DRAFT ENGINEERING EVALUATION

Montezuma Wetlands, LLC
1285 Collinsville Road, Suisun City, CA 94585
Facility #: 203615
Application #: 709283

I. BACKGROUND

Montezuma Wetlands, LLC (Montezuma Wetlands) has applied for an Authority to Construct and/or Permit to Operate for the following equipment:

S-1 Contaminated Sediment Remediation – Drying Stockpiles (0.7 acres)
Maximum Throughput: 200 ton/hr, 2,000 ton/day, 56,000 ton/yr
Abated by Foam Dust Suppressant (A-1) and Water Spray (A-2)

S-2 Contaminated Sediment Remediation – Offloading
Maximum Throughput: 200 ton/hr, 2,000 ton/day, 56,000 ton/yr
Abated by Foam Dust Suppressant (A-1)

S-3 Contaminated Sediment Remediation – Mixing
Maximum Throughput:
Sediment → 200 ton/hr, 2,000 ton/day, 56,000 ton/yr
Cement/Grout → 20 ton/hr, 200 ton/day, 5,600 ton/yr
Abated by Foam Dust Suppressant (A-1)

S-4 Contaminated Sediment Remediation – Loading
Maximum Throughput: 200 ton/hr, 2,000 ton/day, 56,000 ton/yr
Abated by Foam Dust Suppressant (A-1)

A-1 Foam Dust Suppressant
Make: Rusmar, Model: RusFoam OC (AC645)

A-2 Water Truck Spray

Montezuma Wetlands also applied for a Certificate of Exemption for the following equipment:

S-5 Tank #1 - Water Storage Tank (Pre-Treatment)
External Floating Roof Tank
Make: ModuTank Model: Custom, Capacity: 73,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-6 Tank #2 - Water Storage Tank (Post-Treatment)
Fixed Roof Tank
Make**:** Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-7 Tank #3 - Water Storage Tank (Post-Treatment)
Fixed Roof Tank
Make**:** Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

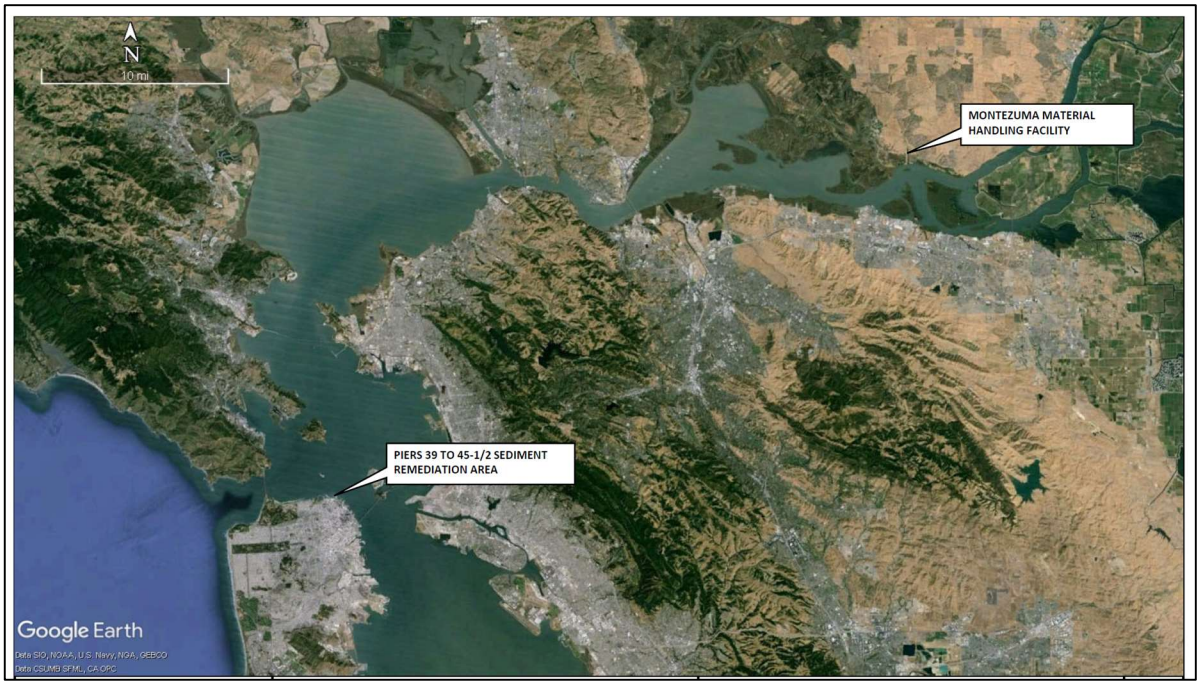
S-8 Tank #4 - Water Storage Tank (Post-Treatment)
Fixed Roof Tank
Make**:** Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-9 Tank #5 - Water Storage Tank (Post-Treatment)
Make**:** Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

Montezuma Wetlands will provide support to the Pacific Gas & Electric (PG&E) Sediment Remediation Project. The PG&E Sediment Remediation Project entails dredging submerged sediments at Piers 39 to 43½, which were impacted by a former manufactured gas plant. The dredging will include the removal of approximately 100,000 cubic yards of sediment across five remedial response areas (Areas A through E) within Piers 39 to 43½. The project duration, in total, will occur over a 5-to-7-year period for approximately six (6) months each year and will be implemented in phases with approximately 20,000 cubic yards excavated each year. It is anticipated that remedial construction activities will commence in mid-2024 (site preparation activities only) within water and sediment-handling activities commencing in late spring 2025.

The dredged sediment will be transported by barge to an upland material handling facility (MHF) at the Montezuma Wetlands where it will be offloaded and dried until the moisture content is sufficient enough for the sediment to be transported by trucks to licensed landfills. The locations of the Site and MHF are provided in **Figure 1**.

Figure 1: Location of PG&E Sediment Remediation Project and Montezuma Wetlands



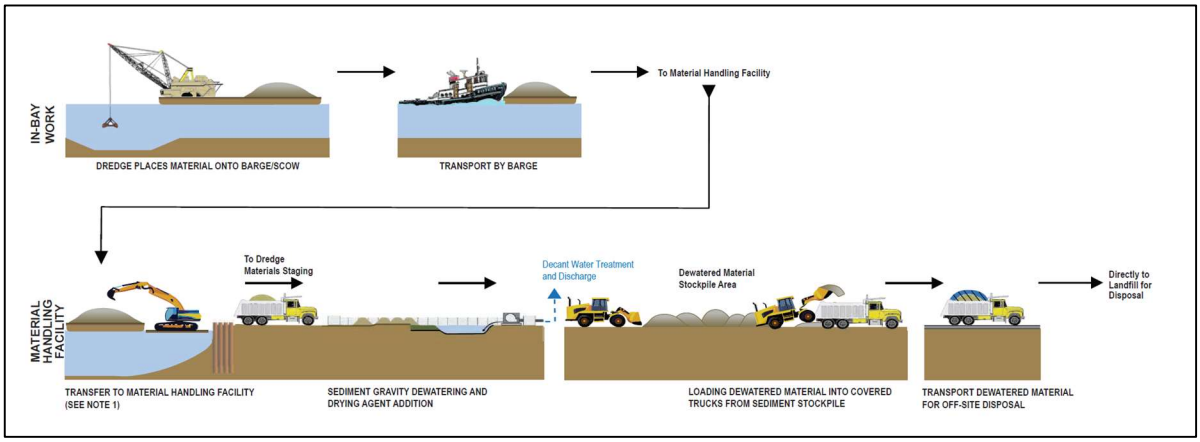
Activities at the MHF will include:

- Offloading and temporary stockpiling of dredged sediments and any debris.
- Drying of the sediments, as necessary, to load them into trucks.
- Collection of decant water, which will be treated, tested, and trucked to an offsite disposal facility or discharged under the appropriate permits, including the use of water for dust control, with appropriate permits/approvals.
- Transport of dewatered sediments to a pre-approved, regulated offsite disposal facility (e.g.,

a landfill).

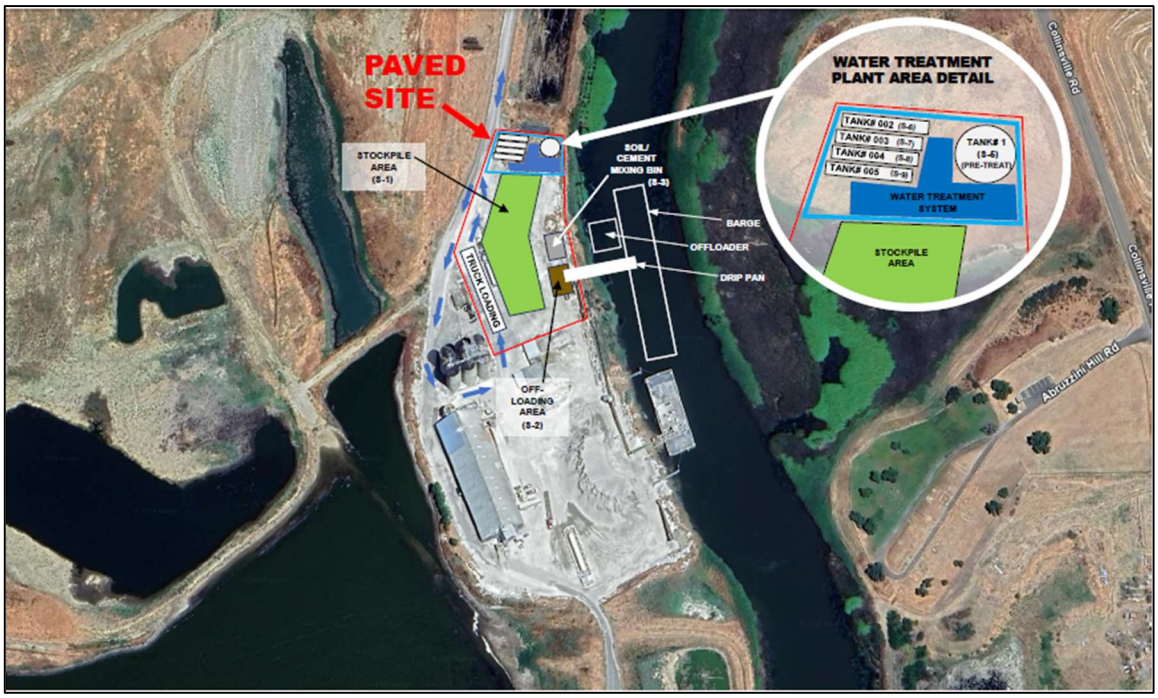
A general process flow diagram of activities at the PG&E Sediment Remediation Project and Montezuma Wetlands' MHF is provided below in **Figure 2.**

Figure 2: Process Flow Diagram



The layout of the MHF and the location of the sources in this application are provided in **Figure 3.**

Figure 3: Material Handling Facility Layout and Source Locations



Investigation of the sediments at Pier 39 to 43 ½ has been ongoing for almost two decades. Initially, the presence of the contamination was discovered during sampling for routine maintenance dredging. Since then, the contamination has been linked to historic releases from the former Beach Street manufactured gas plant, which had been located landward of Piers 39 to 43 ½.The pollutants of concern include particulate matter with an aerodynamic diameter of <10 microns (PM_{10}) and particulate matter with an aerodynamic diameter of <2.5 microns ($PM_{2.5}$). The toxic air contaminants (TACs) of concern include various polycyclic aromatic hydrocarbons (PAHs), metals, and other

volatile organic compounds (VOCs, also known as precursor organic compounds or POCs). The facility is located within an Overburdened Community (OBC).

This evaluation report will discuss compliance of the proposed project with all applicable air quality rules and regulations.

II. EMISSIONS SUMMARY

a. Methodology Overview

As discussed above, contaminated sediment will be dredged at the PG&E Sediment Remediation Project and transported to Montezuma Wetlands by barge, where the contaminated sediments will be offloaded to land, dewatered, and eventually loaded onto haul trucks for landfill disposal. Decant water generated during sediment dewatering will be collected, stored, and treated using coagulants, bag filters and granulated activated carbon (GAC) for particulate and residual organic material in the decant water.

Activities at the MHF are designated by the following sources:

- **Offloading (S-2):** The sediment will be offloaded from the barge to land at the MHF. The sediment will be transferred directly from the barge to a custom-built mixing bin. The sediment will be completely saturated upon arrival.
- **Mixing (S-3):** After being transferred to the mixing bin, truck-delivered wet cement (or similar material) will be mixed into the sediment to facilitate sediment dewatering. Cement will be added to the sediment at a rate of up to 10% by weight and mixed into the sediment using an excavator or similar equipment. The cement will be produced/premixed offsite, delivered wet via cement mixer trucks, and offloaded directly into the mixing bin. No dry cement will be used or mixed into the sediments onsite.
- **Drying Stockpiles (S-1):** After mixing, the sediment will be transported to onsite stockpiles for drying. Inactive piles will be covered by tarps.
- **Loading (S-4):** After the sediment is dried to approximately 20% moisture content, the sediment will be transferred from the onsite drying stockpiles onto haul trucks for offsite transport and landfill disposal.
- **Pre-Treatment Tank (S-5):** During sediment dewatering, decanted water and rainwater runoff will be collected in a 73,000-gallon external floating roof tank.
- **Post-Treatment Water Tanks (S-6 through S-9):** Treated water will be transferred to one (1) of four (4) 21,000-gallon fixed roof tanks.

