DRAFT ENGINEERING EVALUATION

Bauman Landscape and Construction Inc.
Facility ID 25242 | Application 31809
424 Irwin Street, San Rafael, CA 94901

BACKGROUND

Bauman Landscape and Construction Inc. (Bauman) has applied for an Authority to Construct and Permit to Operate for the following sources:

S-1 Cement Silo, Make: Cementech, Model: CT-350P, Capacity: 1,400 cubic feet abated by A-1 Bin Vent
S-2 Cement Supplement Silo, Make: Cementech, Model: CT-350P, Capacity: 1,400 cubic feet abated by A-2 Bin Vent
S-3 Four (4) Stockpiles, 10 feet x 10 feet; abated by A-3 Water Spray

Abated by:
A-1 Bin Vent, Make: Cementech, Model: 330 Pulse Jet, Efficiency: 98.7%, for S-1
A-2 Bin Vent, Make: Cementech, Model: 330 Pulse Jet, Efficiency: 98.7%, for S-2
A-3 Water Spray for S-3

Bauman submitted an application to come into compliance stemming from a Notice of Violation (NOV) A61554 for unpermitted equipment issued on April 28, 2022. The facility began its operations in 2019 and submitted an initial application on July 7, 2022.

Bauman operates a material storage and transfer yard at 424 Irwin Street in the City of San Rafael. The yard receives and stores raw materials such as sand, rock, Type II cement, and cement supplement and combines those materials together into ready-mix concrete delivery trucks, which batch concrete at construction sites across the Bay Area.

The yard includes two (2) 50-ton silos used to store Type II cement and cement supplement (Sources S-1 and S-2). Dry Type II cement and cement supplement are delivered to the site using vendor trucks and are unloaded into the silos via a pneumatic transfer (fully enclosed). During ready-mix concrete truck loading operations, both silos discharge to the trucks via a single auger which connects to the trucks via a fully enclosed and camlock connected tube. Each truck has a venting/vacuum system to remove and return any dust generated from the cement loading. Each silo is abated by a bin vent filter (Abatement Devices A-1 and A-2).

The yard contains four (4) 10'x10'x 6' stockpiles (Source S-3) used to store and handle the raw sand or rock, which is brought to the site from the Port of Richmond. Each stockpile is partially enclosed by concrete walls on three sides to limit wind exposure, and water sprinklers are mounted along the walls to abate the stockpiles (Abatement Device A-3). The A-3 sprinklers water the stockpiles at least twice a day and use approximately 1,200 gallons of recycled water. According to Bauman, the typical moisture content of the sand stockpile is approximately 3-4%. Additionally, Bauman manually sprays the stockpiles with handheld hoses during truck loading and off-loading events.

When a construction job site orders ready-mix concrete, a volumetric concrete mixer truck travels to the San Rafael facility, loads dry Type II cement from the silos into a silo compartment on the truck via camlock loading, and load sand and rocks from the stockpiles into additional compartments in the truck, before driving off-site. Before exiting the site, the haul trucks go through a wheel washing system to reduce trackout. The volumetric concrete mixer truck mixes the dry material and water at individual job sites, and the yard does not do any concrete batching on-site.

EMISSION CALCULATIONS

Criteria Pollutants

The primary criteria pollutant is particulate matter, specifically particulate matter with an aerodynamic diameter smaller than or equal to a nominal 10 microns (PM_{10}) and particulate matter with an aerodynamic diameter smaller than or equal to a nominal 2.5 microns ($PM_{2.5}$). Emission Factors are sourced as follows:

