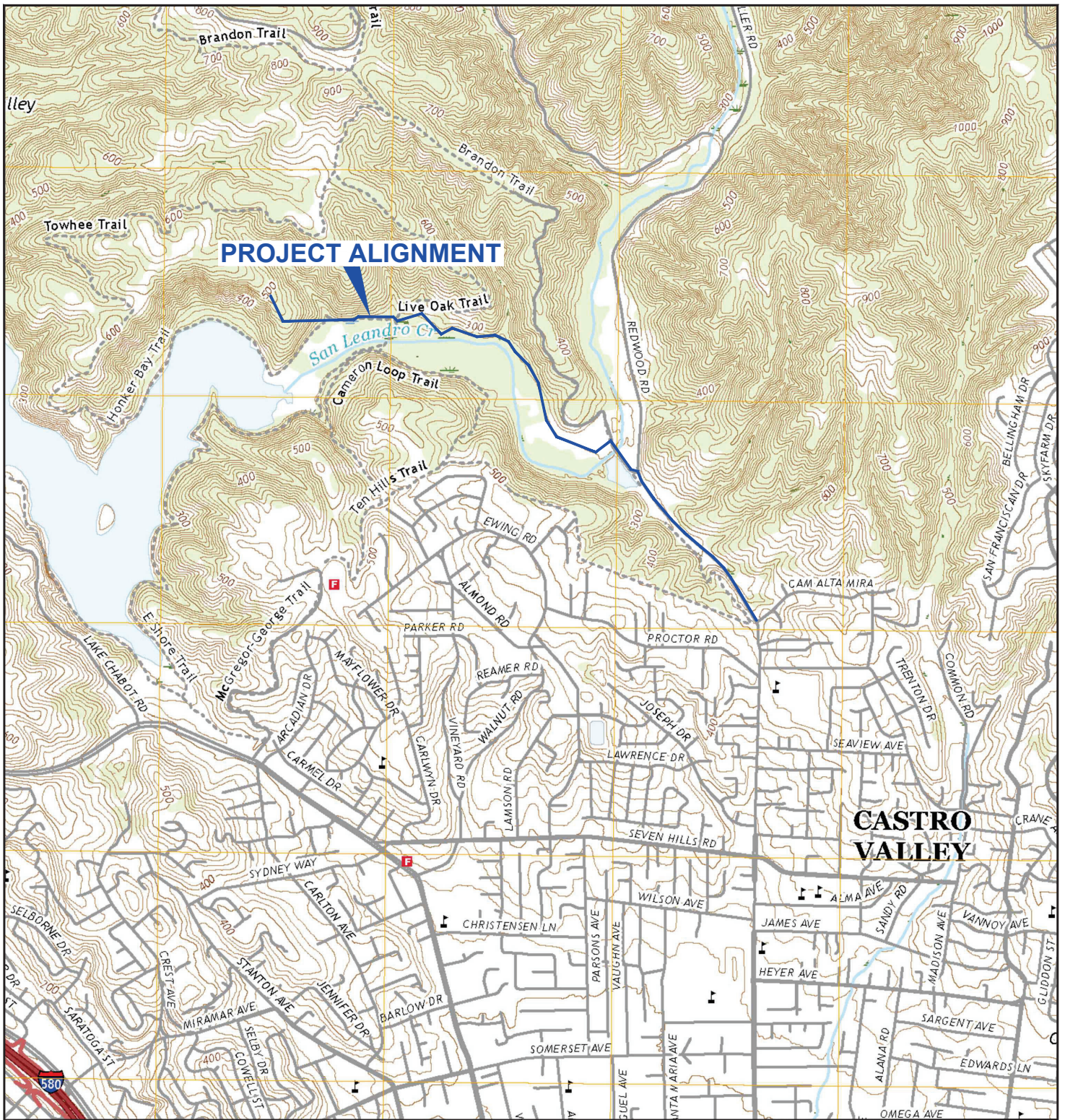


Brandon S. Wilken
Principal Environmental Geologist

February 9, 2024
Date

Figures

404752001.dwg 02/12/2024 AEK



NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: USGS, 2018

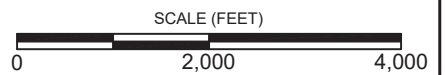


FIGURE 1

404752001.dwg 02/13/2024 AEK



NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: GOOGLE EARTH, 2024



Appendix A - Resumes

Luke I. Swickard

Project Manager



EDUCATION

B.S., Environmental Science and Management, 2017, University of California, Davis, California

REGISTRATIONS/CERTIFICATIONS

AHERA Accredited Asbestos Inspector, #45593

40-Hour HAZWOPER with Annual Updates

As a Project Manager for Ninyo & Moore, Mr. Swickard has 6 years of experience in various environmental field work, including Phase I and Phase II ESAs, corridor studies, oversight of soil boring drilling, well installation and UST removal activities, as well as water, soil and soil vapor sampling. He has also conducted Spill Prevention, Control, and Countermeasure (SPCC) audits, prepared Storm Water Pollution Prevention Plan (SWPPP), and designed stormwater Best Management Practices (BMP).

EXPERIENCE

Duncan Enterprises Phase I Environmental Site Assessment (ESA), Fresno, California: Provided project management for the completion of a Phase I ESA on an approximate 14-acre industrial property that is utilized for paint, ceramics, and craft goods manufacturing and distribution. The Phase I ESA was conducted to evaluate the potential for Recognized Environmental Conditions (RECs) on and adjacent to the site for ongoing use of the property. Phase I ESA activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

Lemoine Ranch Property Phase I ESA, Alturas, California: Provided project management for the completion of a Phase I ESA on an approximate 2,026-acre agricultural property that is utilized for cattle grazing. The Phase I ESA was conducted to evaluate the potential for RECs on and adjacent to the site for ongoing use of the property. Phase I ESA activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

SWCA, Transmission Line Corridor Assessments, California: Provided project management for the completion of three corridor assessments on over 1,000 parcels along over 100-mile long transmission line routes in San Jose and the California Valley. Activities included the created of parcel information databases, reviewing historical and regulatory environmental data, conducting site reconnaissance and preparing the corridor assessments and figures.

Mikesell Avenue Properties Reports Manteca, California: Provided project management and oversight for the completion of six Phase I ESAs, Pipeline Risk Analyses, Railroad Safety Studies, Geotechnical Hazard Surveys, and California Department of Education Checklists, for the Manteca Unified School District. The reports were conducted to evaluate the potential for environmental hazards and RECs. Activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

City of West Sacramento Sacramento River West North Levee Corridor Assessment, West Sacramento, California: Provided project management and implementation for the completion of a corridor assessment on over 200 parcels along a 5.8-mile long area, as part of the Sacramento River levee expansion project. Activities included reviewing historical and regulatory environmental data, conducting site reconnaissance and preparing the corridor assessment. The project was conducted in accordance with EPA Brownfields Grant guidelines and requirements.

Luke I. Swickard

Project Manager

Bayo Vista Family Housing 2 California Street Phase I ESA, Rodeo, California: Senior Staff Environmental Scientist for the Phase I ESA for the Bayo Vista Family Housing project. The site is occupied by the Bayo Vista Family Housing Community residents, the Contra Costa Sheriff's office, Lifelong Medical, a resident counselor, the Head Start school, and the Bayo Vista Housing Authority. The site is situated on seven parcels totaling approximately 33 acres of land. The objective of this ESA was to identify recognized environmental conditions at the site.

Hollis Oaks Apartments Phase I ESA, Oakland, California: Senior Staff Environmental Scientist for the Phase I ESA at the Hollis Oaks Apartments. The objective of the ESA was to identify recognized environmental conditions. The ESA was conducted for Principal Real Estate Investors.