Table 1 summarizes throughput information, as provided by Montezuma Wetlands, for all sources. For S-1 through S-4, the top values were the requested throughputs. However, in order to meet the project risk requirements of Regulation 2-5, maximum allowable throughputs were reduced. The reduced throughputs will be included as permit limits.

Table 1: Montezuma Wetlands Throughput

Source	Source Description	Throughputs[1,2,3]		
S-1	Drying Stockpiles	Initial: 200 tons/hour Limit: 100 tons/hour	Initial: 2,000 tons/day Limit: 1,000 tons/day	Initial: 56,000 tons/year Limit: 28,000 tons/year
S-2	Offloading			
S-3	Mixing			
S-4	Loading			
S-5	Pre-Treatment Tank #1	3,500 gals/hour	35,000 gals/day	1,500,000 gals/year
S-6	Post-Treatment Tank #2			
S-7	Post-Treatment Tank #3			

Table 1: Montezuma Wetlands Throughput

Source	Source Description	Throughputs[1,2,3]		
S-8	Post-Treatment Tank #4			
S-9	Post-Treatment Tank #5			

Notes:

1. As stated above, Montezuma Wetlands estimates that approximately 20,000 yd^3/yr of sediment will be dredged each year. For purposes of conservatively estimating emissions from sediment handling activities at the MHF, Montezuma Wetlands provided an annual maximum sediment throughput of 40,000 yd^3/yr. Sediment throughput is converted from yd^3 to ton using a sediment unit weight of 1.4 yd^3/ton (see sediment properties in **Table 3** below).
2. The throughput of each of the four (4) effluent tanks (S-6 through S-9) was conservatively assumed to be the same as the whole system, under the scenario that one (1) effluent tank can accommodate the full throughput of the system without the need to utilize the other effluent tanks.
3. In order for the project to pass the risk requirements of Regulation 2-5, further throughput limitations were required.

TAC concentrations used for emission calculations were based on the results of the Waste Characterization Report conducted by Haley & Aldrich in October 2024[1]. For this report, sediment samples were collected from various locations throughout Remedial Areas A and B, as these areas were considered to have the highest sediment contamination. Some of the samples taken were amended with various weight percentages of cement to simulate the use of cement for drying. The maximum concentrations of TACs from the twenty-five (25) composite samples and twelve (12) sediment samples mixed with up to 10% cement by weight were relied on for calculating TAC emission rates.

Organic TAC emissions for all release mechanisms, except particulate-phase emissions during the mixing and loading steps, rely on the maximum concentrations from the twenty-five (25) composite samples. Particulate TAC emissions rely on the maximum concentration from either the twenty-five (25) composite samples or the twelve (12) sediment samples mixed with up to 10% cement by weight.

Table 2 summarizes the final concentrations used to represent the makeup of the sediment.

Table 2: Sediment Composition

Toxic Air Contaminant	CAS	Max Concentration (mg/kg)[1]	
		Composite Sediment	10% PC Sediment
Arsenic	7440-38-2	13.2	15.4
Beryllium	7440-41-7	0.529	0.527
Cadmium	7440-43-9	0.825	0.593
Cobalt	7440-48-4	13.8	10.5
Copper	7440-50-8	137	40.3
Cyanide	57-12-5	0.254	0.194
Lead	7439-92-1	70.2	45.3
Mercury	7439-97-6	1.06	0.451
Nickel	7440-02-0	79.2	57.1

[1] https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/3252302944/T10000007367.PDF

Table 2: Sediment Composition

Toxic Air Contaminant	CAS	Max Concentration (mg/kg)[1]	
		Composite Sediment	10% PC Sediment
Selenium	7782-49-2	0.434	1.31
Vanadium	7440-62-2	65.3	55.1
2,4-Dinitrotoluene	121-14-2	0.0085	--
Benzo(a)anthracene	56-55-3	860	--
Benzo(a)pyrene	50-32-8	1400	--
Benzo(b)fluoranthene	205-99-2	830	--
Benzo(k)fluoranthene	207-08-9	730	--
bis(2-Ethylhexyl)phthalate	117-81-7	21	--
Chrysene	218-01-9	1100	--
Dibenz(a,h)anthracene	53-70-3	74	--
Hexachlorobenzene	118-74-1	0.0085	--
Indeno(1,2,3-cd)pyrene	193-39-5	1200	--
Naphthalene	91-20-3	1600	--
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.5	--
Benzene	71-43-2	0.24	--
Carbon disulfide	75-15-0	2.7	--
Chloroform (Trichloromethane)	67-66-3	0.065	--
Ethylbenzene	100-41-4	0.18	--
m,p-Xylenes	1330-20-7	0.05	--
o-Xylene	95-47-6	0.0275	--
Toluene	108-88-3	0.0290	--

Notes:

1. ½ the detection limit was used for samples detected below the detection limit. If all samples were non-detect, the pollutant was excluded. Samples detected above the detection limit but below the quantitation limit were reported as estimated concentrations and marked with the letter "J". These values were included when determining the maximum concentrations.

b. Sediment Handling Emissions (S-2, S-3, and S-4)

(1) Sediment Properties

The emission calculations for sediment handling activities required various sediment properties including dry bulk density, total porosity, water-filled porosity, and air-filled porosity. The sediment dry bulk density and total porosity were assumed to remain constant while the sediment is processed through the MHF, however, the sediment moisture content was assumed to decrease (consistent with the MHF operation's purpose). The sediment will be completely saturated upon arrival by barge and offloaded at the MHF. Therefore, for the offloading step, the saturation ratio was assumed to be 100%, corresponding to a moisture content of 40%. The sediment will be dried to approximately 20% moisture content prior to loading onto haul trucks for offsite transport and disposal. Therefore, for the loading step, the saturation ratio was assumed to be 50%, corresponding to a moisture content of 20%. For the intermediate step of mixing, sediment moisture content was assumed to be the average of the initial and final values. Therefore, for the mixing step, the saturation ratio was assumed to be 75%, corresponding to a moisture content of 30%.

Assumed sediment moisture properties at each step of handling, as provided by Motezuma Wetlands, are summarized below in **Table 3**.

Table 3: Sediment Properties

Parameter	Symbol	Units	Value		
			Offloading	Mixing	Loading
Dry bulk density	ρ	g/cm³	1.345	1.1345	1.345
Total porosity	n	vol. fr.	0.535	0.535	0.535
Saturation ratio	Sr	vol. %	100%	75%	50%
Water-filled porosity	E_w	vol. fr.	0.535	0.401	0.268
Air-filled Porosity	E_a	vol. fr.	0.000	0.134	0.268
Moisture content	M	wt. %	40%	30%	20%

Pollutant emission rates from sediment handling are estimated for three (3) release mechanisms:

- VOCs: Emissions of volatile chemicals by pore space emissions when sediment is handled
- VOCs: Emissions of volatile chemicals by diffusion from freshly exposed surfaces
- VOCs/PM/TACs: Emissions of particulate-phase chemicals when sediment is handled (VOCs, particulate matter (PM), and particulate TACs)

These emission mechanisms are assumed to occur at each step of sediment handling at the MHF – offloading, mixing, and loading. The methodology and significant input assumptions used to estimate emissions from each release mechanism are summarized below.

(2) Pore Space Emissions

Emission rates of contaminants from the sediment pore space during sediment handling are estimated in accordance with Equation 3 of *Estimation of Air Impacts for the Excavation of Contaminated Soils* (EPA 1992)[2], as shown below. The methodology assumes that a fraction of the contaminant mass present in the air-filled pore space of the sediment is released to the atmosphere when the sediment is actively handled. The pore space emission rate is based on the following equation:

$$ER_{PS} = \frac{P*MW*10^6*E_a*Q*ExC}{R*T}$$ (EPA 1992; Equation 3)

where:
ER_{ps} = Pore space emission rate (g/s)
P = Vapor pressure (mmHg)
MW = Molecular weight (g/g-mol)
E_a = Air-filled porosity (dimensionless)
Q = Soil/Sediment handling rate (m^3/sec)
ExC = Soil/Sediment gas-to-atmosphere exchange constant
- for wet soils/sediments (EPA 1992)

R = Gas Constant (mmHg-cm^3/g-mol K)
T = Temperature (K)

This equation can be simplified/alternatively represented as:

$$ER_{PS}\left(\frac{lb}{hr}\right) = CS_{a,a} * Q\left(\frac{ton}{hr}\right) * \frac{907.185\frac{kg}{ton}}{453{,}592\frac{mg}{lb}} * ExC$$

where:
$CS_{a,a}$ = Concentration in sediment – air-phase (mg/kg)

[2] https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=20011PXJ.TXT

Assuming an arbitrary concentration of a VOC in the pore water (C_w) such as 1 mg/kg, the relative concentration in the sediment for the solid, water, and air phases can be determined using the soil/sediment-water partition coefficient (K_d) and the dimensionless Henry's law constant (H'). K_d describes the partitioning between the sediment (solid) and water phases. H' describes the partitioning between the air and water phases.

H' for each VOC can be taken from the Chemical Specific Parameters table of EPA's Regional Screening Level (RSL) tables. K_d can be calculated from the following equation:

$$K_d = K_{oc} * f_{oc}$$

where:
K_d = Soil/Sediment-water partition coefficient (L/kg)
K_{oc} = Soil/Sediment organic-water partition coefficient (L/kg), taken from EPA RSL tables
f_{oc} = Organic carbon fraction

- 0.17 (Project-specific, provided by Montezuma Wetlands)

With these variables, the relative concentration in sediment for solid, water, and air phases can be calculated as follows:

$$CS_{s,r} = C_w * K_d$$
$$CS_{w,r} = C_w * E_w * \rho$$
$$CS_{a,r} = C_w * E_a * \rho * H'$$

The fraction of mass in each phase can be calculated by dividing the relative concentration in sediment (either $CS_{s,r}$, $CS_{w,r}$, $CS_{a,r}$) by the total concentration in sediment ($CS_{s,r} + CS_{w,r} + CS_{a,r}$).

The actual concentration in the sediment – air phase, $CS_{a,a}$ can be calculated by multiplying the air mass fraction by the measured concentration in sediment for each VOC (CS). $CS_{a,a}$ can then be plugged into the equation for ER_{ps} to evaluate pore space emissions from each VOC.

(3) Diffusive Emissions

Emission rates by diffusion from freshly exposed sediment surface during the handling of sediments are estimated in accordance with Equation 4 of *Estimation of Air Impacts for the Excavation of Contaminated Soil* (EPA 1992), as shown below. This methodology assumes that volatile chemicals are released to the atmosphere by diffusion from freshly exposed sediment surfaces and sediment stockpiles. The methodology assumes that emissions from freshly exposed sediment surfaces are significant for a period of 60 seconds; fresh surfaces are continually being created by ongoing excavation and stockpiling; and the emitting exposed surface area is created in one hour of excavation and stockpiling.

The total effective diffusivity (D_e) of each compound is calculated as the sum of the diffusivity of the compound in air multiplied by the fraction of sediment air-filled porosity to the total sediment porosity and the diffusivity of that compound in water multiplied by the fraction of sediment water-filled porosity to the total sediment porosity. The total effective diffusivity (D_e) of each compound is in turn used to determine the diffusive emissions expected from sediment handling (ER_{DIFF}).

$$ER_{Diff} = \frac{CS*10{,}000*SA}{\left(\frac{E_a}{K_{eq}*K_g}\right)+\sqrt{\frac{\pi*t}{De*K_{eq}}}}$$ (EPA 1992; Equation 4)

where:
ER_{Diff} = Diffusive emission rate (g/s)
CS = Concentration in sediment (g/cm^3)
SA = Emitting surface area (m^3)

- The emitting surface area during unloading is the mixing bin stockpile top and sidewall

surface.
- The emitting surface area during mixing is the mixing bin stockpile top surface area, which assumes the bin is full thus the sediment stockpile has no exposed sidewalls.
- The emitting surface area during loading is the sum of the mixing bin stockpile top surface area and the haul truckload top surface area.

K_{eq} = H' for dilute, aqueous solutions (dimensionless).
- The model assumes that Henry's Law applies; i.e., the solution is relatively dilute (Section 4.2.3 EPA 1993 and Appendix A.4 EPA 1992)

K_q = Gas-phase transfer coefficient (cm^2/sec)
- 0.15 (EPA 1992)

t = Time
- 60 seconds
- It is assumed that emissions from freshly excavated sediment are significant for a period of 360 seconds, after which the sediment is covered by subsequent layers of excavated material; The instantaneous rate at t = 60 seconds is a good approximation of the overall emission rate for the first 360 seconds (Appendix A.4 EPA 1992).

D_e = Diffusivity in air (cm^2/sec).
- Taken from EPA RSL tables

(4) Particulate-Phase Emissions

Particulate-phase emission rates from sediment handling were calculated in accordance with the methodology in *EPA's AP-42 Section 13.2.4: Aggregate Handling And Storage Piles*. Drop operation emission factors for total suspended particulates (TSP), PM_{10}, and $PM_{2.5}$ are calculated using Equation 1 from AP-42 Section 13.2.4:

$$E = \mathrm{k} * (0.0032) * \frac{\frac{U}{5}^{1.3}}{\frac{M}{2}^{1.4}}$$ (AP-42 Section 13.2.4; Equation 1)

where:
E = Emission Factor (lb/ton)
k = Particulate size multiplier (dimensionless)
- 0.74 for TSP, 0.35 for PM_{10}, and 0.053 for $PM_{2.5}$

U = Mean wind speed (mph)
M = Material moisture content (%)

The calculated particulate emission factor was multiplied by two to account for material being handled twice at each step. During sediment mixing, drying, and loading activities, emissions of particulate matter will be controlled with the application of RusFoam® OC (AC645) long duration foam, a non-toxic and biodegradable surfactant that is designed to control emissions from activity. It was assumed that foam vapor suppressant has a particulate matter control effectiveness of 80%, based on Permit Handbook guidance for chemical dust suppressants. To account for the increase in material volume resulting from the addition of cement during the mixing step, the assumed sediment throughputs in the mixing and loading steps for the particulate-phase PM and particulate TAC emission calculations were increased by 10% (not VOC as no VOCs are expected from cement).