- For S-1, Cement Silo, "uncontrolled cement pneumatic unloading to elevated storage silo" from AP-42 Table 11.12-2. A 98.7% control efficiency is then assumed for the bin vent.
- For S-2, Cement Supplement Silo, "uncontrolled cement supplement pneumatic unloading to elevated storage silo" from AP-42 Table 11.12-2. A 98.7% control efficiency is then assumed for the bin vent.
- The above methodologies are applied twice to each silo, once for loading of the silos and once for unloading of the silos into volumetric concrete mixer trucks.
- AP-42 Table 11.12-2 for sand and aggregate transfer of storage piles, S-3
- For emissions from inactive stockpiles due to wind erosion, EF_{PM10} =1.7 lbs/day/acre per AP-42 (Fourth Edition) Table 8-19.1-1.
- For emissions from inactive stockpiles due to wind erosion, $EF_{PM2.5}$ =1.7 lbs/day/acre per AP-42 (Fourth Edition) Table 8-19.1-1. For wind erosion it is assumed that $PM_{10} = PM_{2.5}$.
- AP-42 Chapter 13.2.1 for pounds of particulate matter emissions per Vehicle Mile Travel (VMT); where $E = k(sL)^{0.91}*(W)^{1.02}$ for paved roads, k = 0.0022 for PM_{10}, k=0.00054 for $PM_{2.5}$, sL = 70 g/m^2, W = mean vehicle weight = 40 tons
- For calculating daily and hourly emissions from paved roads, it was assumed there would be 18 trips per day and 18 max trips per hour.
- Where AP-42 did not have specific $PM_{2.5}$ factors the Air District Permit Handbook guidance from Chapter 11.5 for Concrete Batch Plants was used - $PM_{2.5}$ emissions are approximately 15% of PM_{10} emissions (CARB PM3431). This includes drop loading/unloading and stockpiles.

Table 1. Material Throughputs

Source	Material	Hourly Rate (tons/hour)	Daily Rate (tons/day)	Annual Rate (tons/year)
Silo 1 (S-1)	Cement	22	528	5,720
Silo 2 (S-2)	Cement Supplement (Fly Ash)	6.6	158.4	1,716
Stockpiles (S-3)	Sand & Aggregate	28.6	686.4	7,436

Table 2. PM_{10} Emissions

Source	Process Description	Material Processed	Unabated Emission Factor (lbs PM_{10}/ton)	Abatement	Annual Throughput (tons/year)	Annual Emissions (lbs PM_{10}/yr)	Max Daily Throughput (tons/day)	Daily Emissions lbs PM_{10}/day
S-1	Cement Silo (Silo Loading)	Cement	0.47	98.7%	5,720	35	528	3.2
S-1	Cement Silo (Truck Loading)	Cement	0.47	98.7%	5,720	35	528	3.2
S-1 Total		Cement				**70**		**6.5**
S-2	Flyash Silo (Silo Loading)	Cement Supplement	1.10	98.7%	1,716	25	158.4	2.3
S-2	Flyash Silo (Truck Loading)	Cement Supplement	1.10	98.7%	1,716	25	158.4	2.3
S-2 Total		Cement Supplement				**49**		**4.5**
S-3	Stockpiles (Drop Loading)	Sand & Aggregate	3.3E-03	70% Water Spray[3]	7,436	25	686.4	0.7
S-3	Stockpiles (Drop Unloading)	Sand & Aggregate	3.3E-03	70% Water Spray[3]	7,436	25	686.4	0.7
S-3	Stockpiles (Wind Erosion)	Sand & Aggregate	1.7[1]	70% Water Spray[3]	N/A	2	N/A	0.0
S-3	Roads	N/A	4.52[2]	70% Water Spray[3]	N/A	642	N/A	1.8
S-3 Total						**694**		**3.2**

Notes:

1) Stockpiles emission factor is pounds of PM_{10} per acre per day.
2) Road emission factor is pounds of PM_{10} per vehicle mile travelled.
3) If watering is used to suppress dust, a maximum abatement efficiency of 70% may be used as per the permit handbook.