Floating Photovoltaic (PV) Solar Array, Windsor, California: Provided project support for the completion of a Phase I Environmental Site Assessment (ESA) of a proposed floating PV solar array on an existing water treatment facility. Ninyo & Moore conducted the Phase I ESA to evaluate the potential for Recognized Environmental Conditions (RECs) adjacent to the site so that electrical infrastructure could be installed from the floating PV solar array to a collection system. Phase I ESA Activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

Multi-family Housing Project, Mountain View, California: Provided project support for the completion of a Phase I Environmental Site Assessment (ESA) on a multi-family housing complex to evaluate the potential for Recognized Environmental Conditions (RECs) on and adjacent to the site for planned redevelopment of the property. Phase I ESA Activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

Agricultural Land, Capay Valley, California: Provided project support for the completion of a Phase I Environmental Site Assessment (ESA) on an approximate 310-acre agricultural property that is utilized for cattle grazing and olive orchards. The Phase I ESA was conducted to evaluate the potential for Recognized Environmental Conditions (RECs) on and adjacent to the site for on-going use of the property. Phase I ESA Activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

Former Richmond Hospital, Richmond, California: Provided project support for the completion of a Phase I Environmental Site Assessment (ESA) of the former Richmond Hospital for potential redevelopment. Ninyo & Moore conducted the Phase I ESA to evaluate the potential for Recognized Environmental Conditions (RECs) on or adjacent to the site. Phase I ESA Activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

City of Sacramento, 3739 Marysville Boulevard Phase II ESA, Sacramento, California: Staff Environmental Scientist a Community Wide Assessment under an existing US EPA Brownfields grant. Review of historical information indicated the site was formerly a gasoline station and convenience store and a former dry cleaner was also identified on the adjacent parcel. Soil samples collected from beneath seven former USTs and the associated piping and dispensers indicated that an unauthorized release of petroleum hydrocarbons had occurred from the former fuel dispensing system. In 2018, Ninyo & Moore conducted a Phase I ESA on the site and the adjoining dry cleaner property. Results of the Phase I ESA, along with the results of the prior sampling and remediation were used to prepare a Sampling and Analysis Plan (SAP) for review by the RWQCB to conduct a Phase II ESA, which included installing and sampling 33 temporary soil gas samples, collecting soil samples from five soil borings, and collecting grab groundwater samples from three on-site borings.

Brandon S. Wilken, PG

Principal Geologist



EDUCATION

B.S., Geology, 1996, University of Nebraska-Lincoln

REGISTRATIONS/ CERTIFICATIONS

PG 7564 (California)

OSHA 8 hour Refresher

PROFESSIONAL AFFILIATIONS

California Groundwater Resource Association (GRA)

Geologic Society of America (GSA) – Hydrogeology Division

As a Principal Geologist for Ninyo & Moore, Mr. Wilken has 25 years of experience in the Environmental industry and started his career working in the field all over North America for a hard rock mineral exploration company. His experience in field geophysics led him to the contaminant assessment and remediation industry, providing professional geologic services including environmental hydrogeology, site investigation, remedial planning and implementation, health risk screening, due diligence, regulatory negotiations, and litigation support. Mr. Wilken has lead investigation and remediation projects driving risk-based solutions to successfully close environmental projects and reduce client's costs. He works closely with regulators, stakeholders, and clients to negotiate effective solutions utilizing sound science, strong technical expertise, and clear communication skills. Mr. Wilken has completed projects for a wide range of clients, including major oil companies, municipalities, manufacturing groups, and individual small business owners.

EXPERIENCE

Aerospace Manufacturing, Confidential Manufacturing Business, Torrance, California: Principal Geologist for the PFAS assessment at an operating Aerospace manufacturing facility. Assessed PFAS in soil, wastewater effluent, storm water, and groundwater by advancing five soil borings, installing three monitoring wells, collecting wastewater effluent, municipal water, and storm water samples. The data was compared, and recommendations were provided to the RWQCB.

Major Oil Company Refinery, Martinez, California: Principal Geologist for the environmental services at a 640-acre refining complex. The team is developing a PFAS assessment strategy for the facility to comply with a RWQCB request for assessment. Furthermore, the project team was planning to demolish an old wastewater treatment pond and developing a replacement treatment facility. Lastly the team operated, maintained, and optimized 27 groundwater extraction systems for contaminant plume control, to limit impacts to adjacent wetlands and surface water bodies.

S Street Redevelopment Project, Sacramento, California: Principal Geologist for the soil, soil vapor, and groundwater assessment and in situ ELSTM and zero valent iron injections to remediate site CVOC's. Assessment included advancement of soil borings, installation of groundwater monitoring and soil vapor wells, and routine sampling. Remedial activities included closing an UST in-place and injecting approximately 6,900 pounds of ELSTM and 58,000 pounds of zero valent iron into targeted areas. Interfaced with multiple stakeholders and agencies including property owner/client (Capitol Area Development Authority), City of Sacramento, RWQCB, and SCEMD.

Former Orchard Supply Facility, Sacramento, California: Principal Geologist for in situ EHC® injections to remediate site VOC's. Approximately 24,525 gallons of 30% EHC® slurry was injected into the subsurface; approximately 1,272 gallons of EHC® slurry was injected into the shallow zone aquifer; and approximately 23,253 gallons of EHC® slurry was injected into the deep zone aquifer. Interfaced with multiple stakeholders and agencies including property owner, client (Capitol Area Development Authority), DTSC, City of Sacramento, RWQCB, and SCEMD.

Stewart's Automotive, Sacramento, California: Principal Geologist for

Brandon S. Wilken

Principal Geologist

soil, soil vapor, and groundwater assessments, SVE system operation, and in situ EDS-ERTM and zero valent iron injections to remediate site CVOC's. Assessment included vertical delineation of groundwater, the installation of soil vapor wells, and routine sampling. Remedial activities included upgrading and operating an SVE system and the injection of approximately 31,900 pounds of EDS-ERTM; 19,900 pounds of mZVI; and 82 liters of KB-1 into targeted areas. Interfaced with multiple stakeholders and agencies including property owner/client, site tenant, City of Sacramento, Caltrans, RWQCB, and SCEMD.

Manufacturing Facilities, San Carlos, California: Principal Geologist and previous Senior Project Manager for assessment and remediation of PCBs and CVOCs at two adjacent manufacturing facilities. Project required managing corrective action account between two clients that at times had competing interests. Also, over saw the sale of one of the properties and the development of a plan to meet redevelopment goals which included a cap for PCBs, stormwater infrastructure decontamination, and other redevelopment activities.

Ecodyne Pond Site, Windsor, California: Principal Geologist for the assessment and remediation of a former wood treatment facility that utilized creosote and pentachlorophenol to treat lumber. The facility also had a lead dip-treatment tank for coating metal hardware. Brandon's team designed a remedial excavation to remove residual dioxin, lead, and poly aromatic hydrocarbons from soil at the site. The excavation extended offsite, which involved removing soil beneath a concrete-lined drainage ditch that conveyed stormwater from the site to a nearby creek. In addition, a natural gas transmission line was located approximately 2 to 4 feet below the grade of the drainage ditch. To minimize potential damage, Brandon's team worked closely with the owner of the natural gas line and excavated soil by hand digging around the natural gas line. The work was completed safely without incident. A total of 15,587 tons of non-hazardous and 6,411 tons of hazardous soil were excavated, and 4,718,739 gallons of water were extracted, and properly handled and disposed of offsite. The team also provided technical assistance to the client's legal team prior to and during remedial activities for several lawsuits related to the site. All lawsuits were resolved in our client's favor.

Ranch Headquarters, Woodland, California: Principal Geologist and previous Senior Project Manager for fixed fee remediation of a several acre light non aqueous phase liquid plume near a network of irrigation canals at an operating ranch/farm headquarters. He managed a cost cap and a pollution liability limit insurance policy to provide long term liability protection for the client. This project also utilized a land discharge permit obtained from the RWQCB to discharge treated groundwater from the multi-phase extraction treatment system. Successfully negotiated with the RWQCB to shut down and remove the remediation system after no reoccurrences of LNAPL were observed and approximately 1 month after the treatment system's mass removal rate went asymptotic. Post-remediation groundwater monitoring has ceased. He was working with the stakeholders to get a land covenant in place to facilitate case low threat case closure.

Former Paint Manufacturing Facility, San Leandro, California: Senior Project Manager for a former paint manufacturing facility contaminated with various chlorinated and non-chlorinated volatile organic compounds (VOCs). The project consisted of environmental investigations, agency liaison, and the operation and maintenance of a multi-phase extraction treatment system. The team successfully implemented a carbohydrate injection program, after active mechanical remediation reached asymptotic recovery, to increase the rate of reductive dechlorination to accelerate the timeframe to regulatory case closure.