PM emission factors were partitioned into TAC emission factors based on the following:

- Metal emissions were calculated by multiplying the metal concentration from the waste characterization report by the TSP emission factor.
- VOC emissions are expected from the pores of exposed, free floating particulate emissions in the form of PM_{10}. VOCs from PM_{10} are expected to fully evaporate since there is more surface area exposure.

c. Drying Stockpile Emissions (S-1)

(1) Wind-Blown Dust

Wind erosion emissions were calculated in accordance with Equation 5 and Equation 4-5 of EPA's *Soil Screening Guidance: User's Guide (1996)* and *EPA's Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (2002)*, respectively[3,4]. This equation is consistent with the methodology used to determine windblown emissions of similar facilities that were previously permitted.

$$\mathrm{PEF} = \frac{Q}{C_{wind}} * \frac{0.036*(1-\mathrm{V})*(\frac{U_m}{U_t})^3*\mathrm{F(x)}}{3600}$$ (EPA 1996; Equation 5)

where:

PEF = Particulate Emission Factor (m^3/kg)

Q/C_{wind} = Inverse of the ratio of the geometric mean air concentration to the emission flux at the center of a square source ($g/m^2/s$ per kg/m^3)

V = Fraction of vegetative cover (dimensionless)

- 0.5 (EPA (2002) default)

U_m = Mean annual windspeed (m/s)

- 4.69 m/s (EPA (2002) default)

U_t = Equivalent threshold value of windspeed

- 7m = 11.32 m/s (EPA (2002) default)

F(x) = Function dependent on U_m/U_t derived using Cowherd et al. 1985 (m^3/s)

- 0.194 (EPA (2002) default)

Q/C_{wind} can be derived for any source size between 0.5 and 500 acres using the equation and look-up table in EPA's Supplemental Guidance Appendix D, Exhibit D-2[5].

$$\frac{Q}{C_{wind}} = \mathrm{A} * \exp\frac{\ln(A_{site}-B)^2}{C}$$ (EPA 2002; Exhibit D-2)

where:

A, B, C = Dispersion coefficients for Zone II, San Francisco (EPA 2002 Exhibit D-2)

- A = 13.1994
- B = 23.6414
- C = 283.5307

A_{site} = Site acreage (acre) = 0.7 acres (provided by Montezuma Wetlands)

An abatement efficiency of 80% was applied to the wind-blown dust emissions to account for the use of foam vapor suppressant (A-1), per BAAQMD Permit Handbook guidance. PM emission factors are partitioned into TAC emission factors using the same approach used for the particulate-phase emissions (metal emissions are based on TSP, and VOC emissions are based on PM_{10}).

(2) Vehicle Travel (Road Dust)

Road dust emissions from vehicle traffic were estimated using the methodologies in EPA's AP-42 Sections 13.2.1 for vehicles on paved roads and 13.2.2 for vehicles on unpaved roads. For emissions from equipment traffic traveling on paved roads (excavator 2, loader, cement trucks, and export trucks), the equation from Section 13.2.1 for paved roads was used. For emissions from equipment traffic traveling on piles (excavator 1), the equation from Section 13.2.2 for unpaved roads was used. Particulate-phase emissions from vehicle traffic depend on vehicle miles traveled (VMT), vehicle weights, silt content of surface material (unpaved), road surface

[3] https://semspub.epa.gov/work/HQ/175238.pdf
[4] https://semspub.epa.gov/work/HQ/175878.pdf
[5] https://semspub.epa.gov/work/HQ/174068.pdf

silt loading (paved), and pollutant concentrations in the emitted dust. Vehicle information including VMT and average vehicle weight for each vehicle type, as provided by Montezuma Wetlands, is summarized in **Table 4**. The applicant requested higher VMT values. However, using those values, the project risk did not meet the requirements of Regulation 2-5. The values in the table are those that have been determined to meet the risk requirements of Regulation 2-5. Permit conditions limiting the operation to these values will be imposed.

Table 4: Vehicle Information

Vehicle Type	Average Vehicle Weight (ton)	VMT/hr	VMT/day	VMT/yr
Excavator 1	36	0.03	0.27	35
Excavator 2	36	0.01	0.72	91
Loader	50	0.4	3.86	487
Cement Trucks (Import)	24	1.7	17.05	1,200
Export Trucks	28	4.3	42.61	2,600

TSP, PM_{10}, and $PM_{2.5}$ from vehicle traffic on paved roadways are estimated using Equation (1) from AP-42 Section 13.2.1:

$$E = k(sL)^{0.91} \times (W)^{1.02}$$

where:
E = PM size-specific emission factor (lb/VMT)
sL = Road surface silt loading (g/m^2)
- 8.4 (From EPA AP-42 Table 13.2.1-3, within range for quarries)

W = average vehicle weight (ton)
k = Empirical constant (dimensionless)
- 0.00054 for $PM_{2.5}$, 0.0022 for PM_{10}, and 0.011 for TSP

TSP, PM_{10}, and $PM_{2.5}$ from vehicle traffic on unpaved roadways are estimated using Equation (1a) from AP-42 Section 13.2.2:

$$E = \mathrm{k}\left(\frac{s}{12}\right)^{a}\left(\frac{W}{3}\right)^{b} \quad \text{(EPA 2006; Equation 1a)}$$

where:
E = PM size-specific emission factor (lb/VMT)
s = Surface material silt content (%)
- 7.1 (EPA default for material storage areas as recommended by the BAAQMD Permit Handbook)

W = Mean vehicle weight (ton)
k = Empirical constant (dimensionless)
- 0.15 for $PM_{2.5}$, 1.5 for PM_{10}, and 4.9 for TSP

a = Empirical constant (dimensionless)
- 0.9 for $PM_{2.5}$, 0.9 for PM_{10} and 0.7 for TSP

b = Empirical constant (dimensionless)
- 0.45 for $PM_{2.5}$, 0.45 for PM_{10} and 0.45 for TSP

PM emission factors were partitioned into TAC emission factors using a similar approach as used for the particulate-phase and wind erosion emissions (metal emissions are based on TSP, and VOC emissions are based on PM_{10}), however only PM emissions from pile management vehicles (excavators and loader) were used for partitioning. This is because these vehicles are expected to be actively driving over and around the stockpiles while haul trucks (cement import and export trucks) are not expected to do so. An abatement efficiency of 70% was applied to the road dust emissions from haul trucks to account for the use of water spray (A-2), per BAAQMD Permit

Handbook guidance. An abatement efficiency of 80% was assumed for road dust emissions from pile management vehicles to account for the use of foam vapor suppressant (A-1), per BAAQMD Permit Handbook guidance.

d. Water Treatment System (S-5 through S-9)

Storage tank emissions were estimated using EPA's TANKS emission estimation software, version 5.1[6]. TANKS is based on the equations and methodologies outlined in EPA's AP-42 Chapter 7: Organic Liquid Storage Tanks. Tank parameters and throughputs for S-5 through S-9 were provided by Montezuma Wetlands.

e. Cargo Emissions

Tugboats and barges will be used to transport material to the facility. These vessels are sources of nitrogen oxide (NO_x), carbon monoxide (CO), non-methane hydrocarbons (NMHC)/POC, sulfur dioxide (SO_2), and PM. In accordance with Regulation 2-2-610, emissions of cargo carriers shall be included in this analysis for the purpose of assessing the facility offset requirements. Emissions from cargo carriers shall not be included for the purpose of applying any other provisions of Regulation 2-2.

According to information provided by Montezuma Wetlands, the project will include three barges. At any one time, one barge will be stationed at the Site for loading, one barge will be stationed at the MHF for unloading, and one barge will be in transit between the two locations. All barges will be towed by a single tugboat. Loading and unloading equipment will be mounted on spud barges on water and equipped with their own engines.

f. Emission Summary

For clarity, the following is a breakdown of the emissions included in each source:

- S-1: wind erosion (PM, metals, VOCs) and road dust (PM, metals, VOCs) emissions associated with the stockpiles
- S-2: pore-space (VOC), diffusive (VOC), and particulate-phase (PM, VOC, and metals) emissions from offloading
- S-3: pore-space (VOC), diffusive (VOC), and particulate-phase (PM, VOC, and metals) emissions from mixing
- S-4: pore-space (VOC), diffusive (VOC), and particulate-phase (PM, VOC, and metals) emissions from loading

A summary of daily and annual regulated air pollutant emissions for each source are presented below in **Tables 5** and **6**, respectively. A summary of hourly and annual TAC emissions for each source are presented below in **Tables 7** and **8**, respectively.

Table 5: Daily Regulated Air Pollutant Emissions Summary

Pollutant	Daily Emissions (lb/day)			
	Drying Stockpiles (S-1)	Offloading (S-2)	Mixing (S-3)	Loading (S-4)
PM_{10}	25.9	0.2	0.1	0.1
$PM_{2.5}$	6.3	0.0	0.0	0.0
POC	0.0	0.6	0.6	1.6

[6] https://www.epa.gov/air-emissions-factors-and-quantification/tanks-emissions-estimation-software-version-5

Table 6: Annual Regulated Air Pollutant Emissions Summary

Pollutant	Annual Emissions (ton/yr)									
	Drying Stockpiles (S-1)	Offloading (S-2)	Mixing (S-3)	Loading (S-4)	Tank #1 (S-5)	Tank #2 (S-6)	Tank #3 (S-7)	Tank #4 (S-8)	Tank #5 (S-9)	Combined
PM_{10}	0.259	0.001	0.000	0.001	--	--	--	--	--	0.261
$PM_{2.5}$	0.088	0.000	0.000	0.000	--	--	--	--	--	0.088
POC	0.000	0.003	0.004	0.010	0.188	0.332	0.332	0.332	0.332	1.533

Table 7: Hourly Toxic Air Contaminant Emission Rate Summary

Compound	Hourly TAC Emissions (lb/hr)									
	Drying Stockpiles (S-1)	Offloading (S-2)	Mixing (S-3)	Loading (S-4)	Tank #1 (S-5)	Tank #2 (S-6)	Tank #3 (S-7)	Tank #4 (S-8)	Tank #5 (S-9)	Combined
Arsenic	9.75E-06	3.96E-07	1.52E-07	2.69E-07	--	--	--	--	--	1.06E-05
Beryllium	3.35E-07	1.59E-08	5.23E-09	9.22E-09	--	--	--	--	--	3.65E-07
Cadmium	5.22E-07	2.48E-08	8.15E-09	1.44E-08	--	--	--	--	--	5.70E-07
Cobalt	8.74E-06	4.14E-07	1.36E-07	2.41E-07	--	--	--	--	--	9.53E-06
Copper	8.67E-05	4.11E-06	1.35E-06	2.39E-06	--	--	--	--	--	9.46E-05
Cyanide	1.61E-07	7.63E-09	2.51E-09	4.43E-09	--	--	--	--	--	1.75E-07
Lead	4.44E-05	2.11E-06	6.94E-07	1.22E-06	--	--	--	--	--	4.85E-05
Mercury	6.71E-07	3.18E-08	1.05E-08	1.85E-08	--	--	--	--	--	7.32E-07
Nickel	2.51E-05	1.19E-06	3.91E-07	6.90E-07	--	--	--	--	--	2.73E-05
Selenium	8.29E-07	1.30E-08	1.29E-08	2.28E-08	--	--	--	--	--	8.78E-07
Vanadium	4.13E-05	1.96E-06	6.45E-07	1.14E-06	--	--	--	--	--	4.51E-05
2,4-Dinitrotoluene	1.48E-09	6.09E-09	2.19E-09	1.17E-09	2.72E-05	2.06E-06	2.06E-06	2.06E-06	2.06E-06	3.55E-05
bis(2-Ethylhexyl)phthalate	3.67E-06	3.36E-07	1.03E-07	1.65E-07	4.86E-08	3.86E-14	3.86E-14	3.86E-14	3.86E-14	4.32E-06
Hexachlorobenzene	1.48E-09	1.45E-08	1.66E-08	4.71E-08	6.33E-05	4.59E-11	4.59E-11	4.59E-11	4.59E-11	6.34E-05
Naphthalene	2.79E-04	2.33E-02	1.81E-02	5.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.17E-02
2-Butanone (Methyl Ethyl Ketone)	8.73E-08	5.42E-05	3.10E-05	6.61E-05	2.76E-05	5.03E-05	5.03E-05	5.03E-05	5.03E-05	3.80E-04
Benzene	4.19E-08	5.21E-05	1.45E-04	4.47E-04	7.12E-05	9.23E-05	9.23E-05	9.23E-05	9.23E-05	1.09E-03
Carbon disulfide	4.72E-07	1.31E-03	6.90E-03	2.00E-02	2.23E-05	4.42E-05	4.42E-05	4.42E-05	4.42E-05	2.84E-02
Chloroform (Trichloromethane)	1.14E-08	1.41E-05	3.41E-05	9.94E-05	1.24E-03	1.66E-03	1.66E-03	1.66E-03	1.66E-03	8.01E-03
Ethylbenzene	3.14E-08	1.32E-05	4.27E-05	1.31E-04	1.84E-05	3.03E-05	3.03E-05	3.03E-05	3.03E-05	3.26E-04
Toluene	5.06E-09	3.30E-06	1.01E-05	3.08E-05	2.50E-04	4.40E-04	4.40E-04	4.40E-04	4.40E-04	2.05E-03
Crystalline silica	1.15E-02	9.34E-04	2.79E-04	4.93E-04	--	--	--	--	--	1.32E-02
Xylenes (Total)	1.35E-08	5.04E-06	1.45E-05	4.43E-05	1.43E-04	2.32E-04	2.32E-04	2.32E-04	2.32E-04	1.14E-03
PAHs (as B(a)P-equivalent)	3.23E-04	6.53E-05	2.22E-05	2.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-04