Table 3. VMT Summary

Truck Weight (tons)	Trip Distance (ft)	Annual Trips	Annual VMT	Daily Trips	Daily VMT	Unabated Emission Factor (lbs PM_{10} /VMT)	Abatement	Annual Emissions (lbs PM_{10}/year)	Daily Emissions (lbs PM_{10}/day)
40	380	6570	473	18	1.3	4.52	70%	**642**	**1.8**

Table 4. Total PM_{10} Emissions Summary

Processes	Daily Emissions (lbs PM_{10}/day)	Annual Emissions (lbs PM_{10}/year)	Annual Emissions (tons PM_{10}/year)
Main Plant	12.3	170	0.085
Vehicle Traffic	1.8	642	0.321
Total	**14.1**	**812**	**0.406**

Table 5. $PM_{2.5}$ Emissions

Source	Process Description	Material Processed	Unabated Emission Factor (lbs $PM_{2.5}$/ton)	Abatement	Annual Throughput (tons/year)	Annual Emissions (lbs $PM_{2.5}$/yr)	Max Daily Throughput (tons/day)	Daily Emissions (lbs $PM_{2.5}$/day)
S-1	Cement Silo (Silo Loading)	Cement	0.07	98.7%	5,720	5	528	0.5
S-1	Cement Silo (Truck Loading)	Cement	0.07	98.7%	5,720	5	528	0.5
S-1 Total		Cement				**10**		**1.0**
S-2	Flyash Silo (Silo Loading)	Cement Supplement	0.17	98.7%	1,716	4	158.4	0.4
S-2	Flyash Silo (Truck Loading)	Cement Supplement	0.17	98.7%	1,716	4	158.4	0.4
S-2 Total		Cement Supplement				**8**		**0.7**
S-3	Stockpiles (Drop Loading)	Sand & Aggregate	5.0E-04	70% Water Spray[3]	7,436	4	686.4	0.1
S-3	Stockpiles (Drop Unloading)	Sand & Aggregate	5.0E-04	70% Water Spray[3]	7,436	4	686.4	0.1
S-3	Stockpiles (Wind Erosion)	Sand & Aggregate	1.7[1]	70% Water Spray[3]	N/A	2	N/A	0.0
S-3	Roads	N/A	1.11[2]	70% Water Spray[3]	N/A	158	N/A	0.4
S-3 Total						**168**		**0.6**

Notes:

1) Stockpiles emission factor is pounds of $PM_{2.5}$ per acre per day, $PM_{2.5}$ is assumed to be equal to PM_{10} emissions.
2) Road emission factor is pounds of PM_{10} per vehicle mile travelled.
3) If watering is used to suppress dust, a maximum abatement efficiency of 70% may be used as per the permit handbook.

Table 6. VMT Summary $PM_{2.5}$

Truck Weight (tons)	Trip Distance (ft)	Annual Trips	Annual VMT	Daily Trips	Daily VMT	Unabated Emission Factor (lbs $PM_{2.5}$/ VMT)	Abatement	Annual Emissions lbs $PM_{2.5}$/year	Daily Emissions lbs $PM_{2.5}$/day
40	380	6,570	473	18	1.3	1.11	70%	**158**	**0.4**

Table 7. Total $PM_{2.5}$ Emissions Summary

Processes	Daily Emissions lbs $PM_{2.5}$/day	Annual Emissions lbs $PM_{2.5}$/year	Annual Emissions tons $PM_{2.5}$/year
Main Plant	1.9	28	0.014
Vehicle Traffic	0.4	158	0.079
Total	**2.3**	**186**	**0.093**

Toxic Air Contaminants

Toxic Air Contaminant (TAC) emissions are expected from sources that handle cement and cement supplements. The following tables provide TAC emissions from applicable sources. TAC emission factors are referenced from Table 11.12-8 in Chapter 11.12, Concrete Batching of AP-42, and Journal of the Air & Waste Management Association paper titled "*PM_4 Crystalline Silica Emission Factors and Ambient Concentrations at Aggregate-Producing Sources in California.*"