Service Station Site, Fremont, California: Senior Project Manager for a service station that has petroleum hydrocarbons impacts in the first water-bearing zone, in an aquitard, and the Newark Aquifer. He was given this site to manage, and he completely reevaluated the conceptual site model during the production of a remedial action plan proposing the installation of multiple groundwater extraction recirculation wells screened in the Newark Aquifer. He convinced the client to not invest in the \$1,800,000 remediation project and to challenge the regulatory agency. He was successful in negotiating with the regulatory agency that remediation in the drinking water aquifer was not necessary. Allowing the client to pursue a more cost feasible remedial solution.

Former Bulk Terminal, Rio Vista, California: Senior Project Manager for a former bulk terminal with LNAPL detections directly adjacent to the Sacramento River. The site had been utilized by many businesses in its history and the first known crude oil above ground storage tank (AST) was onsite as early as 1896. Defined the extent of hydrocarbons in soil and groundwater, including LNAPL plume. Planned and submitted a remedial excavation along the Sacramento River to the Army Corps of Engineers and received approval without further review. During negotiations with the RWQCB, successfully negotiated a soil cleanup goal of 1,000 milligrams per kilogram (mg/kg) total petroleum hydrocarbons (TPH), which saved the client hundreds of thousands of dollars in cleanup costs.

Brandon S. Wilken, PG

Principal Geologist



EDUCATION

B.S., Geology, 1996, University of Nebraska-Lincoln

REGISTRATIONS/ CERTIFICATIONS

PG 7564 (California)

OSHA 8 hour Refresher

PROFESSIONAL AFFILIATIONS

California Groundwater Resource Association (GRA)

Geologic Society of America (GSA) – Hydrogeology Division

As a Principal Geologist for Ninyo & Moore, Mr. Wilken has 25 years of experience in the Environmental industry and started his career working in the field all over North America for a hard rock mineral exploration company. His experience in field geophysics led him to the contaminant assessment and remediation industry, providing professional geologic services including environmental hydrogeology, site investigation, remedial planning and implementation, health risk screening, due diligence, regulatory negotiations, and litigation support. Mr. Wilken has lead investigation and remediation projects driving risk-based solutions to successfully close environmental projects and reduce client's costs. He works closely with regulators, stakeholders, and clients to negotiate effective solutions utilizing sound science, strong technical expertise, and clear communication skills. Mr. Wilken has completed projects for a wide range of clients, including major oil companies, municipalities, manufacturing groups, and individual small business owners.

EXPERIENCE

Aerospace Manufacturing, Confidential Manufacturing Business, Torrance, City, California: Principal Geologist for the PFAS assessment at an operating Aerospace manufacturing facility. Assessed PFAS in soil, wastewater effluent, storm water, and groundwater by advancing five soil borings, installing three monitoring wells, collecting wastewater effluent, municipal water, and storm water samples. The data was compared, and recommendations were provided to the RWQCB.

Major Oil Company Refinery, Martinez, California: Principal Geologist for the environmental services at a 640-acre refining complex. The team is developing a PFAS assessment strategy for the facility to comply with a RWQCB request for assessment. Furthermore, the project team was planning to demolish an old wastewater treatment pond and developing a replacement treatment facility. Lastly the team operated, maintained, and optimized 27 groundwater extraction systems for contaminant plume control, to limit impacts to adjacent wetlands and surface water bodies.

S Street Redevelopment Project, Sacramento, California: Principal Geologist for the soil, soil vapor, and groundwater assessment and in situ ELSTM and zero valent iron injections to remediate site CVOC's. Assessment included advancement of soil borings, installation of groundwater monitoring and soil vapor wells, and routine sampling. Remedial activities included closing an UST in-place and injecting approximately 6,900 pounds of ELSTM and 58,000 pounds of zero valent iron into targeted areas. Interfaced with multiple stakeholders and agencies including property owner/client (Capitol Area Development Authority), City of Sacramento, RWQCB, and SCEMD.

Former Orchard Supply Facility, Sacramento, California: Principal Geologist for in situ EHC® injections to remediate site VOC's. Approximately 24,525 gallons of 30% EHC® slurry was injected into the subsurface; approximately 1,272 gallons of EHC® slurry was injected into the shallow zone aquifer; and approximately 23,253 gallons of EHC® slurry was injected into the deep zone aquifer. Interfaced with multiple stakeholders and agencies including property owner, client (Capitol Area Development Authority), DTSC, City of Sacramento, RWQCB, and SCEMD.

Stewart's Automotive, Sacramento, California: Principal Geologist for soil, soil vapor, and groundwater assessments, SVE system operation, and in situ

Brandon S. Wilken

Principal Geologist

EDS-ERTM and zero valent iron injections to remediate site CVOC's. Assessment included vertical delineation of groundwater, the installation of soil vapor wells, and routine sampling. Remedial activities included upgrading and operating an SVE system and the injection of approximately 31,900 pounds of EDS-ERTM; 19,900 pounds of mZVI; and 82 liters of KB-1 into targeted areas. Interfaced with multiple stakeholders and agencies including property owner/client, site tenant, City of Sacramento, Caltrans, RWQCB, and SCEMD.

Manufacturing Facilities, San Carlos, California: Principal Geologist and previous Senior Project Manager for assessment and remediation of PCBs and CVOCs at two adjacent manufacturing facilities. Project required managing corrective action account between two clients that at times had competing interests. Also, over saw the sale of one of the properties and the development of a plan to meet redevelopment goals which included a cap for PCBs, stormwater infrastructure decontamination, and other redevelopment activities.

Ecodyne Pond Site, Windsor, California: Principal Geologist for the assessment and remediation of a former wood treatment facility that utilized creosote and pentachlorophenol to treat lumber. The facility also had a lead dip-treatment tank for coating metal hardware. Brandon's team designed a remedial excavation to remove residual dioxin, lead, and poly aromatic hydrocarbons from soil at the site. The excavation extended offsite, which involved removing soil beneath a concrete-lined drainage ditch that conveyed stormwater from the site to a nearby creek. In addition, a natural gas transmission line was located approximately 2 to 4 feet below the grade of the drainage ditch. To minimize potential damage, Brandon's team worked closely with the owner of the natural gas line and excavated soil by hand digging around the natural gas line. The work was completed safely without incident. A total of 15,587 tons of non-hazardous and 6,411 tons of hazardous soil were excavated, and 4,718,739 gallons of water were extracted, and properly handled and disposed of offsite. The team also provided technical assistance to the client's legal team prior to and during remedial activities for several lawsuits related to the site. All lawsuits were resolved in our client's favor.

Ranch Headquarters, Woodland, California: Principal Geologist and previous Senior Project Manager for fixed fee remediation of a several acre light non aqueous phase liquid plume near a network of irrigation canals at an operating ranch/farm headquarters. He managed a cost cap and a pollution liability limit insurance policy to provide long term liability protection for the client. This project also utilized a land discharge permit obtained from the RWQCB to discharge treated groundwater from the multi-phase extraction treatment system. Successfully negotiated with the RWQCB to shut down and remove the remediation system after no reoccurrences of LNAPL were observed and approximately 1 month after the treatment system's mass removal rate went asymptotic. Post-remediation groundwater monitoring has ceased. He was working with the stakeholders to get a land covenant in place to facilitate case low threat case closure.

Former Paint Manufacturing Facility, San Leandro, California: Senior Project Manager for a former paint manufacturing facility contaminated with various chlorinated and non-chlorinated volatile organic compounds (VOCs). The project consisted of environmental investigations, agency liaison, and the operation and maintenance of a multi-phase extraction treatment system. The team successfully implemented a carbohydrate injection program, after active mechanical remediation reached asymptotic recovery, to increase the rate of reductive dechlorination to accelerate the timeframe to regulatory case closure.

Service Station Site, Fremont, California: Senior Project Manager for a service station that has petroleum hydrocarbons impacts in the first water-bearing zone, in an aquitard, and the Newark Aquifer. He was given this site to manage, and he completely reevaluated the conceptual site model during the production of a remedial action plan proposing the installation of multiple groundwater extraction recirculation wells screened in the Newark Aquifer. He convinced the client to not invest in the \$1,800,000 remediation project and to challenge the regulatory agency. He was successful in negotiating with the regulatory agency that remediation in the drinking water aquifer was not necessary. Allowing the client to pursue a more cost feasible remedial solution.