Table 8: Annual Toxic Air Contaminant Emission Summary

Compound	Annual TAC Emissions (lb/yr)									
	Drying Stockpiles (S-1)	Offloading (S-2)	Mixing (S-3)	Loading (S-4)	Tank #1 (S-5)	Tank #2 (S-6)	Tank #3 (S-7)	Tank #4 (S-8)	Tank #5 (S-9)	Combined
Arsenic	7.88E-03	1.11E-04	4.26E-05	7.52E-05	--	--	--	--	--	8.11E-03
Beryllium	2.71E-04	4.45E-06	1.46E-06	2.58E-06	--	--	--	--	--	2.79E-04
Cadmium	4.22E-04	6.94E-06	2.28E-06	4.03E-06	--	--	--	--	--	4.35E-04
Cobalt	7.06E-03	1.16E-04	3.82E-05	6.74E-05	--	--	--	--	--	7.28E-03
Copper	7.01E-02	1.15E-03	3.79E-04	6.69E-04	--	--	--	--	--	7.23E-02
Cyanide	1.30E-04	2.14E-06	7.03E-07	1.24E-06	--	--	--	--	--	1.34E-04
Lead	3.59E-02	5.90E-04	1.94E-04	3.43E-04	--	--	--	--	--	3.71E-02
Mercury	5.42E-04	8.91E-06	2.93E-06	5.17E-06	--	--	--	--	--	5.59E-04
Nickel	2.03E-02	3.33E-04	1.10E-04	1.93E-04	--	--	--	--	--	2.09E-02
Selenium	6.70E-04	3.65E-06	3.63E-06	6.40E-06	--	--	--	--	--	6.84E-04
Vanadium	3.34E-02	5.49E-04	1.81E-04	3.19E-04	--	--	--	--	--	3.45E-02
2,4-Dinitrotoluene	1.21E-06	1.70E-06	6.13E-07	3.28E-07	2.38E-01	1.81E-02	1.81E-02	1.81E-02	1.81E-02	3.11E-01
bis(2-Ethylhexyl)phthalate	2.99E-03	9.41E-05	2.89E-05	4.61E-05	4.26E-04	3.38E-10	3.38E-10	3.38E-10	3.38E-10	3.58E-03
Hexachlorobenzene	1.21E-06	4.05E-06	4.66E-06	1.32E-05	5.54E-01	4.02E-07	4.02E-07	4.02E-07	4.02E-07	5.54E-01
Naphthalene	2.27E-01	6.52E+00	5.05E+00	1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+01
2-Butanone (Methyl Ethyl Ketone)	7.11E-05	1.52E-02	8.67E-03	1.85E-02	2.42E-01	4.40E-01	4.40E-01	4.40E-01	4.40E-01	2.05E+00
Benzene	3.41E-05	1.46E-02	4.07E-02	1.25E-01	6.24E-01	8.08E-01	8.08E-01	8.08E-01	8.08E-01	4.04E+00
Carbon disulfide	3.84E-04	3.67E-01	1.93E+00	5.61E+00	1.95E-01	3.87E-01	3.87E-01	3.87E-01	3.87E-01	9.65E+00
Chloroform (Trichloromethane)	9.24E-06	3.95E-03	9.56E-03	2.78E-02	1.09E+01	1.45E+01	1.45E+01	1.45E+01	1.45E+01	6.89E+01
Ethylbenzene	2.56E-05	3.70E-03	1.19E-02	3.67E-02	1.61E-01	2.65E-01	2.65E-01	2.65E-01	2.65E-01	1.27E+00
Toluene	4.12E-06	9.24E-04	2.82E-03	8.63E-03	2.19E+00	3.85E+00	3.85E+00	3.85E+00	3.85E+00	1.76E+01
Crystalline silica	9.35E+00	2.62E-01	7.82E-02	1.38E-01	--	--	--	--	--	9.83E+00
Xylenes (Total)	1.10E-05	1.41E-03	4.06E-03	1.24E-02	1.26E+00	2.03E+00	2.03E+00	2.03E+00	2.03E+00	9.40E+00
PAHs (as B(a)P-equivalent)	2.63E-01	1.83E-02	6.21E-03	6.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-01

III. CUMULATIVE INCREASE

Table 9 summarizes the cumulative increase in criteria pollutant emissions that will result from this application.

Table 9: Facility Cumulative Emissions Increase, Post 4/5/91

Pollutant	Existing Emissions Post 4/5/91 (tons/yr)	Application Source Emissions (tons/yr)	Application Cargo Emissions (tons/yr)	Cumulative Emissions (tons/yr)
NO_X	0.000	0.000	2.133	2.133
POC	0.000	1.533	0.418	1.951
CO	0.000	0.000	2.300	2.300
PM_{10}	0.000	0.261	0.037	0.298
$PM_{2.5}$	0.000	0.088	0.035	0.123
SO_2	0.000	0.000	0.003	0.003

IV. HEALTH RISK ASSESSMENT

Pursuant to Regulation 2-5-110, a project shall not be subject to the health risk assessment (HRA) requirements of this rule if, for each TAC, the total project emissions are below the acute and chronic trigger levels listed in Table 2-5-1 of this regulation. A project includes all new or modified sources of TACs permitted within the last five years. There were no related applications permitted within the last five years. **Tables 10** and **11** provide a summary of the final project hourly and annual TAC emissions that would yield a passing project and how they compare to the trigger levels in Table 2-5-1.

Table 10: Project Health Risk Assessment Hourly Emission Summary

Compound	Hourly HRA Emissions (lb/hr)										Acute Trigger Level (lb/hr)	Exceeds Acute?
	Drying Stockpiles (S-1)	Offloading S-2)	Mixing (S-3)	Loading (S-4)	Tank #1 (S-5)	Tank #2 (S-6)	Tank #3 (S-7)	Tank #4 (S-8)	Tank #5 (S-9)	Project Total		
Arsenic	9.75E-06	3.96E-07	1.52E-07	2.69E-07	--	--	--	--	--	1.06E-05	8.80E-05	No
Beryllium	3.35E-07	1.59E-08	5.23E-09	9.22E-09	--	--	--	--	--	3.65E-07	--	--
Cadmium	5.22E-07	2.48E-08	8.15E-09	1.44E-08	--	--	--	--	--	5.70E-07	--	--
Cobalt	8.74E-06	4.14E-07	1.36E-07	2.41E-07	--	--	--	--	--	9.53E-06	--	--
Copper	8.67E-05	4.11E-06	1.35E-06	2.39E-06	--	--	--	--	--	9.46E-05	4.40E-02	No
Cyanide	1.61E-07	7.63E-09	2.51E-09	4.43E-09	--	--	--	--	--	1.75E-07	1.50E-01	No
Lead	4.44E-05	2.11E-06	6.94E-07	1.22E-06	--	--	--	--	--	4.85E-05	--	--
Mercury	6.71E-07	3.18E-08	1.05E-08	1.85E-08	--	--	--	--	--	7.32E-07	2.70E-04	No
Nickel	2.51E-05	1.19E-06	3.91E-07	6.90E-07	--	--	--	--	--	2.73E-05	8.80E-05	No
Selenium	8.29E-07	1.30E-08	1.29E-08	2.28E-08	--	--	--	--	--	8.78E-07	--	--
Vanadium	4.13E-05	1.96E-06	6.45E-07	1.14E-06	--	--	--	--	--	4.51E-05	1.30E-02	No
2,4-Dinitrotoluene	1.48E-09	6.09E-09	2.19E-09	1.17E-09	2.72E-05	2.06E-06	2.06E-06	2.06E-06	2.06E-06	3.55E-05	--	--
bis(2-Ethylhexyl)phthalate	3.67E-06	3.36E-07	1.03E-07	1.65E-07	4.86E-08	3.86E-14	3.86E-14	3.86E-14	3.86E-14	4.32E-06	--	--
Hexachlorobenzene	1.48E-09	1.45E-08	1.66E-08	4.71E-08	6.33E-05	4.59E-11	4.59E-11	4.59E-11	4.59E-11	6.34E-05	--	--
Naphthalene	2.79E-04	2.33E-02	1.81E-02	5.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.17E-02	--	--
2-Butanone (Methyl Ethyl Ketone)	8.73E-08	5.42E-05	3.10E-05	6.61E-05	2.76E-05	5.03E-05	5.03E-05	5.03E-05	5.03E-05	3.80E-04	5.80E+00	No
Benzene	4.19E-08	5.21E-05	1.45E-04	4.47E-04	7.12E-05	9.23E-05	9.23E-05	9.23E-05	9.23E-05	1.09E-03	1.20E-02	No
Carbon disulfide	4.72E-07	1.31E-03	6.90E-03	2.00E-02	2.23E-05	4.42E-05	4.42E-05	4.42E-05	4.42E-05	2.84E-02	2.70E+00	No
Chloroform (Trichloromethane)	1.14E-08	1.41E-05	3.41E-05	9.94E-05	1.24E-03	1.66E-03	1.66E-03	1.66E-03	1.66E-03	8.01E-03	6.60E-02	No
Ethylbenzene	3.14E-08	1.32E-05	4.27E-05	1.31E-04	1.84E-05	3.03E-05	3.03E-05	3.03E-05	3.03E-05	3.26E-04	--	--
Toluene	5.06E-09	3.30E-06	1.01E-05	3.08E-05	2.50E-04	4.40E-04	4.40E-04	4.40E-04	4.40E-04	2.05E-03	2.20E+00	No
Crystalline silica	1.15E-02	9.34E-04	2.79E-04	4.93E-04	--	--	--	--	--	1.32E-02	--	--
Xylenes (Total)	1.35E-08	5.04E-06	1.45E-05	4.43E-05	1.43E-04	2.32E-04	2.32E-04	2.32E-04	2.32E-04	1.14E-03	9.70E+00	No
PAHs (as B(a)P-equivalent)	3.23E-04	6.53E-05	2.22E-05	2.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-04	--	--

Table 11: Project HRA Annual Emission Summary

Compound	Annual HRA Emissions (lb/yr)										Chronic Trigger Level (lb/yr)	Exceeds Chronic?
	Drying Stockpiles (S-1)	Offloading S-2)	Mixing (S-3)	Loading (S-4)	Tank #1 (S-5)	Tank #2 (S-6)	Tank #3 (S-7)	Tank #4 (S-8)	Tank #5 (S-9)	Project Total		
Arsenic	7.88E-03	1.11E-04	4.26E-05	7.52E-05	--	--	--	--	--	8.11E-03	1.60E-03	Yes
Beryllium	2.71E-04	4.45E-06	1.46E-06	2.58E-06	--	--	--	--	--	2.79E-04	3.40E-02	No
Cadmium	4.22E-04	6.94E-06	2.28E-06	4.03E-06	--	--	--	--	--	4.35E-04	1.90E-02	No
Cobalt	7.06E-03	1.16E-04	3.82E-05	6.74E-05	--	--	--	--	--	7.28E-03	1.10E-02	No
Copper	7.01E-02	1.15E-03	3.79E-04	6.69E-04	--	--	--	--	--	7.23E-02	--	--
Cyanide	1.30E-04	2.14E-06	7.03E-07	1.24E-06	--	--	--	--	--	1.34E-04	3.50E+02	No
Lead	3.59E-02	5.90E-04	1.94E-04	3.43E-04	--	--	--	--	--	3.71E-02	2.90E-01	No
Mercury	5.42E-04	8.91E-06	2.93E-06	5.17E-06	--	--	--	--	--	5.59E-04	2.10E-01	No
Nickel	2.03E-02	3.33E-04	1.10E-04	1.93E-04	--	--	--	--	--	2.09E-02	3.10E-01	No
Selenium	6.70E-04	3.65E-06	3.63E-06	6.40E-06	--	--	--	--	--	6.84E-04	8.00E+00	No
Vanadium	3.34E-02	5.49E-04	1.81E-04	3.19E-04	--	--	--	--	--	3.45E-02	--	--
2,4-Dinitrotoluene	1.21E-06	1.70E-06	6.13E-07	3.28E-07	2.38E-01	1.81E-02	1.81E-02	1.81E-02	1.81E-02	3.11E-01	9.20E-01	No
bis(2-Ethylhexyl)phthalate	2.99E-03	9.41E-05	2.89E-05	4.61E-05	4.26E-04	3.38E-10	3.38E-10	3.38E-10	3.38E-10	3.58E-03	2.90E+01	No
Hexachlorobenzene	1.21E-06	4.05E-06	4.66E-06	1.32E-05	5.54E-01	4.02E-07	4.02E-07	4.02E-07	4.02E-07	5.54E-01	1.60E-01	Yes
Naphthalene	2.27E-01	6.52E+00	5.05E+00	1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+01	2.40E+00	Yes
2-Butanone (Methyl Ethyl Ketone)	7.11E-05	1.52E-02	8.67E-03	1.85E-02	2.42E-01	4.40E-01	4.40E-01	4.40E-01	4.40E-01	2.05E+00	--	--
Benzene	3.41E-05	1.46E-02	4.07E-02	1.25E-01	6.24E-01	8.08E-01	8.08E-01	8.08E-01	8.08E-01	4.04E+00	2.90E+00	Yes
Carbon disulfide	3.84E-04	3.67E-01	1.93E+00	5.61E+00	1.95E-01	3.87E-01	3.87E-01	3.87E-01	3.87E-01	9.65E+00	3.10E+04	No
Chloroform (Trichloromethane)	9.24E-06	3.95E-03	9.56E-03	2.78E-02	1.09E+01	1.45E+01	1.45E+01	1.45E+01	1.45E+01	6.89E+01	1.50E+01	Yes
Ethylbenzene	2.56E-05	3.70E-03	1.19E-02	3.67E-02	1.61E-01	2.65E-01	2.65E-01	2.65E-01	2.65E-01	1.27E+00	3.30E+01	No
Toluene	4.12E-06	9.24E-04	2.82E-03	8.63E-03	2.19E+00	3.85E+00	3.85E+00	3.85E+00	3.85E+00	1.76E+01	1.60E+04	No
Crystalline silica	9.35E+00	2.62E-01	7.82E-02	1.38E-01	--	--	--	--	--	9.83E+00	1.20E+02	No
Xylenes (Total)	1.10E-05	1.41E-03	4.06E-03	1.24E-02	1.26E+00	2.03E+00	2.03E+00	2.03E+00	2.03E+00	9.40E+00	2.70E+04	No
PAHs (as B(a)P-equivalent)	2.63E-01	1.83E-02	6.21E-03	6.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-01	3.30E-03	Yes