Former Bulk Terminal, Rio Vista, California: Senior Project Manager for a former bulk terminal with LNAPL detections directly adjacent to the Sacramento River. The site had been utilized by many businesses in its history and the first known crude oil above ground storage tank (AST) was onsite as early as 1896. Defined the extent of hydrocarbons in soil and groundwater, including LNAPL plume. Planned and submitted a remedial excavation along the Sacramento River to the Army Corps of Engineers and received approval without further review. During negotiations with the RWQCB, successfully negotiated a soil cleanup goal of 1,000 milligrams per kilogram (mg/kg) total petroleum hydrocarbons (TPH), which saved the client hundreds of thousands of dollars in cleanup costs.

Appendix B -

Assessor's Information and Questionnaires

PHASE I ESA/AI REQUIREMENTS

According to the All Appropriate Inquiry (AAI, 40 CFR 312) requirements and ASTM (E 1527-05) guidance on conducting Phase I Environmental Site Assessments, the "user" of the assessment must provide the following information, if available, to the environmental professional in order to qualify for Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001. Please check yes or no and provide any additional information you may have regarding the site. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

(1) Environmental cleanup liens that are filed or recorded against the site (40 CFR 132.25).

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?

☐ Yes

☐ No

If yes, please explain:

(2) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).

Are you aware of any activity use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

☐ Yes

☐ No

If yes, please explain:

(3) Specialized knowledge or experience of the person/department requesting the Phase I ESA and seeking to qualify for the landowner liability protections (40 CFR 312.28).

As the user of this ESA, do you have any specialized knowledge or experience related to the property or adjoining properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

☐ Yes

☐ No

If yes, please explain:

(4) Relationship of the purchase price to the fair market value of the property, if it were not contaminated (40 CFR 312.29).

Does the purchase price offered for this property reasonably reflect the fair market value of the property? If there is a difference between the purchase price and the fair market value, have you considered whether the lower purchase price is because contamination is known or believed to be at the property?

Please discuss:

(5) Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

(a) Do you know the past uses of the property?

(b) Do you know of specific chemicals that are present or once were present at the property?

(c) Do you know of spills or other chemical releases that have taken place at the property?

(d) Do you know of any environmental cleanups that have taken place or are ongoing at the property?

☐ Yes

☐ No

If yes, please explain:

(6) The degree of obviousness of the presence or likely presence of contamination at the property and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

☐ Yes

☐ No

If yes, please explain:

Print Name

Signature

Date

Site Name: _____

Site Address: _____

Type of Business: _____

Current Owner: _____

Dates of Ownership: _____ to _____

Previous Owner: _____

Dates of Ownership: _____ to _____

Type(s) of Business: _____

Date of Original Construction of Site Building(s): _____

BACKGROUND & USE

What is the current use of the property?

☐	Hotel/Motel	☐	Industrial/Storage/Warehouse: Type:
☐	Warehouse (type):	☐	Vacant Land/Farming/Agricultural/Cattle Grazing
☐	Office	☐	Multi-Family Residential
☐	Retail	☐	Other:

What is the intended future use of the property? _____

Site Tenant History

Year(s)	Tenant / Type of Business

Please fill in the following information regarding the site utilities, as appropriate and indicate the date service was originally initiated/installed:

Water Provider: _____

Sewer Provider: _____

Electrical Provider: _____

Natural Gas Provider: _____

Is the property currently used, or previously been used, for an industrial or manufacturing operation, as a gasoline station, a motor repair facility, a commercial printing facility, a dry cleaners, a photo developing laboratory, a junkyard or a landfill, or as a waste treatment, storage, disposal, processing or recycling facility?

___ Yes Type: _____

___ No

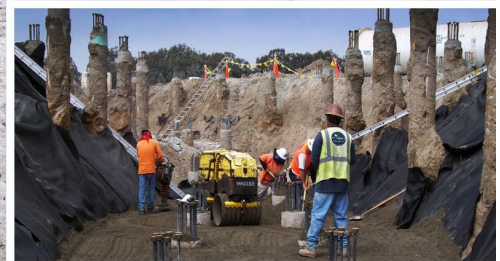
___ Unknown

LIMITED HAZARDOUS BUILDING MATERIALS SURVEY

Two Structures within the Planned Anthony Chabot Sewer Line Vicinity
Redwood Road
Castro Valley, California

MIG, Inc.
2055 Junction Avenue, Suite 205
San Jose, California 94533

November 20, 2024 | Project No. 404752002

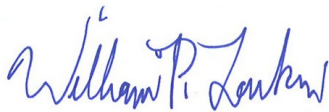


LIMITED HAZARDOUS BUILDING MATERIALS SURVEY

Two Structures within the Anthony Chabot Sewer Line Vicinity
Redwood Road
Castro Valley, California

Mr. Mike Campbell
MIG, Inc.
2055 Junction Avenue, Suite 205 | San Jose, California 95131

November 20, 2024 | Project No. 404752002



William P. Larkin
Principal Environmental Scientist
DOSH Certified Asbestos Consultant
(No. 99-2688)
DPH Certified Lead Inspector/Assessor and Project Monitor
(Nos. 1284/1285)

WPL

Distribution: (1) Addressee (via e-mail)

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A – Certifications

B – Asbestos Laboratory Analytical Report and Chain-of-Custody Records

C – Lead-Containing Material Laboratory Analytical Report and Chain-of-Custody Records

D – CDPH Form 8552 - Lead Hazard Evaluation Report

1 INTRODUCTION

Ninyo & Moore was retained by MIG, Inc. (MIG/Client) to conduct a limited hazardous building materials survey (HBMS) at two structures within the planned Anthony Chabot Sewer Line vicinity located along Redwood Road in Castro Valley, California (Figures 1 and 2). Our services included the performance of limited, non-destructive suspect asbestos-containing materials (ACMs) and suspect lead-containing materials (LCMs) surveys and a review and quantification of miscellaneous hazardous building materials (potential mercury-containing thermostats/switches, PCB-containing items [transformers, light ballasts, etc.], fluorescent light tubes, exit signs, air conditioning units, and Freon™-containing refrigeration systems) within the project area. For the purposes of this assessment, LCM refers to both lead-based paint (LBP), as defined by the California Department of Public Health (CDPH) and U.S. Department of Housing and Urban Development (HUD) and other potential LCMs (including ceramic tile).

The survey sampling activities were performed in accordance with established guidelines for the assessment of ACM and LCM, and are based upon conditions at the SOS building at the time of the surveying/assessment activities. Our objective and scope of work for the sampling activities are presented below.

1.1 Involved Parties

The sampling activities were performed on November 8, 2024 by Ninyo & Moore personnel. Mr. William Larkin participated in and provided principal-level oversight and quality review and is a State of California Division of Occupational Safety and Health (DOSH)-Certified Asbestos Consultant (No. 99-2688) and a State of California Department of Public Health (DPH) Lead-related (CDPH)-certified Lead Inspector/Assessor and Project Monitor (Nos. 1284/1285). Professional certifications are presented in Appendix A.

1.2 User Reliance

This report may be relied upon and is intended exclusively for use by MIG. Any use or re-use of the findings, conclusions, and/or recommendations of this report by parties other than MIG is undertaken at said parties' sole risk.

2 OBJECTIVE AND SCOPE OF SERVICES

The purpose of this study is to provide information regarding current conditions within the two site structures to assist MIG related to the proposed demolition of each structure. Ninyo & Moore personnel performed the following services:

- Visual reconnaissance of the two structures to document homogeneous areas of hazardous building materials and locate suspect ACM and LCMs.
- Collection of eight bulk samples of suspect ACMs and submittal of these samples to a certified, independent laboratory for analysis of asbestos content via polarized light microscopy (PLM/EPA 600/R-93/116 Method).
- Collection of seven suspect LCM samples and submittal of these samples to a certified, independent laboratory for analysis of lead content (EPA Method SW-846 3050B/7000B).
- Visual assessment and quantification of potential mercury-containing thermostats/switches, PCB-containing items, fluorescent light tubes, exit signs, smoke detectors, air conditioning units, and Freon™-containing refrigeration systems.
- Preparation of this limited HBMS report, which presents our data and summarizes the assessed building materials. The report includes a site description, laboratory testing information, findings, conclusions, and recommendations, sample/site location maps, tables summarizing the building materials assessed, and the estimated quantities of identified materials.

3 SITE DESCRIPTION

Two structures were assessed during these sampling activities. The structures are located within the planned Anthony Chabot Sewer Line vicinity in the East Bay Regional Park District near the Redwood Canyon Golf Course (RCGC) and Lake Chabot along Redwood Road in Castro Valley, California. The building descriptions are as follows:

RCGC Pump Station - The RCGC Pump Station is located near the RCGC lake along Redwood Road (Figures 1 and 2) and encompasses approximately 100 square feet (SF). It is of wood construction with exterior wood walls and wood roofing (on a concrete pad/foundation). The finishes for the pump station included wood walls, concrete floors and wood ceilings.

Existing Comminutor- The existing comminutor (a facility to grind sewage waste into smaller pieces) encompasses approximately 120 SF and is located near the Anthony Chabot Regional Park Campground (Figures 1 and 2). The comminutor is of wood construction with exterior wood walls and wood roofing (on a concrete pad/foundation). Finishes of the comminutor include wood walls, concrete floors and wood ceilings.

4 PHYSICAL LIMITATIONS

No physical limitations were encountered within the two site structures during our sampling procedures. Underground utilities, such as suspect cementitious water lines or suspect insulated/coated gas or electrical lines were not assessed during these survey activities. If additional suspect materials and/or surfaces are encountered during site building demolition/renovation activities that have not been assessed, they should be assumed to be

asbestos and/or lead-containing and handled accordingly, or should be sampled and analyzed to assess whether they are asbestos and/or lead-containing.

5 SAMPLE COLLECTION AND ANALYSES

On November 8, 2024, the site buildings were assessed for the presence of ACMs, LCMs and miscellaneous hazardous building materials. The ACM and LCM surveys followed United States Environmental Protection Agency (EPA) guidelines, or industry standards, within the limitations of the scope of this assessment. Survey activities are discussed below.

5.1 Asbestos Survey

A preliminary visual assessment and bulk sampling survey of suspect ACMs were performed by Ninyo & Moore personnel. Representative samples of suspect ACMs were collected after identification of homogeneous sampling areas (areas in which the materials are consistent in color, texture, construction or application date, and general appearance). Each homogeneous area was observed for material type, location, condition, and friability. Representative samples were collected from each area (except from areas that were inaccessible). Samples were collected using EPA-recommended sampling procedures.

A total of eight bulk suspect asbestos samples were collected and analyzed. Building materials that were sampled and analyzed for the presence of asbestos are presented in Table 1.

After collection, the suspect ACM samples were transferred to EMSL Analytical, Inc., (EMSL) of San Leandro, California for analysis. EMSL is a laboratory accredited in the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fiber analysis. The samples were analyzed for the presence and quantification of asbestos fibers, using polarized light microscopy with dispersion staining (PLM/ds), in general accordance with EPA Method 600/R-93/116. The lower limit of reliable detection for asbestos using the PLM method is approximately 1 percent by volume. Currently, the EPA and the State of California stipulate that materials containing more than 1% asbestos constitute an ACM and the State of California stipulates that a material containing greater than 0.1% asbestos constitutes an asbestos-containing construction material (ACCM). Building materials that were sampled and analyzed for the presence of asbestos are presented in the attached Table 1, and the locations from which bulk asbestos samples were collected are shown on Figure 3. Materials in which no asbestos was detected are defined in Table 1 as “ND” (for “None Detected”) in the “Asbestos Content” column. Copies of the laboratory analytical reports and chain-of-custody records for suspect ACMs are presented in Appendix B. ACMs reported in the Ninyo & Moore survey are listed in Section 6.1 below.

5.2 Lead-Containing Materials Survey

After collection, the suspect LCM samples were also transferred to EMSL for analysis of total lead content by Flame Atomic Absorption Spectroscopy (Flame AAS/SW 846 3050B/7000B). EMSL is an American Industrial Hygiene Association-accredited Environmental Lead Laboratory (AIHA ELLA). Currently, the EPA stipulates what concentrations of lead in non-volatile components of surface coatings or materials indicate whether a material is considered to be lead-containing. The EPA stipulates that paint containing an amount equal to or in excess of 1 milligram per square centimeter (1.0 mg/cm²), or more than half of one percent (0.5%) by weight (or 5,000 milligrams per kilogram [mg/kg]), constitute a lead-based paint (LBP). Coatings with any detectable amount of reported lead would be considered lead-containing paint (LCP).

Paint that is chipping or peeling, or that may be readily removed from surfaces, and has a lead content equal to or more than 1,000 mg/kg, would require handling as a California Title 22 hazardous waste. The analytical results associated with paint chip samples collected from the building are summarized in Table 2 and copies of the laboratory analytical report and chain-of-custody record are presented in Appendix C. Sample locations are shown on Figure 3.

5.3 Miscellaneous Hazardous Building Materials Survey

A visual assessment of potential mercury-containing thermostats/switches, PCB-containing items (transformers, light ballasts, etc.), fluorescent light tubes, exit signs, smoke detectors, air conditioning units, and FreonTM-containing refrigeration systems was performed within the planned project areas. Materials observed within the two structures are listed in Table 3.

6 FINDINGS

A limited HBMS was performed at the two site structures to evaluate if potential hazards associated with the building materials, paint or other suspect LCMs and/or miscellaneous hazardous building materials may exist.

6.1 Asbestos-Containing Materials

Based upon the analytical results associated with these sampling activities, no ACMs were identified within the two sampled structures. However, if any part of the old pipeline is dug up and/or demolished, asbestos-containing packings and/or gaskets should be assumed to be contained within pipe valves and at joints.

6.2 Lead-Containing Materials

Seven paint chip samples were collected for analysis of lead content. Five of the seven paint samples were reported at less than their associated lead detection limits. The other two paint

samples (LBP-03/white paint located on a south exterior wood wall of the pump station and LBP-04/white paint located on a west exterior wood wall of the pump station) were reported at 0.063% by weight (or 630 mg/kg) and 0.059% by weight (or 590 mg/kg), respectively. Occupational Health and Safety Administration (OSHA) regulations apply whenever materials with any detectable amounts of lead are disturbed. A copy of the CDPH form 8552 “Lead Hazard Evaluation Report” for the project area is included in Appendix D.

6.3 Miscellaneous Hazardous Building Materials

No miscellaneous hazardous building materials were observed at the two site structures.

7 RECOMMENDATIONS

Since LCMs have been reported within the pump station, the following recommendations and precautions are provided:

- The identified LCMs reported at the pump station should not be disturbed. Any LCMs found in a damaged or non-intact condition should be abated and/or stabilized. Prior to renovation or demolition work that would disturb the identified LCMs a licensed lead abatement removal contractor should stabilize and/or remove the identified LCMs in compliance with the most recent applicable federal, state, and local laws, regulations, standards, and/or codes governing abatement, transport, and disposal of LCMs. All lead waste must be properly characterized prior to disposal to determine waste classification, packaging, transportation, and disposal requirements. ***While Ninyo & Moore provided an estimate of the quantity of LCMs present within the pump station (Table 2), it is the abatement contractor’s responsibility to assess the actual LCM quantities present.***
- There is a possibility that additional suspect ACMs, LCMs or other miscellaneous hazardous building materials may be discovered during building renovation and/or demolition activities. Therefore, Ninyo & Moore recommends that, should additional suspect materials not sampled or assessed in this report be uncovered during demolition/renovation activities, (a) samples of suspect materials should be collected for laboratory analysis and activities that may impact the materials should cease until laboratory analytical results are reviewed or (b) the materials should be assumed to be hazardous and handled as such.

8 LIMITATIONS

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and chemical analysis. Further assessment of potential adverse environmental impacts may be accomplished by conducting a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the areas evaluated. However, if additional suspect hazardous building materials are encountered during renovation/demolition activities, these materials should be sampled by qualified personnel, and analyzed for content prior to further disturbance. ***In addition, please note that quantities of identified hazardous building materials are approximate. It is the contractor's responsibility to assess the actual quantities of hazardous building materials present.***

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and analyses have been conducted by an independent laboratory that is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our findings, opinions, and recommendations are based on an analysis of the observed site conditions. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

Table 1 - Bulk Asbestos Sampling Results							
Sample I.D.	Date	Material Location	Sample Description	Friable Y/N	Quantity	Condition	Asbestos Content
ASB-01	11/8/2024	Redwood Canyon Golf Course Pump Station/Roof	Roof Assembly	NA	NA	NA	ND
ASB-02	11/8/2024	Redwood Canyon Golf Course Pump Station/Entrance Floor	Concrete	NA	NA	NA	ND
ASB-03	11/8/2024	Redwood Canyon Golf Course Pump Station/Central Floor	Concrete	NA	NA	NA	ND
ASB-04	11/8/2024	Comminutor/Stairs	Concrete	NA	NA	NA	ND
ASB-05	11/8/2024	Comminutor/Central Floor	Concrete	NA	NA	NA	ND
ASB-06	11/8/2024	Comminutor/North Roof Corner	Foam Material with Tape	NA	NA	NA	ND
ASB-07	11/8/2024	Comminutor/North Roof (Under Metal)	Black Vapor Barrier	NA	NA	NA	ND
ASB-08	11/8/2024	Comminutor/East Roof (Under Metal)	Black Vapor Barrier	NA	NA	NA	ND

NOTES:

Analysis by Polarized Light Microscopy (PLM/EPA 600/R-93/116 Method).