As shown above, arsenic, benzene, chloroform, hexachlorobenzene, naphthalene, and PAH emissions from the project exceed the chronic trigger levels thereby making the project subject to the requirements of an HRA.

Health Risk Assessment Results
An HRA performed for the initial requested throughputs did not meet the project risk requirements of Regulation 2-5. Therefore, throughput and VMT limitations needed to be reduced and imposed. TAC emission limitations also needed to be imposed for the storage tanks to meet project risk requirements.

Using the limitations, pursuant to an HRA completed on March 4, 2025, the maximum project cancer risk is 2.0 in a million, the chronic hazard index (HI) is 0.0072, and the project acute HI is 0.99. The project is below a cancer risk of 6.0 in a million, the limit for facilities located within an OBC, and below a chronic HI of 1.0. Therefore, the project meets the risk requirements of Regulation 2-5-302.

Pursuant to Regulation 2-5-301, since S-1 exceeds a cancer risk of 1.0 in a million with a maximum residential cancer risk of 1.6 in a million, S-1 is subject to Best Available Control Technology for Toxics (TBACT). The project is in compliance with project risk requirements as recommended, limiting operations through permit conditions.

Best Available Control Technology for Toxics
In accordance with the Air District's Regulation 2-5-301, TBACT is required for a new or modified source, where the source's risk is a cancer risk greater than 1.0 in a million and/or a chronic HI greater than 0.20. The relative contribution of S-1 to the total project cancer risk is 1.6 in a million, and the total project chronic HI is 0.0072. The risk for S-1 exceeds a cancer risk of 1.0 in a million and is subject to the requirements of TBACT. The driver of the cancer risk is PAH. Although PAHs are likely identified as POCs, the Air District's Risk Assessment Reduction Section has suggested that these pollutants behave more like particulate matter due to having a low volatility. Therefore, controls will likely resemble those for particulate matter emissions.

TBACT for contaminated sediment drying stockpiles and fugitive road dust emissions associated with this source have been determined to be the combination of water suppression on roadways and stockpiles, the use of vapor suppressants on the drying stockpiles, and the tarping of inactive drying stockpiles. Operational requirements will be included in permit conditions, which the facility is expected to meet.

Project Risk Limits
Since S-1 is expected to meet the requirements of TBACT, the proposed operation has an estimated project cancer risk that does not exceed 6.0 in a million as a project located in an OBC, and the project chronic hazard index does not exceed 1.0, this project complies with the Air District's Regulation 2-5-302 project risk requirements. Operational limitations will be included in the permit condition.

V. BEST AVAILABLE CONTROL TECHNOLOGY

In accordance with Regulation 2-2-301, Best Available Control Technology (BACT) is triggered for any new or modified source with the potential to emit of 10.0 pounds or more per highest day of POC, non-precursor organic compounds (NPOC), NO_X, CO, SO_2, PM_{10}, or $PM_{2.5}$.

As shown in **Table 5**, BACT is triggered for S-1 for PM_{10}.

Per Section 2-2-202, BACT is defined as an emission limitation, control device, or control technique applied at a source that is the most stringent of:

- the most effective device or technique successfully utilized;

- the most stringent emission limitation achieved by an emission control device or technique for the type of equipment comprising such a source;
- the most effective emission control limitation for the type of equipment comprising such a source that is contained in an approved implementation plan of any state; or,
- the most effective control device or technique or most stringent emission limitation that is technologically feasible, taking into consideration cost-effectiveness, any ancillary health and environmental impacts, and energy requirements.

These requirements are generally categorized as either technologically feasible and cost-effective (termed "BACT(1)") or achieved-in-practice (termed "BACT(2)"). BACT(2) is either equal to or less stringent than BACT(1). Because achieved-in-practice is required regardless of cost and BACT(1) is more stringent than BACT(2), an evaluation for what has been achieved-in-practice is first conducted.

Achieved-in-Practice

To understand what has been achieved in practice for controlling PM_{10} and $PM_{2.5}$ emissions from contaminated sediment drying and handling, the following sources of information were reviewed:

- Air District BACT Workbook;
- Regulations (Air District, other California air districts);
- California Air Resources Board (CARB) BACT Clearinghouse; and,
- U.S. EPA RACT/LAER/BACT Clearinghouse.

The Air District's BACT Workbook's Section 9 pertains to soil/water remediation. However, the guidelines only address air strippers and soil vapor extraction operations. Since the proposed operation is for the handling and drying of contaminated sediments, the guidelines in Section 9 are not applicable. A review of the Air District regulations, other California air district regulations, the CARB BACT Clearinghouse, and U.S. EPA RACT/LAER/BACT Clearinghouse have yielded information that the combination of water suppressants on roadways, vapor suppressants on drying stockpiles, and tarping of inactive drying stockpiles has been achieved in practice and is therefore considered BACT(2).

Technologically Feasible and Cost-Effective

Although Regulation 2, Rule 2 does not include a definition for cost-effectiveness, Section 2-2-414 requires the Air District to publish and periodically update a BACT Workbook, and that BACT will be determined using the workbook as a guidance document.

Section 1 of the BACT Workbook includes a maximum cost guideline for PM_{10} emissions of $5,300 per ton of emissions reduced.

The following control technologies and mitigation measures have been found technically feasible for abating PM_{10} emissions from contaminated sediment/soil drying and handling operations related to remediation projects:

Wet scrubber (achievable PM_{10} reduction 40% to 99%)[7]; and,
Electrostatic precipitators (achievable PM_{10} reduction up to 99.9%)[8].

Controls such as fabric filters and baghouses are not recommended for wet gas streams or where the particulate is moist or sticky[9]. However, if filters and baghouses were feasible, the following

[7] United States Environmental Protection Agency. Air Pollution Control Cost Manual, Section 6 – Particulate Matter Controls, Chapter 2 – Wet Scrubbers for Particulate Matter. July 2002.
[8] United States Environmental Protection Agency. Air Pollution Control Cost Manual, Section 6 – Particulate Matter Controls, Chapter 3 – Electrostatic Precipitators. September 1999.
[9] United States Environmental Protection Agency. Air Pollution Control Cost Manual, Section 6 – Particulate Matter Controls, Chapter 1 – Baghouses and Filters (Draft). July 2024.

abatement efficiencies would be expected:

- Baghouse (hypothetical PM_{10} reduction up to 99%)

Using the maximum cost effectiveness value and assuming an abatement of up to 99.9% of the PM_{10} emissions from **Table 6** of the evaluation for sources that exceed a daily potential to emit equal to or greater than 10.0 pounds per day of PM_{10}, maximum annualized costs could not exceed $1,359 for PM_{10} controls to be deemed cost-effective.

Contaminated sediment/soil drying and handling operations related to remediation projects are expected to have a temporary operating duration. In addition, in order to implement the aforementioned technologies, contaminated sediment/soil drying and handling operations related to remediation projects have to be enclosed and emissions have to be routed to the abatement device. The cost of building an enclosure under negative pressure that could accommodate the operation, which includes stockpiles and vehicle traffic, will exceed the maximum annualized cost. Therefore, requiring more stringent controls than meeting achieved-in-practice requirements is deemed not cost-effective.

VI. OFFSETS

Pursuant to Regulation 2-2-302, offsets must be provided for any new or modified source at a facility that emits, or is permitted to emit, more than 10 tons per year of POC or NO_X. Furthermore, pursuant to Regulation 2-2-303, offsets must be provided for any new or modified source at a facility that will have the potential to emit 100 tons per year or more of $PM_{2.5}$, PM_{10}, or SO_2. Pursuant to Regulation 2-2-610, For purposes of applying the offset requirements of Sections 2-2-302 and 2-2-303, a facility's potential to emit and cumulative increase shall be calculated including emissions from cargo carriers (other than motor vehicles) associated with the sources at the facility.

Table 12 summarizes the potential to emit (PTE) for this facility.

Table 12: PTE for Facility #203615

Pollutant	Annual Emissions (tons/yr)			Offsets Requirement (tons/yr)	Offsets Required?
	Existing	Application	Facility		
NO_x	0.000	2.133	2.133	>10	No
POC	0.000	1.951	1.951	>10	No
CO	0.000	2.300	2.300	-	No
PM_{10}	0.000	0.298	0.298	≥100	No
$PM_{2.5}$	0.000	0.123	0.123	≥100	No
SO_2	0.000	0.003	0.003	≥100	No

According to **Table 12**, offsets are not required since the facility's PTE does not exceed the offset trigger levels.

VII. STATEMENT OF COMPLIANCE

The owner/operator is expected to comply with all applicable requirements. Key requirements are listed below:

Air District Rules

Regulation 2, Rule 1: Permits – General Requirements

Regulation 2-1-412 (*Public Notice, Schools & Overburdened Communities*)
Prior to approving an application for an authority to construct or permit to operate, a public notice, fully describing the potential emissions, shall be prepared for the following cases:

(i) A new or modified source located within 1,000 feet of the outer boundary of a K-12 school site and which results in the increase in emissions of any substance into the ambient air which has been identified by the California Air Resources Board or the Air Pollution Control Officer (APCO) as a toxic air contaminant or a hazardous air contaminant or which is on the list required to be prepared pursuant to subdivision (a) of Section 25532 or Section 44321 subsections(a) to (f) inclusive of the Health and Safety Code.

(ii) A new or modified source located within an Overburdened Community (OBC) as defined in Section 2-1-243 and for which a Health Risk Assessment is required pursuant to Section 2-5-401. The project is not located within 1,000 feet of the outer boundary of any K-12 school site, but it is located within an OBC and an HRA was required. Because of this, the project is subject to the public notification requirements of Regulation 2-1-412. A public notice will be sent to all businesses and residents within 1,000 feet of the proposed sources. All comments received shall be summarized in the final evaluation report.

Regulation 2-1-123.2 (*Exemption, Liquid Storage and Loading Equipment)*
Regulation 2-1-123.2 exempts tanks used exclusively for the storage or dispensing of any aqueous solution which contains less than 1 percent (wt) organic compounds.

Montezuma Wetlands has specified that the storage tanks (S-5 through S-9) will contain less than 1 percent (wt.) organic compounds). Sediment porewater sampling provided by Montezuma Wetlands also suggests less than 1% organic content. Emissions from the storage tanks were conservatively reviewed using the maximum concentrations from sediment sampling as these concentrations represented the worst-case concentrations of contaminants of interest. A model was run to determine the absolute maximum allowable emission rate of these contaminants, and a permit condition will be included requiring the tank contents to be tested in order to validate Montezuma Wetlands's claim. With this, the sources are expected to meet the requirements of this exemption.

Emission calculations summarized in **Table 6** demonstrate that S-5 through S-9 will not exceed the backstop provisions of Regulation 2-1-319. The sources are also in compliance with the public nuisance and hazardous substance requirements of Regulation 2-1-317 and 2-1-318. According to the backstop provisions of 2-1-316, if a new or modified source emits one or more toxic air contaminants in quantities that exceed the trigger levels listed in Table 2-5-1 of Regulation 2-5, then the source shall be subject to permitting unless the source complies with both the TBACT requirements of Regulation 2-5-301 as well as the project risk limits of Regulation 2-5-302. TAC emissions for S-5 through S-9 summarized in **Table 11** shows that a toxic trigger level is exceeded for S-5 and the project. Despite this, the HRA results show that each tank is below the TBACT requirements of 2-5-301 (cancer risk less than 1.0 in a million and/or a chronic hazard index less than 0.2) and the project risk limits of Regulation 2-5-302 (cancer risk less than 6.0 in a million, chronic hazard index less than 1.0, and an acute hazard index less than 1.0). In summary, S-5 through S-9 will not exceed the backstop provisions of Regulation 2-1-316.

Because of the variable nature of the operation, under certain operating scenarios the storages tanks would not be exempt. To ensure that S-5 through S-9 do not trigger a permitting requirement per the backstop provisions of 2-1-316, 2-1-317, 2-1-318, and 2-1-319, permit conditions will be imposed. Therefore, these sources are exempt from the permitting requirements of Regulations 2-1-301 and 2-1-302.

Regulation 6, Rule 1: General Requirements

Regulation 6-1-301 (*Ringelmann No. 1 Limitation*)
Pursuant 6-1-301, a person shall not emit from any source for a period or aggregate periods of more than three minutes in any hour, a visible emission that is as dark or darker than No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree.

The Applicant has stated that all work will occur on paved surfaces and any inactive stockpiles will be covered at all times. Air monitoring will be conducted as outlined in a forthcoming Community Air Monitoring Plan (CAMP), and best management practices will be employed consistent with the BAAQMD's CEQA Guidelines, Chapter 5, "Project Level Air Quality Impacts," Table 5-2 and Table 5-3, as applicable. In addition to this, the sediment will have a high moisture content, and all sources will be abated by either foam dust suppressant or water spray. Because of these factors, the facility is expected to comply with Regulation 6-1-301.

Regulation 6-1-310 & Regulation 6-1-311 (*Total Suspended Particulate (TSP) Concentration Limits & Total Suspended Particulate (TSP) Weight Limits*)
Pages 12 and 13 of the Staff Report for Regulation 6-1[10] indicates that Sections 6-1-310 and 311 only apply to sources with a Type A (point) emissions point. Therefore, Sections 6-1-310 and 311 do not apply to sources S-1, S-2, S-3 or S-4 because these sources are Type B (fugitive) sources. Type B sources do not have a vent that is of regular geometry that can be modified/enclosed to undergo source testing using approved methods.

Regulation 6, Rule 6: Prohibition of Trackout

Adopted in 2018, the purpose of Regulation 6, Rule 6 is to limit the quantity of particulate matter in the atmosphere through control of trackout of solid materials onto paved public roads outside the boundaries of Large Bulk Material Sites, Large Construction Sites, and Large Disturbed Surface sites including landfills.

Regulation 6-6-301 (*Prohibition of Trackout onto Paved Roadways*)
Regulation 6-6-301 restricts causing or allowing trackouts that exceed cumulative 25 linear feet creates fugitive dust visible emissions without cleaning up such trackout within 4 hours of its identification. In addition, more than 1 quart of trackout is not allowed to remain at the end of the workday.

Regulation 6-6-302 (*Prohibition of Visible Emissions During Cleanup of Tracko*ut)
Regulation 6-6-302 prohibits fugitive dust visible emissions during trackout cleaning from exceeding 20 percent opacity, as determined by EPA Method 203B (or as dark in shade as that designated as Number 1 on the Ringelmann Chart), for a period or aggregate periods of more than 3 minutes in any 60-minute period.

The project is expected to comply with the trackout prohibitions of 6-6-301 and 6-6-302 through the use of foam dust suppressant on sediment and water spray on facility roads. The requirements of Rule 6-6 will be enforced through the permit conditions.

Regulation 8, Rule 5: Storage of Organic Liquids

Regulation 8-5-117 (Limited Exemption, Low Vapor Pressure)
Regulation 8-5-117 exempts tanks storing organic liquids from all provisions of Regulation 8, Rule 5 except 8-5-307.3 if the tank has a true vapor pressure less than or equal to 0.5 psia. According to the applicant provided data forms for the storage tanks, all tanks (S-5 through S-9) will store materials that have a true vapor pressure less than 0.5 psia.

Because of this, S-5 through S-9 would be exempt from all provisions of Regulation 8, Rule 5 except for Regulation 8-5-307.3. Regulation 8-5-307.3 states requirements for pressure and blanketed tanks. Because S-5 through S-9 are neither pressure nor blanketed tanks, Regulation 8-5-307.3 is not applicable to S-5 through S-9.

[10] https://www.baaqmd.gov/~/media/dotgov/files/rules/archive-2018-regulation-6/bundled-documents/20180801_92_fsr_0601-pdf.pdf?rev=c77e0ef4b9154e25891df0ffff7c1bab&sc_lang=en

Regulation 8, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks

Regulation 8-40-301 (*Uncontrolled Soil Aeration*)
Pursuant to Regulation 8-40-301, a person shall not aerate contaminated soil at a rate in excess of that specified in Table 1 of the regulation for the degree of organic content. The limitations in Table 1 apply to the entire facility and indicate the volume of contaminated soil that may be added on any one day, to contaminated soil that is already aerating. Based on the maximum concentrations of organics taken from the waste characterization report, the organic content of the sediment exceeds 5,000 ppm. This corresponds to a rate of uncontrolled aeration of 0.1 yd^3/day

As Regulation 8-40-110 excludes inactive storage piles that are covered and active storage piles from being included in the calculation of aeration volume, the expected rate of uncontrolled aeration is not expected to exceed 0.1yd^3/day. Thus, the project is expected to comply with Regulation 8-40-301. A permit condition part will be included that requires the covering of inactive storage piles.

Regulation 8-40-301 prohibits the use of contaminated soil in daily, intermediate, or final cover operations at solid waste disposal sites. The applicant is aware that soil that meets the definition of contamination within Regulation 8-40-205 may not be used as cover material at a solid waste disposal site. Therefore, compliance with this section is expected.

Regulation 8-40-304 (*Active Storage Piles*)
Pursuant to Regulation 8-40-304, contaminated soil shall be kept visible moist by water spray, treated with a vapor suppressant, or covered with continuous heavy duty plastic sheeting or covering to minimize emissions of organic compounds to the atmosphere. The uncovered surface area of any active storage pile shall not exceed 6,000 ft^2.

S-1 will be abated by both foam dust suppressant (S-1) and water spray (S-2), so the facility is expected to comply with Regulation 8-40-304.

Regulation 8-40-305 (*Inactive Storage Piles*)
Pursuant to Regulation 8-40-305, contaminated soil shall be covered during periods of inactivity longer than one hour.

Montezuma Wetlands has stated that any inactive stockpiles will be covered at all times, so the facility is expected to comply with Regulation 8-40-305.

Regulation 8-40-306 (Contaminated Soil – Excavation and Removal)
The facility is subject to and expected to comply with the requirements Regulation 8-40-305.

Regulation 8, Rule 47: Air Stripping and Soil Vapor Extraction Operations

The purpose of Regulation 8, Rule 47 is to limit emissions of organic compounds from contaminated groundwater and soil. The provisions of Regulation 8, Rule 47 apply to new and modified air stripping and soil vapor extraction equipment used for the treatment of groundwater soil or soil contaminated with organic compounds. According to the definition of soil vapor extraction in Regulation 8-47-201, operations subject to Regulation 8, Rule 40 are not subject to Regulation 8, Rule 47.

Therefore, this project is not subject to the requirements of Regulation 8, Rule 47.

New Source Performance Standards (NSPS)

There are no New Source Performance Standards that apply to this operation.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

There are no National Emissions Standards for Hazardous Air Pollutants that apply to this operation.

Prevention of Significant Deterioration (PSD)

PSD is not triggered.

California Environmental Quality Act (CEQA)

The San Francisco Bay Regional Water Quality Board (Regional Water Board) is the CEQA lead agency for the PG&E Sediment Remediation Project (Case #: T10000007367). The Regional Water Board's project site history, CEQA review documents, regulatory activities, site maps, and community involvement can be found at: https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000007367.

The Regional Water Board prepared an Initial Study/ Mitigated Negative Declaration (IS/MND) in January 2022 (State Clearinghouse #2021100323). The project sponsor and applicant is PG&E, a former owner and operator of the former Beach Street Manufactured Gas Plant (MGP). The Port of San Francisco is the property owner and co-applicant. The IS/MND was reviewed and adopted by the Regional Water Board on February 9, 2022, under Resolution No. R2-2022-0007. The Regional Water Board prepared an Addendum to the IS/MND (Addendum) on September 25, 2024.

The IS/MND and Addendum analyze the environmental impacts of remediating contaminated sediments at Piers 39 to 43 1/2 that were impacted by a former MGP. The remedial approach involves a combination of dredging, capping impacted sediments left in place, and dewatering contaminated sediments at a material handling facility (MHF) before disposing of them properly. The Addendum analyzed the following changes to the remediation project: adding Montezuma as a possible location for the MHF, extending the target remedial area, and refinements to the project's design including increasing sediment removal estimates. The Regional Water Board determined that the PG&E Sediment Remediation Project, with the implementation of the recommended mitigation measures,[11] would not result in significant environmental impacts. The Air District has reviewed and considered the PG&E Sediment Remediation Project's environmental impacts as analyzed in the IS/MND and Addendum pursuant to CEQA Guidelines Section 15096. The Air District has concluded that the PG&E Sediment Remediation Project will not have any potentially significant air quality impacts. Because air quality impacts are less than significant, CEQA does not require the Air District to consider alternatives or mitigation measures to avoid or minimize any significant impacts. Since the Air District is not imposing any mitigation measures under CEQA, CEQA does not require the adoption of a mitigation monitoring or reporting plan.

VIII. PERMIT CONDITIONS

Permit Condition #100577 for Permitted Sources S-1, S-2, S-3, and S-4:

S-1 Contaminated Sediment Remediation Activities and Stockpiles (0.7 acres)
Abated by Foam Dust Suppressant (A-1) and Water Spray (A-2)

S-2 Contaminated Sediment Remediation – Offloading
Abated by Foam Dust Suppressant (A-1)

S-3 Contaminated Sediment Remediation – Mixing
Maximum Throughput: 100 ton/hr, 1,000 ton/day, 28,000 ton/yr
Abated by Foam Dust Suppressant (A-1)

[11] No mitigation was required for air quality impacts.

S-4 Contaminated Sediment Remediation – Loading Abated by Foam Dust Suppressant (A-1)

Contaminated Sediments Throughput

1. The owner/operator of S-1, S-2, and S-4 shall not process more than the following throughputs of contaminated sediments:

   a. 1,000 tons of contaminated sediments per day; and,
   b. 28,000 tons of contaminated sediments per consecutive 12-month period.
   [Basis: Cumulative Increase and Toxics]

Contaminated Sediments Operational Requirements

2. For S-1, all exposed contaminated sediment surfaces above existing grade level shall be kept visibly moist by foam dust suppressant (A-1), treated with an approved foam suppressant – Rusmar RusFoam OC Foam or equivalent – to minimize dust emissions to the atmosphere. For the surrounding areas of exposed contaminated sediment surfaces, water spray (A-2) shall be used to minimize dust emissions to the atmosphere.
   [Basis: Cumulative Increase, Toxics, and Regulation 6-1-311]

3. For S-2, and S-4, all exposed contaminated sediment surfaces above existing grade level shall be kept visibly moist by foam dust suppressant (A-1), treated with an approved foam suppressant – Rusmar RusFoam OC Foam or equivalent – to minimize dust emissions to the atmosphere.
   [Basis: Cumulative Increase, Toxics, and Regulation 6-1-311]

4. All contaminated sediments in storage piles must be covered with continuous heavy-duty plastic sheeting except for active areas. The covering shall be in good condition, joined at the seams, and securely anchored to minimize headspace where vapors may accumulate. Storage piles shall not exceed 0.7 acres.
   [Basis: Cumulative Increase, Toxics and Regulations 8-40-110, 8-40-301, and 8-40-305]

5. All contaminated sediments above grade shall be completely covered during periods of inactivity longer than one hour. The contaminated sediments shall be covered with continuous heavy-duty plastic sheeting to minimize emission to the atmosphere. The covering shall be in good condition, joined at the seams, and securely anchored to minimize headspace where vapors may accumulate.
   [Basis: Regulations 2-1-403, 8-40-110, 8-40-301, and 8-40-305]

6. Visible dust emission from S-1, S-2, and S-4 shall not exceed Ringelmann 1.0 or result in fallout on adjacent properties in such quantities as to cause a public nuisance per Regulation 1-301. To ensure compliance with this Part and with Regulation 6-1-301 and 6-1-305, the owner/operator shall visually observe all material handling operations associated with S-1, S-2, and S-4 and shall initiate corrective actions, if any visible dust emissions are detected that persist for longer than 3 minutes in any hour.
   [Basis: Regulations 1-301, 6-1-301, and 6-1-305]

7. The owner/operator shall abate dust emissions from roads with water spray (A-2) and shall utilize sweeping or other appropriate measures to abate emissions from roadways, as necessary to maintain compliance with Part 6 of this condition, Regulations 6-1-305, 6-6-301 and 6-6-302. For the stockpile areas, the owner/operator shall ensure the water spray reaches the entire surface area of the stockpile and the entire surface area remains wet at all times, except for areas required to be covered by foam suppressant. The owner/operator is required to maintain compliance with the facility's Community Air Monitoring Plan (CAMP) that includes an air monitoring plan with dust control measures.
   [Basis: Cumulative Increase, Regulations 1-301, 6-1-305, 6-6-301, 6-6-302, and CEQA]

Vehicle Operational Requirements

8. The owner/operator shall ensure that only the following vehicles used for delivery, pick-up, processing, onsite transport, or other handling of related materials or any related operations comply with the following limitations:

    a. The vehicle weight shall not exceed any of the following:
        i. Excavator 1 = 36 tons;
        ii. Excavator 2 = 36 tons;
        iii. Loaders = 50 tons;
        iv. Cement Trucks = 24 tons average weight of an incoming truck and outgoing empty truck; and/or,
        v. Mean Vehicle Export Trucks = 28 tons average weight of an incoming empty truck and outgoing full truck.

    b. The distance traveled by vehicles onsite shall not exceed any of the following:
        i. Excavator 1 = 0.27 miles per day and 35 miles during any consecutive 12-month period;
        ii. Excavator 2 = 0.72 miles per day and 91 miles during any consecutive 12-month period;
        iii. Loaders = 3.86 miles per day and 487 miles during any consecutive 12-month period;
        iv. Cement Trucks = 17.05 miles per day and 1,200 miles during any consecutive 12-month period; and/or,
        v. Vehicle Export Trucks = 42.61 miles per day and 2,600 miles during any consecutive 12-month period.