NA = Not Applicable

ND = None detected

CH = Chrysotile

Table 2 - Lead-Containing Material Sampling Results

Sample I.D.	Building	Sample Location	Substrate/Surface	Sample Description (Color / # of Layers / Substrate)	Estimated Surface Area (Square Feet [SF] or Linear Feet [LF])	Condition	Total Lead	
							Weight Percent	Parts per Million (or mg/kg)
LBP-01	Pump Station	North Exterior Pipe	Metal	Blue/1/Metal	NA	Intact	<0.018	180
LBP-02	Pump Station	North Exterior Pipe	Metal	Black/1/Metal	NA	Intact	<0.016	160
LBP-03	Pump Station	South Exterior Wall	Wood	White/1/Wood	100 SF	Non-Intact	0.063	630*
LBP-04	Pump Station	West Exterior Wall	Wood	White/1/Wood	100 SF	Non-Intact	0.059	590*
LBP-05	Comminutor	North Exterior Wall	Wood	Brown/2/Wood	NA	Intact	<0.0080	<80
LBP-06	Comminutor	West Exterior Corner	Wood	Brown/2/Wood	NA	Intact	<0.0084	<84
LBP-07	Comminutor	South Metal Roof	Metal	Brown/1/Metal	NA	Intact	<0.031	310

NOTES:

Total lead analyzed in paint chips by Flame Atomic Absorption Spectroscopy/Flame AAS (EPA Test Method EPA SW-846 3050B/7000B).

mg/kg = Milligrams per kilogram

SF = Square feet

* indicates lead-containing paint that is less than 5,000 mg/kg (or <0.5% by weight)

Estimated quantities are not intended for use in bidding calculations.

Table 3 - Miscellaneous Hazardous Building Materials Survey Results

Building/Room	Transformers	Light Ballasts	Mercury Thermostats	A/C-Heating Units	Fluorescent Light Tubes	Exit Signs	Fire Doors	Freon Systems/ Refrigerators
Redwood Golf Course Pump Station	0	0	0	0	0	0	0	0
Comminutor	0	0	0	0	0	0	0	0

NOTES:

A/C = Air Conditioning



FIGURES

404752002.dwg 11/18/2024 AEK



NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: USGS, 2021



SCALE (FEET)
0 2,000 4,000

FIGURE 1

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

SITE LOCATION
HAZARDOUS BUILDING MATERIALS SURVEY
CHABOT SEWER LINE, 9999 REDWOOD ROAD
CASTRO VALLEY, CALIFORNIA
404752002 | 11/24

404752002.dwg 11/18/2024 AEK



NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCES: GOOGLE EARTH, 2024

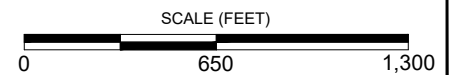
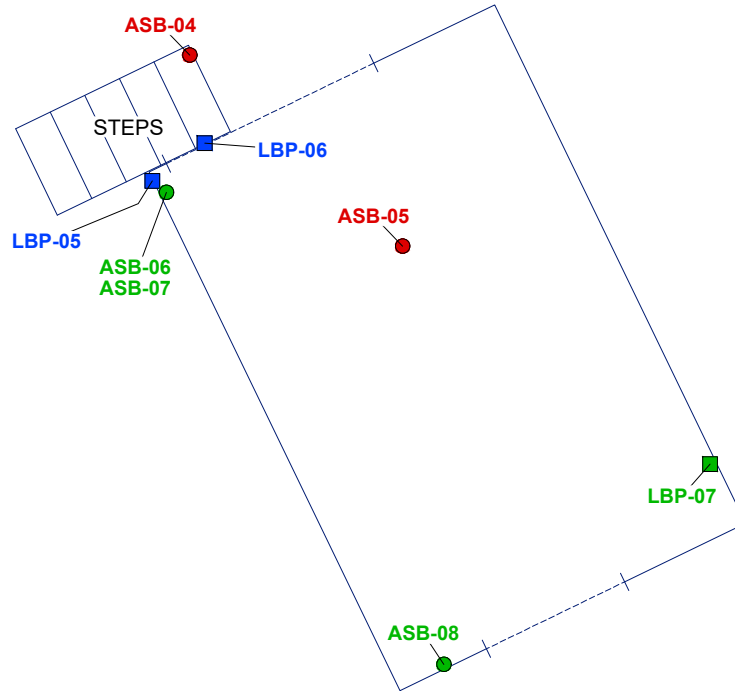
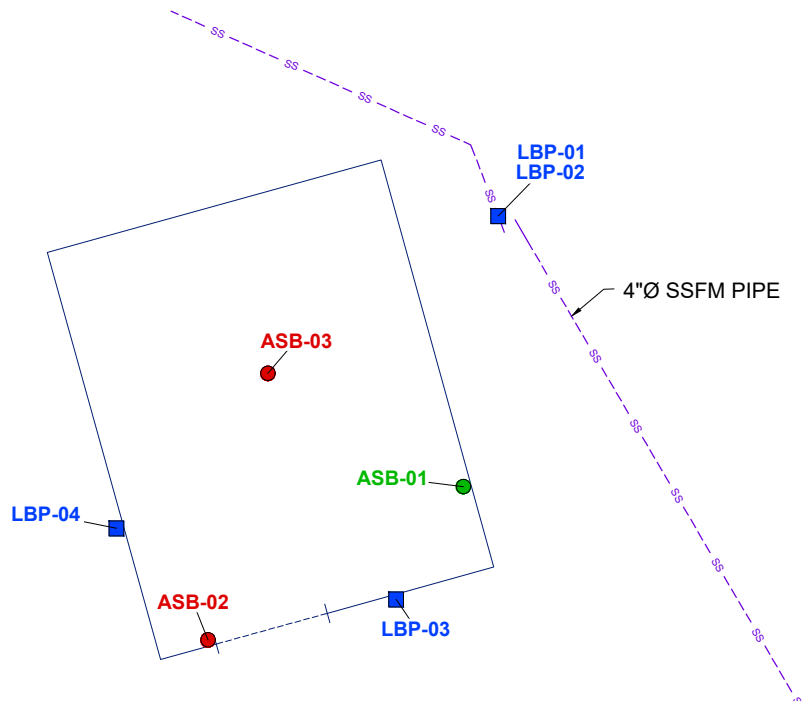


FIGURE 2

CAMPGROUND COMMINUTOR



REDWOOD CANYON GOLF COURSE PUMP HOUSE



LEGEND

- ASB-02** ● SUSPECT ASBESTOS SAMPLE
- ASB-01** ● SUSPECT ASBESTOS ROOF SAMPLE
- LBP-01** ■ SUSPECT LEAD-BASED PAINT SAMPLE
- LPB-07** ■ SUSPECT LEAD-BASED PAINT ROOF SAMPLE

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



FIGURE 3



APPENDIX A

Certifications

DEPARTMENT OF INDUSTRIAL RELATIONS

Division of Occupational Safety and Health-Asbestos Certification

1750 Howe Avenue, Suite 460

Sacramento, CA 95825

(916) 574-2993 Office <http://www.dir.ca.gov/dosh/asbestos.html> actu@dir.ca.gov

911222688C

193

October 25, 2023

William Patrick Larkin
4 Miramonte Road
Orinda CA 94563

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

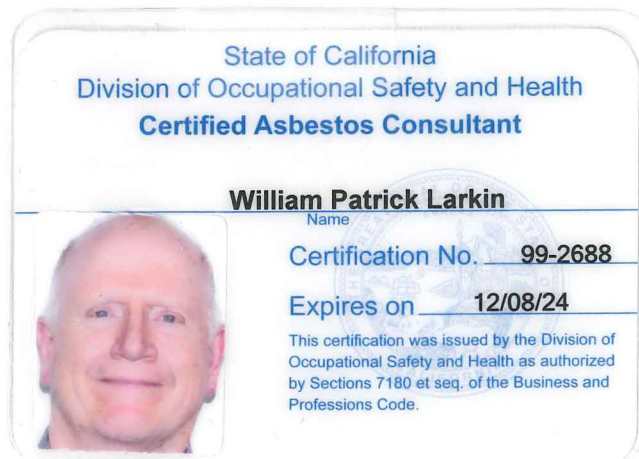
Please contact our office at the above address or email w any changes in your contact/ mailing information within 15 days of the change.