    [Basis: Cumulative Increase and Toxics]

9. All contaminated sediments loaded into trucks or trailers for offsite disposal or treatment shall be covered with a pull-tarp cover or equivalent to minimize emission to the atmosphere. The covering shall be in good condition and securely anchored.
    [Basis: Regulations 2-1-403 and 8-40-306]

10. The owner/operator shall meet the following operational requirements to transport/handle contaminated sediments:

    a. Contaminated sediment-handling activities shall be halted during high winds (sustained 15 mph or greater);
    b. Onsite vehicles and equipment shall be limited to 15 mph;
    c. Onsite vehicles and equipment shall be restricted to roads to the extent possible;
    d. Contaminated sediments sufficiently dried for landfill acceptance shall be directly loaded onto trucks when possible; the duration of onsite sediment stockpile shall be minimized;
    e. The exterior of the truck, trailer, and tires shall be cleaned-off prior to the truck leaving the site;
    f. Real time dust monitoring shall be conducted;
    g. Drop heights shall be kept to a minimum while loading vehicles with contaminated sediments; and,
    h. Idling time for all equipment shall be minimized.

    [Basis: Cumulative Increase and CEQA]

11. The owner/operator shall allow excavators, loaders, cement trucks, and vehicle export trucks to travel only on paved portions of the property, except for the excavator working on stockpiles.
    [Basis: Toxics and Regulation 2-1-403]

12. The owner/operator shall maintain the following records:
    a. Monitor the extent of the trackout at each active exit from the site onto a paved public road at least twice during each workday, at times when vehicle traffic exiting the site is most likely to create an accumulation of trackout, or as otherwise specified by the APCO;
    b. Document the active exit locations monitored each workday;
    c. Document each occasion when the trackout exceeds cumulative 25 linear feet and all trackout control and cleanup actions initiated as a result of monitoring Subpart (a) of this Part; and,

d. Maintain the records required by Subpart (b) and Subpart (c) of this Part for two (2) years, in electronic, paper hard copy, or logbook format, and make them available to the APCO upon request.
[Basis: Regulation 6-6-501]

13. The owner/operator shall abate roads with water spray A-2 to prevent fugitive dust emissions. [Basis: Cumulative Increase and Regulation 6-1]

14. The owner/operator shall transport contaminated sediments that are classified as non-Hazardous Waste to Potrero Hills Landfill (Suisun City, California), Keller Canyon Landfill (Pittsburg, California), Vasco Road Landfill (Livermore, California), Altamont Landfill (Livermore, California), and/or other Class II disposal facility approved by DTSC or Regional Water Board. The owner/operator shall transport the contaminated sediments to these locations, which are located within Air District jurisdiction, only if the landfill has Air District approval to accept contaminated sediments.
[Basis: Regulation 2-1-403 and CEQA]

15. The owner/operator shall transport contaminated sediments that are classified as Hazardous Waste to Chemical Waste Management Kettleman Hills Landfill in Kettleman City, California or Clean Harbors Buttonwillow Landfill in Buttonwillow, California, and/or other Hazardous Waste disposal facilities approved for the project by the Regional Water Board.
[Basis: Regulation 2-1-403 and CEQA]

Emission Limitations

16. Emission Limits: The owner/operator shall ensure that:

a. Emissions from S-1 shall not exceed any of the following limits
   i. Daily
      1. 25.9 pounds PM_{10} per day; and/or,
      2. 6.3 pounds $PM_{2.5}$ per day.
   ii. 12-Month Consecutive Period
      1. 0.259 tons PM_{10} per consecutive 12-month period; and/or,
      2. 0.088 tons $PM_{2.5}$ per consecutive 12-month period.
   iii. Toxic Air Contaminant (Organics)
      1. Benzene (CAS #71-43-2)
         a. 4.2E-08 pounds per hour
         b. 3.4E-05 pounds per consecutive 12-month period
      2. Chloroform (CAS #67-66-3)
         a. 1.1E-08 pounds per hour
         b. 9.2E-06 pounds per consecutive 12-month period
      3. Hexachlorobenzene (CAS #118-74-1)
         a. 1.5E-09 pounds per hour
         b. 1.2E-06 pounds per consecutive 12-month period
      4. Naphthalene (CAS #91-20-3)
         a. 2.8E-04 pounds per hour
         b. 2.3E-01 pounds per consecutive 12-month period
      5. Polycyclic Aromatic Hydrocarbons as B(a)P-Equivalent
         a. 3.2E-04 pounds per hour
         b. 2.6E-01 pounds per consecutive 12-month period
   iv. Toxic Air Contaminant (Inorganics)
      1. Arsenic and Compounds (CAS #7440-38-2)
         a. 9.8E-06 pounds per hour
         b. 7.9E-03 pounds per consecutive 12-month period
      2. Nickel and Compounds (CAS #7440-02-0)
         a. 2.5E-05 pounds per hour
         b. 2.0E-02 pounds per consecutive 12-month period

b. Emissions from S-2 shall not exceed any of the following limits
   i. Daily
      1. 0.6 pounds of POC per day; and/or,
      2. 0.2 pounds PM_{10} per day.
   ii. 12-Month Consecutive Period
      1. 0.003 tons POC per consecutive 12-month period; and/or,
      2. 0.001 tons PM_{10} per consecutive 12-month period.
   iii. Toxic Air Contaminant (Organics)
      1. Benzene (CAS #71-43-2)
         a. 5.2E-05 pounds per hour
         b. 1.5E-02 pounds per consecutive 12-month period
      2. Chloroform (CAS #67-66-3)
         a. 1.4E-05 pounds per hour
         b. 4.0E-03 pounds per consecutive 12-month period
      3. Hexachlorobenzene (CAS #118-74-1)
         a. 1.5E-08 pounds per hour
         b. 4.1E-06 pounds per consecutive 12-month period
      4. Naphthalene (CAS #91-20-3)
         a. 2.3E-02 pounds per hour
         b. 6.5E+00 pounds per consecutive 12-month period
      5. Polycyclic Aromatic Hydrocarbons as B(a)P-Equivalent
         a. 6.5E-05 pounds per hour
         b. 1.8E-02 pounds per consecutive 12-month period
   iv. Toxic Air Contaminant (Inorganics)
      1. Arsenic and Compounds (CAS #7440-38-2)
         a. 4.0E-07 pounds per hour
         b. 1.1E-04 pounds per consecutive 12-month period
      2. Nickel and Compounds (CAS #7440-02-0)
         a. 1.2E-06 pounds per hour
         b. 3.3E-04 pounds per consecutive 12-month period

c. Emissions from S-3 shall not exceed any of the following limits
   i. Daily
      1. 0.6 pounds of POC per day
   ii. 12-Month Consecutive Period
      1. 0.004 tons POC per consecutive 12-month period
   iii. Toxic Air Contaminant (Organics)
      1. Benzene (CAS #71-43-2)
         a. 1.5E-05 pounds per hour
         b. 4.1E-02 pounds per consecutive 12-month period
      2. Chloroform (CAS #67-66-3)
         a. 3.4E-05 pounds per hour
         b. 9.6E-03 pounds per consecutive 12-month period
      3. Hexachlorobenzene (CAS #118-74-1)
         a. 1.7E-08 pounds per hour
         b. 4.7E-06 pounds per consecutive 12-month period
      4. Naphthalene (CAS #91-20-3)
         a. 1.8E-02 pounds per hour
         b. 5.1E+00 pounds per consecutive 12-month period
      5. Polycyclic Aromatic Hydrocarbons as B(a)P-Equivalent
         a. 2.2E-05 pounds per hour
         b. 6.2E-03 pounds per consecutive 12-month period
   iv. Toxic Air Contaminant (Inorganics)
      1. Arsenic and Compounds (CAS #7440-38-2)
         a. 1.5E-07 pounds per hour

b. 4.3E-05 pounds per consecutive 12-month period
2. Nickel and Compounds (CAS #7440-02-0)
a. 3.9E-07 pounds per hour
b. 1.1E-04 pounds per consecutive 12-month period

d. Emissions from S-4 shall not exceed any of the following limits
i. Daily
1. 1.6 pounds of POC per day;
2. 0.1 pounds PM_{10} per day; and/or,
ii. 12-Month Consecutive Period
1. 0.010 tons POC per consecutive 12-month period; and/or,
2. 0.001 tons PM_{10} per consecutive 12-month period.
iii. Toxic Air Contaminant (Organics)
1. Benzene (CAS #71-43-2)
a. 4.5E-04 pounds per hour
b. 1.3E-01 pounds per consecutive 12-month period
2. Chloroform (CAS #67-66-3)
a. 9.9E-05 pounds per hour
b. 2. 8E-02 pounds per consecutive 12-month period
3. Hexachlorobenzene (CAS #118-74-1)
a. 4.7E-08 pounds per hour
b. 1.3E-05 pounds per consecutive 12-month period
4. Naphthalene (CAS #91-20-3)
a. 5.0E-02 pounds per hour
b. 1.4E+01 pounds per consecutive 12-month period
5. Polycyclic Aromatic Hydrocarbons as B(a)P-Equivalent
a. 2.3E-05 pounds per hour
b. 6.4E-03 pounds per consecutive 12-month period
iv. Toxic Air Contaminant (Inorganics)
1. Arsenic and Compounds (CAS #7440-38-2)
a. 2.7E-07 pounds per hour
b. 7.5E-05 pounds per consecutive 12-month period
2. Nickel and Compounds (CAS #7440-02-0)
a. 6.9E-07 pounds per hour
b. 1.9E-04 pounds per consecutive 12-month period

e. Total emissions from S-1, S-2, S-3, and S-4 of any toxic air contaminants not limited in a condition shall not equal or exceed the respective trigger levels contained in Regulation 2-5.
[Basis: Cumulative Increase and Toxics]

Sample Analysis

17. Within 60 days of initial start-up, the owner/operator shall take material samples from S-1, S-2, S-3 and S-4 for laboratory analysis. The owner/operator shall use the results from the laboratory report to demonstrate compliance with the limitations of this part and/or calculate emissions emitted to the atmosphere. The owner/operator shall submit the laboratory report and/or calculated emissions no later than 60 days from the date laboratory analysis is completed, to demonstrate compliance with Part 16 of this condition.
[Basis: Regulation 2-1-403]

Recordkeeping & Reporting

18. The owner/operator shall maintain the following information:

a. Daily throughput of contaminated sediments in tons and cubic yards at each source;
b. Monthly throughput of contaminated sediments in tons and cubic yards at each source;
c. On a monthly basis, summarize process throughput rates for each month and for each consecutive rolling twelve-month period to demonstrate compliance with Part 1;

d. Maintain records of vehicle trip data (in vehicle miles traveled per day, VMT/day) for each type of vehicle used for transfer, processing, unloading, and loading; paved and unpaved road distances; vehicle fleet weights; and associated emissions calculations;
e. Maintain daily records of the number of vehicles that travel onsite;
f. Trackout records in accordance with Part 12 of this condition; and,
g. Sample analysis and calculations in accordance with Part 17 of this condition.

The owner/operator shall maintain all records in an Air District-approved log. The owner/operator shall retain the records for at least two (2) years from the date of entry and make them available for inspection by Air District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable Air District Regulations.
[Basis: Recordkeeping]

19. The owner/operator shall provide a written report to the Compliance and Enforcement Division no later than 30 working days after all contaminated sediment drying and removal is completed. The written verification shall include:

    a. Names and addresses of persons performing and responsible for the contaminated sediment removal.
    b. Date of removal.
    c. Quantity of contaminated sediments removed in tons.
    d. Procedures employed to meet the requirements of Section 8-40-301 through 306.

    [Basis: Cumulative Increase and Regulation 8-40-405]

20. The owner/operator shall follow the dust control and volatile organic compound (VOC) measure specified in the Remedial Action Plan (RAP) as approved by the San Francisco Bay Regional Water Quality Board and Community Air Monitoring Plan (CAMP) as approved by the California Department of Toxics Substances Control (DTSC):
    a. Conduct real-time dust monitoring during project activities according to the RAP and CAMP and record results in an Air District-approved log.
    b. Conduct fence line air monitoring during project activities according to the RAP and CAMP and record results in an Air District-approved log.
    c. Compare dust and air monitoring results to the real-time action levels for dust and VOC, take all required actions if monitored levels exceed an action level, and maintain records of all actions taken in an Air District-approved log.