Sincerely,

Kevin Graulich
Principal Safety Engineer

Attachment: Certification Card

cc: File



Renewal – Card Attached



STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



William Larkin

CERTIFICATE TYPE:

Lead Inspector/Assessor

Lead Project Monitor

NUMBER:

LRC-00001285

LRC-00001284

EXPIRATION DATE:

7/3/2025

7/3/2025

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD



STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



Nathan Eubanks

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00010612

EXPIRATION DATE:

11/14/2024

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD



APPENDIX B

Asbestos Laboratory Analytical Report and Chain-of-Custody Records



EMSL Analytical, Inc.

464 McCormick Street San Leandro, CA 94577

Tel/Fax: (510) 895-3675 / (510) 895-3680

<http://www.EMSL.com> / sanleandrolab@emsl.com

EMSL Order: 092420352

Customer ID: NOMO22

Customer PO: 999999

Project ID:

Attention: Bill Larkin

Ninyo & Moore

2020 Challenger Drive

Suite 103

Alameda, CA 94501

Project: 999999 - EBRPD PUMPHOUSES

Phone: (510) 385-5054

Fax: (510) 633-5646

Received Date: 11/08/2024 10:30 AM

Analysis Date: 11/11/2024

Collected Date: 11/08/2024

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
ASB-01 092420352-0001	REDWOOD CANYON GC PUMPHOUSE ROOF - ROOF ASSEMBLY	Black Fibrous Homogeneous	10% Glass	5% Quartz 70% Matrix 15% Non-fibrous (Other)	None Detected
ASB-02 092420352-0002	REDWOOD CANYON GC PUMPHOUSE ENTRANCE - CONCRETE	Gray Non-Fibrous Homogeneous		40% Quartz 40% Ca Carbonate 20% Non-fibrous (Other)	None Detected
ASB-03 092420352-0003	REDWOOD CANYON GC PUMPHOUSE CENTRAL FLOOR - CONCRETE	Gray Non-Fibrous Homogeneous		40% Quartz 40% Ca Carbonate 20% Non-fibrous (Other)	None Detected
ASB-04 092420352-0004	CAMP GROUND PUMPHOUSE STAIRS - CONCRETE	Gray Non-Fibrous Homogeneous		40% Quartz 40% Ca Carbonate 20% Non-fibrous (Other)	None Detected
ASB-05 092420352-0005	CAMP GROUND PUMPHOUSE CENTRAL FLOOR - CONCRETE	Gray Non-Fibrous Homogeneous		40% Quartz 40% Ca Carbonate 20% Non-fibrous (Other)	None Detected
ASB-06-Foam 092420352-0006	CAMP GROUND PUMPHOUSE NORTH ROOF CORNER - FOAM W/TAPE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-06-Tape 092420352-0006A	CAMP GROUND PUMPHOUSE NORTH ROOF CORNER - FOAM W/TAPE	Black Fibrous Homogeneous	10% Synthetic	70% Matrix 20% Non-fibrous (Other)	None Detected
ASB-07 092420352-0007	CAMP GROUND PUMPHOUSE NORTH ROOF UNDER METAL - VAPOR BARRIER	Black Fibrous Homogeneous	60% Cellulose	20% Matrix 20% Non-fibrous (Other)	None Detected
ASB-08 092420352-0008	CAMP GROUND PUMPHOUSE EAST ROOF UNDER METAL - VAPOR BARRIER	Black Fibrous Homogeneous	60% Cellulose	20% Matrix 20% Non-fibrous (Other)	None Detected



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<http://www.EMSL.com> / sanleandrolab@emsl.com

EMSL Order: 092420352

Customer ID: NOMO22

Customer PO: 999999

Project ID:

Analyst(s)

Damaris Pineda Ayala (9)

Oscar Merino, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884

Initial report from: 11/11/2024 13:37:48



EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

California Customers

EMSL Order Number / Lab Use Only

#092420352

EMSL Analytical, Inc.
464 McCormick St.
San Leandro, CA 94577

PHONE: (510) 895-3675
EMAIL: SanLeandroLab@emsl.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information	Customer ID:	Billing ID:
	Company Name: <u>Ninguo & Moore</u>	Company Name:
	Contact Name: <u>William Larkin</u>	Billing Contact:
	Street Address:	Street Address:
	City, State, Zip: <u>Alameda</u> Country:	City, State, Zip: Country:
	Phone:	Phone:
Email(s) for Report: <u>wlarkin@ninguomoores.com</u>		Email(s) for Invoice:

Project Information	
Project Name/No: <u>EBRPD Pump houses 999999</u>	Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: State of Connecticut (CT) must select project location:
Sampled By Name: <u>WPL</u>	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Signature:	No. of Samples in Shipment

Turn-Around-Time (TAT)	
☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☒ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week	
TEM Air 3-8 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.	

PCM Air ☐ NIOSH 7400 ☐ NIOSH 7400 w/ 8hr. TWA PLM - Bulk (reporting limit) ☒ PLM EPA 600/R-93/116 (<1%) ☐ PLM EPA NOB (<1%) ☐ POINT COUNT ☐ 400 (<0.25%) ☐ 1,000 (<0.1%) ☐ 1,200 (<0.08%) POINT COUNT w/ GRAVIMETRIC ☐ 400 (<0.25%) ☐ 1,000 (<0.1%) ☐ 1,200 (<0.08%)	Test Selection TEM - Air ☐ AHERA 40 CFR, Part 763 ☐ CARB Modified AHERA ☐ NIOSH 7402 ☐ EPA Level II ☐ ISO 10312* TEM - Bulk ☐ TEM EPA NOB ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%) TEM - Settled Dust ☐ Microvac - ASTM D5755 ☐ Wipe - ASTM D6480 ☐ Qualitative via Filtration Prep ☐ Qualitative via Drop Mount Prep	Soil - Rock - Vermiculite (reporting limit)* ☐ PLM CARB 435 - Level A (<0.25%) ☐ PLM CARB 435 - Level B (<0.1%) ☐ TEM CARB 435 - Level B (<0.1%) ☐ TEM CARB 435 - Level C (<0.01%) ☐ CARB Guidance Compliance Prep ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%) ☐ PLM EPA 600/R-93/116 with milling prep (<0.1%) ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%) Other
--	---	---

*Please call with your project-specific requirements.

☐ Positive Stop - Clearly Identified Homogeneous Areas (HA)	Filter Pore Size (Air Samples) ☐ 0.8um ☐ 0.45um
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Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
ASB-01	Redwood Canyon GC Pumphouse roof	roof Assembly	
ASB-02	Redwood Canyon GC Pumphouse entrance	Concrete	
ASB-03	Redwood Canyon GC Pumphouse Central Floor	1	
ASB-04	Camp Ground pumphouse stairs	Concrete	
ASB-05	Camp Ground pumphouse central floor	1	
ASB-06	Camp Ground pumphouse North roof corner	Foam w/ tape	
ASB-07	Camp Ground pumphouse North roof under metal	barrier	
ASB-08	Camp Ground Pumphouse West East roof under metal	1	

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment:	Sample Condition Upon Receipt:
Relinquished by: <u>Nathan Eubanks</u>	Date/Time: <u>11/8</u>
Relinquished by:	Date/Time:
Received by: <u>Emily Fischer w/it</u>	Date/Time: <u>11-8-24</u>
Received by:	Date/Time: <u>10:30am</u>

Controlled Document - COC-51 Asbestos CA Clients R2 02/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



APPENDIX C

Lead-Containing Material Laboratory Analytical Report and Chain-of-Custody Records