    [Basis: Cumulative Increase and Regulation 2-5-302]

Notification Requirements

21. Any non-compliance with these conditions shall be reported in writing to the Compliance and Enforcement Division by the next business day after discovery. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well as the time of occurrence.
    [Basis: Regulation 1-401]

22. Upon final completion of the contaminated sediment drying project, the owner/operator shall notify the Engineering Division within two weeks of completion of all remediation activities.
    [Basis: Regulation 1-441]

End of Conditions

Permit Condition #100578 for S-3:

S-3 Contaminated Sediment Remediation – Mixing
Maximum Throughput: 100 ton/hr, 1,000 ton/day, 28,000 ton/yr
Abated by Foam Dust Suppressant (A-1)

1. The owner/operator shall process no more than 100 tons per day or 2,800 tons in any consecutive 12-month period of pre-mixed wet cement at this facility. The owner/operator shall process no more than 28,000 tons of pre-mixed wet cement over the duration of the project.
   [Basis: Cumulative Increase and Toxics]

2. The owner/operator shall process no more than 1,000 tons per day or 28,000 tons in any consecutive 12-month period of contaminated sediments at this facility. The owner/operator shall process no more than 280,000 tons of contaminated sediments over the duration of the project.
   [Basis: Cumulative Increase and Toxics]

3. The owner/operator shall not mix more than 10% by weight of pre-mixed wet cement with contaminated sediments.
   [Basis: Cumulative Increase and Toxics]

4. The owner/operator shall not discharge an air contaminant into the atmosphere for a period or periods aggregating more than 3 minutes in any hour, which is as dark or darker than a Ringelmann 1.0.
   [Basis: Regulation 6-1-301]

5. The owner/operator shall maintain the following information:

   a. Daily throughput of contaminated sediments in tons and cubic yards;
   b. Daily throughput of pre-mixed wet cement in tons and cubic yards;
   c. Monthly throughput of contaminated sediments in tons and cubic yards;
   d. Monthly throughput of pre-mixed wet cement in tons and cubic yards; and,
   e. On a monthly basis, summarize process throughput rates for each month and for each consecutive rolling twelve-month period to demonstrate compliance with Parts 1, 2, and 3.

   The owner/operator shall maintain all records in an Air District-approved log. The owner/operator shall retain the records for at least two (2) years from the date of entry and make them available for inspection by Air District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable Air District Regulations.
   [Basis: Recordkeeping]

End of Conditions

Permit Condition #100579 for Exempt Sources S-5, S-6, S-7, S-8, and S-9:

S-5 Tank #1 - Water Storage Tank (Pre-Treatment) (Exempt)
Make: ModuTank Model: Custom, Capacity: 73,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-6 Tank #2 - Water Storage Tank (Post-Treatment) (Exempt)
Fixed Roof Tank
Make: Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-7 Tank #3 - Water Storage Tank (Post-Treatment) (Exempt)
Fixed Roof Tank
Make: Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-8 Tank #4 - Water Storage Tank (Post-Treatment) (Exempt)
Fixed Roof Tank
Make: Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-9 Tank #5 - Water Storage Tank (Post-Treatment) (Exempt)
Fixed Rood Tank
Make: Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

Exempt Storage Tank Requirements

1. The owner/operator of S-5 through S-9 shall not exceed the following throughput limits:

   a. 3,500 gallons of decant water per hour for each tank S-5 through S-9; and,
   b. 1,500,000 gallons of decant water per consecutive 12-month period for each tank S-5 through S-9.

   [Basis: Cumulative Increase and Toxics]

2. The owner/operator of S-5 through S-9 shall not store a material with an organic content of 1% or more by weight.
   [Basis: Regulation 2-1-123.2]

3. The owner/operator may store alternate liquid(s) other than the materials specified in Part 1 and/or usages in excess of those specified in Part 1, provided that the owner/operator can demonstrate that all of the following are satisfied:

   a. POC emissions do not exceed the following:
      i. S-5: 0.188 tons in any consecutive twelve-month period
      ii. S-6: 0.332 tons in any consecutive twelve-month period
      iii. S-7: 0.332 tons in any consecutive twelve-month period
      iv. S-8: 0.332 tons in any consecutive twelve-month period
      v. S-9: 0.332 tons in any consecutive twelve-month period

   b. Benzene (CAS #71-43-2) emissions do not exceed the following:
      i. S-5: 7.1E-05 pounds in any hour and 6.2E-01 pounds in consecutive twelve-month period
      ii. S-6: 9.2E-05 pounds in any hour and 8.1E-01 pounds in consecutive twelve-month period
      iii. S-7: 9.2E-05 pounds in any hour and 8.1E-01 pounds in consecutive twelve-month period
      iv. S-8: 9.2E-05 pounds in any hour and 8.1E-01 pounds in consecutive twelve-month period
      v. S-9: 9.2E-05 pounds in any hour and 8.1E-01 pounds in consecutive twelve-month period

   c. Chloroform (CAS #67-66-3) emissions do not exceed the following:
      i. S-5: 1.2E-03 pounds in any hour and 1.1E+01 pounds in consecutive twelve-month period
      ii. S-6: 1.7E-03 pounds in any hour and 1.5E+01 pounds in consecutive twelve-month period
      iii. S-7: 1.7E-03 pounds in any hour and 1.5E+01 pounds in consecutive twelve-month period
      iv. S-8: 1.7E-03 pounds in any hour and 1.5E+01 pounds in consecutive twelve-month period
      v. S-9: 1.7E-03 pounds in any hour and 1.5E+01 pounds in consecutive twelve-month period

   d. Hexachlorobenzene (CAS #118-74-1) emissions do not exceed the following:
      i. S-5: 6.3E-05 pounds in any hour and 5.5E-01 pounds in consecutive twelve-month period
      ii. S-6: 4.6E-11 pounds in any hour and 4.0E-07 pounds in consecutive twelve-month period
      iii. S-7: 4.6E-11 pounds in any hour and 4.0E-07 pounds in consecutive twelve-month period
      iv. S-8: 4.6E-11 pounds in any hour and 4.0E-07 pounds in consecutive twelve-month period
      v. S-9: 4.6E-11 pounds in any hour and 4.0E-07 pounds in consecutive twelve-month period

   e. Total emissions from S-5 through S-9 of any toxic air contaminant not limited in a condition shall not equal or exceed the respective trigger levels contained in Regulation 2-5.

   f. If the owner/operator of S-5 through S-9 exceeds any of the toxic air contaminant limits in Parts 3b through 3e, the exceedance shall not be considered a violation if the owner/operator can demonstrate, to the satisfaction of the Air District, compliance with the requirements of

Regulation 2-5.
[Basis: Cumulative Increase & Toxics]

4. Within 60 days of initial start-up, the owner/operator shall take material samples from S-5 through S-9 for laboratory analysis. The owner/operator shall use the results from the laboratory report to calculate emissions emitted to the atmosphere. The owner/operator shall submit the laboratory report and calculated emissions within 60 days from the completion of laboratory analysis, to demonstrate compliance with Parts 2 and 3 of this condition.
[Basis: Regulation 2-1-403]

5. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
   a. Quantities and maximum true vapor pressure of each type of liquid stored at each source on a monthly basis;
   b. If a material other than those specified in Part 1 is stored, POC/NPOC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 3, on a monthly basis;
   c. Monthly throughput and/or emission calculations shall be totaled for each consecutive twelve-month period; and,
   d. Sample analysis and calculations in accordance with Part 4 of this condition.

   All records shall be retained onsite for 24 months, from the date of entry, and made available for inspection by Air District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable Air District Regulations.
   [Basis: Recordkeeping]

6. The owner/operator of S-5 shall equip the source with a liquid mounted primary seal and a zero-gap secondary seal. There shall be no ungasketed roof fittings. Except for roof legs, each roof fitting shall be of the design, which yields the minimum roof fitting losses (per EPA Compilation of Air Pollution Emission Factors, AP-42, Supplement E, Section 12.3.2, Table 12.3-11). The following list indicates the type of control required for a variety of typical roof fittings. Control techniques for roof fittings not included in this list shall be subject to Air District approval, prior to installing the roof on the tank.

Fitting Type	**Control Technique**
Access Hatch	Bolted cover, gasketed
Guide Pole/Well	Unslotted guide pole, gasketed sliding cover; or Slotted with controls per API 2517 Addendum (See Note 1)
Gauge Float Well	Bolted cover, gasketed
Gauge Hatch/Sample Well	Weighted mechanical actuation, gasketed
Vacuum Breaker	Weighted mechanical actuation, gasketed
Roof Drain	Roof drain does not drain water into product
Roof Leg	Fixed; or adjustable with vapor seal boot, or gasket between roof leg and leg sleeve
Rim Vent	Weighted mechanical actuation, gasketed

   Note 1: Slotted Guide Pole Control Configuration, per Addendum to API Publication 2517, May 1994, shall include the following components:

   a. Sliding cover;
   b. Well gasket;
   c. Pole sleeve with pole wiper approximately 6 inches above sliding cover, or Air District approved equivalent; and,
   d. Float with float wiper approximately 1 inch above the sliding cover, or alternately a float with multiple wipers.

[Basis: Regulations 2-1-320 and 2-1-403]

End of Conditions

Permit Condition #100580 for Cargo Carriers Associated with Facility:

1. The owner/operator shall not exceed 60 cargo carriers at berth at the facility in any consecutive 12-month period.

   a. A cargo carrier that travels from the sediment dredging site to the facility and returns from the facility to the dredging site without making another port of call in the San Francisco Bay Area shall be considered as one cargo carrier.
   b. A cargo carrier that makes another port of call in the San Francisco Bay Area, in addition to berthing at the facility, shall be considered as five-eighths (5/8) of a cargo carrier.
   c. A cargo carrier that comes to berth at the facility in one month and leaves berth from the facility in the following month shall be counted in the month the cargo carrier comes to berth.

   Emissions of NOx from cargo carriers shall be limited to 2.133 tons in any consecutive 12-month period.
   [Basis: Cumulative Increase]

2. For tugboat services that the owner/operator directly contracts within Air District Waters, the owner/operator shall obtain documentation from the tugboat operators that the sulfur content of the liquid fuel is 0.05% or less by weight.
   [Basis: Regulation 2-1-403]

3. The owner/operator shall maintain monthly records of the number of cargo carriers berthed at the facility and any other port of call a cargo carrier made in Air District Waters. All records shall be retained for at least two (2) years from the date of entry. The monthly report shall be kept on site and made available to Air District staff upon request. An annual report of the previous 12 months of data shall be submitted to the Engineering Division at least 30 days prior to permit renewal.
   [Basis: Recordkeeping]

End of Conditions

IX. RECOMMENDATION

The Air District has reviewed the material contained in the permit application for the proposed project and has made a preliminary determination that the project is expected to comply with all applicable requirements of Air District, state, and federal air quality-related regulations with additional limitations. The preliminary recommendation is to issue an Authority to Construct for the equipment listed below, however the proposed source triggers the public notification requirements of Regulation 2-1-412. After comments from the public are received and reviewed, the Air District will make a final determination on the permit.

I recommend that the Air District initiate a public notice and consider any comments received prior to taking any final action on issuance of an Authority to Construct and/or a Permit to Operate for the following equipment:

S-1 Contaminated Sediment Remediation – Drying Stockpiles (0.7 acres)
Maximum Throughput: 100 ton/hr, 1,000 ton/day, 28,000 ton/yr
Abated by Foam Dust Suppressant (A-1) and Water Spray (A-2)

S-2 Contaminated Sediment Remediation – Offloading
Maximum Throughput: 100 ton/hr, 1,000 ton/day, 28,000 ton/yr
Abated by Foam Dust Suppressant (A-1)

S-3 Contaminated Sediment Remediation – Mixing
Maximum Throughput: 100 ton/hr, 1,000 ton/day, 28,000 ton/yr
Abated by Foam Dust Suppressant (A-1)

S-4 Contaminated Sediment Remediation – Loading
Maximum Throughput: 100 ton/hr, 1,000 ton/day, 28,000 ton/yr
Abated by Foam Dust Suppressant (A-1)

A-1 Foam Dust Suppressant
Make: Rusmar, Model: RusFoam OC (AC645)

A-2 Water Truck Spray

I recommend that the Air District issue a Certificate of Exemption to Montezuma Wetlands for the following equipment:

S-5 Tank #1 - Water Storage Tank (Pre-Treatment)
External Floating Roof Tank
Make: ModuTank Model: Custom, Capacity: 73,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-6 Tank #2 - Water Storage Tank (Post-Treatment)
Fixed Roof Tank
Make**:** Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-7 Tank #3 - Water Storage Tank (Post-Treatment)
Fixed Roof Tank
Make**:** Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-8 Tank #4 - Water Storage Tank (Post-Treatment)
Fixed Roof Tank
Make**:** Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

S-9 Tank #5 - Water Storage Tank (Post-Treatment)
Fixed Roof Tank
Make**:** Sabre Manufacturing, Model: GT-452, Capacity: 21,000 gal
Maximum Throughput: 3,500 gal/hr, 1,500,000 gal/yr

By: _____ Date: _____
Alfonso Borja
Supervising Air Quality Engineer