LA Testing

5431 Industrial Drive, Huntington Beach, CA 92649

Phone/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com>

hblab@latesting.com

LA Testing Order: 332421823

CustomerID: NOMO22

CustomerPO:

ProjectID:

Attn: **William Larkin**
Ninyo & Moore
2020 Challenger Drive
Suite 103
Alameda, CA 94501

Phone: (510) 343-3000
Fax: (510) 633-5646
Received: 11/11/2024 10:15 AM
Collected: 11/8/2024

Project: **EBRPD PUMP HOUSES- 949999**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample	Description	Collected	Analyzed	Weight	RDL	Lead Concentration
LBP-01		11/8/2024	11/12/2024	0.1117 g	0.018 % wt	<0.018 % wt
332421823-0001		Site: RED CANYON GC PUMPHOUSE NORTH EXT PIPE				
LBP-02		11/8/2024	11/12/2024	0.1217 g	0.016 % wt	<0.016 % wt
332421823-0002		Site: RED CANYON GC PUMPHOUSE NORTH EXT PIPE				
LBP-03		11/8/2024	11/12/2024	0.2852 g	0.0080 % wt	0.063 % wt
332421823-0003		Site: RED CANYON GC PUMPHOUSE SOUTH EXT. WALL				
LBP-04		11/8/2024	11/12/2024	0.2622 g	0.0080 % wt	0.059 % wt
332421823-0004		Site: RED CANYON GC PUMPHOUSE WEST EXT.WALL				
LBP-05		11/8/2024	11/12/2024	0.2666 g	0.0080 % wt	<0.0080 % wt
332421823-0005		Site: F CAMP GROUND PUMPHOUSE NORTH EXT. WALL				
LBP-06		11/8/2024	11/12/2024	0.2371 g	0.0084 % wt	<0.0084 % wt
332421823-0006		Site: WEST EXT. CORNER CAMPGROUND PUMPHOUSE				
LBP-07		11/8/2024	11/12/2024	0.0653 g	0.031 % wt	<0.031 % wt
332421823-0007		Site: SOUTH METAL ROOF CAMP GROUND PUMPHOUSE				

Michael Chapman, Laboratory Manager
or other approved signatory

LA Testing maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by LA Testing. LA Testing bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

Analysis following Lead in Paint by LA Testing SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by LA Testing Huntington Beach, CA AIHA LAP, LLC-ELLAP Accredited #101650, CA ELAP 1406

Initial report from 11/12/2024 16:16:24

EMSL

Lead Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

200 Route 130 North

Cinnaminson, NJ 08077

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

#332421823

PHONE: (800) 220-3675

EMAIL: CinnaminsonLeadLab@emsl.com

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name: <i>Mingo & Moore</i>		Company Name:	
Contact Name: <i>William Larkin</i>		Billing Contact:	
Street Address:		Street Address:	
City, State, Zip: <i>Alameda</i>		City, State, Zip:	
Country:		Country:	
Phone:		Phone:	
Email(s) for Report: <i>william.larkin@mingoandmoore.com</i>		Email(s) for Invoice:	
Project Information			
Project Name/No: <i>EBRPD Pump houses - 999999</i>		Purchase Order:	
EMSL UMS Project ID (If applicable, EMSL will provide)		State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)	
Sampled By Name: <i>WPL</i>		Sampled By Signature:	
No. of Samples in Shipment			
Turn-Around-Time (TAT)			
☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☒ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week			
Please call ahead for large projects and/or turn-around times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am			
MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT
CHIPS* ☒ % by wt. ☐ ppm (mg/kg) ☐ mg/cm² *Chips reporting Limit based on a minimum 0.25g sample weight. Not appropriate for Ceramic Tiles - XRF is recommended.	SW 846-7000B	Flame Atomic Absorption	*Please select reporting limit on left. -0.008% -80 ppm -mg/cm² - RL is Variable
	SW 846-6010D*	ICP-OES	*Please select reporting limit on left. -0.0004% -40 ppm -mg/cm² - RL is Variable
	NIOSH 7082	Flame Atomic Absorption	4µg/filter
AIR	NIOSH 7303M	ICP-OES	1.0µg/filter
	NIOSH 7303M	ICP-MS	0.05µg/filter
WIPE ☐ ASTM ☐ NON-ASTM *If no box is checked, non-ASTM Wipe is assumed	SW 846-7000B	Flame Atomic Absorption	10µg/wipe
	SW 846-6010D*	ICP-OES	1.0µg/wipe
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
TTLC	22 CCR App. II, 7000B	Flame Atomic Absorption	40mg/kg (ppm)
	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
Soil	SW 846-7000B	Flame Atomic Absorption	40mg/kg (ppm)
	SW 846-6010D*	ICP-OES	2mg/kg (ppm)
Wastewater	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
Unpreserved			
Preserved with HNO3 ☐ PH<2	EPA 200.7	ICP-OES	0.020 mg/L (ppm)
Drinking Water	EPA 200.5	ICP-OES	0.003 mg/L (ppm)
Unpreserved			
Preserved with HNO3 ☐ PH<2	EPA 200.8	ICP-MS	0.001 mg/L (ppm)
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter
Other:			

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
LBP-01	Redcanyon GC Pumphouse North Ext pipe	Blue/1/metal	
LBP-02	Redcanyon GC Pumphouse North Ext. pipe	Black/1/metal	
LBP-03	Redcanyon GC Pumphouse South Ext. wall	White/1/wood	
LBP-04	Redcanyon GC Pumphouse West ext. wall		
LBP-05	#Camp Ground Pumphouse North Ext. wall	Brown/2/wood	

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: <i>Nathan Eubanks</i>	Date/Time: <i>11/08</i>	Received by: <i>Emily Fischer w/IT</i>	Date/Time: <i>11-8-24</i>
Relinquished by: <i>Emily Fischer</i>	Date/Time: <i>11-8-24 4:00pm</i>	Received by: <i>Emily Mendora C/IT (FX)</i>	Date/Time: <i>11/11/24 10:30am</i>

Controlled Document CDD-25 Lead R19 08/16/2024

*6010C Available Upon Request

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Lead Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
464 McCormick St.
San Leandro, CA 94577

PHONE: (510) 895-3675

EMAIL: SanLeandroLab@emsl.com

#332421823

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

[illegible]

Controlled Document - CDC-25 Lead R17 05/09/2022

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



APPENDIX D

CDPH Form 5882 – Lead Hazard Evaluation Report

LEAD HAZARD EVALUATION REPORT**Section 1 — Date of Lead Hazard Evaluation** 11/8/2024**Section 2 — Type of Lead Hazard Evaluation (Check one box only)**☐ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☒ Other (specify) Chip Sampling**Section 3 — Structure Where Lead Hazard Evaluation Was Conducted**

Address [number, street, apartment (if applicable)]		City	County	Zip Code
17007 Redwood Road		Oakland	Alameda	94546
Construction date (year) of structure	Type of structure		Children living in structure?	
1950s	☐ Multi-unit building ☐ School or daycare ☐ Single family dwelling ☒ Other Out Buildings		☐ Yes ☒ No ☐ Don't Know	

Section 4 — Owner of Structure (if business/agency, list contact person)

Name		Telephone number	
East Bay Regional Park District, c/o MIG, Inc./Mike Campbell		650/327-0429	
Address [number, street, apartment (if applicable)]		City	State
2055 Junction Ave., Suite 205		San Jose	California
			Zip Code
			95131

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

☒ No lead-based paint detected ☐ Intact lead-based paint detected ☐ Deteriorated lead-based paint detected
☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other

Section 6 — Individual Conducting Lead Hazard Evaluation

Name		Telephone number	
William P. Larkin		510/343-3000	
Address [number, street, apartment (if applicable)]		City	State
1301 Marina Village Parkway, Suite 110		Alameda	California
			Zip Code
			94501
CDPH certification number	Signature	Date	
1284/1285		11/13/2024	

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

N/A

Section 7 — Attachments

- A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656



1301 Marina Village Parkway, Suite 110 | Alameda, California 94501 | p. 510.343.3000

SAN DIEGO | IRVINE | LOS ANGELES | FONTANA | OAKLAND | SAN FRANCISCO | SACRAMENTO
SAN JOSE | PHOENIX | TUCSON | PRESCOTT | LAS VEGAS | DENVER | BROOMFIELD | HOUSTON

www.ninyoandmoore.com