- For Cement Silo, S-1, unabated emission factors are from AP-42, Table 11.12-8 (Cement Silo Filing), except crystalline silica. A 98.7% abatement factor is assumed for silo loading and unloading.
- For Cement Supplement Silo, S-2, unabated emission factors are from San Diego Air Pollution Control District, except crystalline silica. A 98.7% abatement factor is assumed for silo loading and unloading.
- Crystaline silica emissions are assumed to be 6.38% of PM_{10} emissions from S-1 and S-2, as per BAAQMD Permit Handbook Chapter 11.5 Concrete Batch Plants.
- For Cement Silo, S-1, hexavalent chromium emissions are assumed to be 5/58th of total chromium provided in AP-42, Table 11.12-8 as per guidance in BAAQMD Permit Handbook Chapter 11.5 Concrete Batch Plants.
- For calculating daily and hourly emissions from paved roads, it was assumed there would be 18 trips per day and 18 max trips per hour.
- AP-42 Chapter 13.2.1 for pounds per Vehicle Mile Travel (VMT); where $E = k(sL)^{0.91}*(W)^{1.02}$ for paved roads, k = 0.0022 for PM_{10}, k=0.00054 for $PM_{2.5}$, sL = 70 g/m2, W = mean vehicle weight = 40 tons.

Table 8. TAC Emissions

Pollutant TAC Compounds		Chronic Risk Trigger (lbs/year)	S-1 Annual Emissions (lbs/year)	S-2 Annual Emissions (lbs/year)	S-3 Annual Emissions (lbs/year)	Project Total (lbs/year)	Chronic Triggered?
Arsenic	7440-38-2	1.6E-03	2.5E-04	2.1E-03		2.3E-03	Yes
Beryllium	7440-41-7	3.4E-02	2.7E-06	2.8E-04		2.8E-04	No
Cadmium	7440-43-9	1.9E-02	3.5E-05	1.4E-04		1.7E-04	No
Chromium VI	18540-29-9	5.1E-04	3.2E-06	4.2E-04		4.2E-04	No
Copper	7440-50-8	--		3.2E-03		3.2E-03	No
Crystalline Silica	7631-86-9	1.2E+02	4.5E+00	3.7E+00	4.2E+01	5.0E+01	No
Lead	7439-92-1	2.9E-01	1.1E-04	2.1E-03		2.2E-03	No
Manganese	7439-96-5	3.5E+00	3.0E-02	1.1E-02		4.1E-02	No
Nickel	7440-02-0	3.1E-01	2.6E-03	1.7E-03		4.3E-03	No
Selenium	7782-49-2	8.0E+00		1.4E-04		1.4E-04	No
Pollutant TAC Compounds		Acute Risk Trigger (lbs/hour)	S-1 Hourly Emissions	S-2 Hourly Emissions	S-3 Hourly Emissions	Project Total (lbs/hour)	Acute Triggered?

			(lbs/hour)	(lbs/hour)	(lbs/hour)		
Arsenic	7440-38-2	8.8E-05	9.6E-07	8.1E-06		9.0E-06	No
Beryllium	7440-41-7	--	1.0E-08	1.1E-06		1.1E-06	No
Cadmium	7440-43-9	--	1.3E-07	5.4E-07		6.7E-07	No
Chromium VI	18540-29-9	--	1.2E-08	1.6E-06		1.6E-06	No
Copper	7440-50-8	1.0E+02		1.2E-05		1.2E-05	No
Crystalline Silica	7631-86-9	--	1.7E-02	1.4E-02	1.2E-01	1.5E-01	No
Lead	7439-92-1	--	4.2E-07	8.1E-06		8.5E-06	No
Manganese	7439-96-5	--	1.2E-04	4.3E-05		1.6E-04	No
Nickel	7440-02-0	8.8E-05	1.0E-05	6.5E-06		1.7E-05	No
Selenium	7782-49-2	--		5.4E-07		5.4E-07	No

Plant Cumulative Increase

Tables 9 and 10 provide a summary of the facility cumulative increase which includes new or modified source emission increases.

Table 9. Plant Cumulative Increase per Source

Source	PM_{10} Emissions (tons/year)	$PM_{2.5}$ Emissions (tons/year)
S-1	0.035	0.005
S-2	0.025	0.004
S-3	0.347	0.084
Total	**0.406**	**0.093**

Table 10. Plant Cumulative Increase

Criteria Pollutants	Pre-Project Cumulative Increase (tons/year)	Emissions from this Application (tons/year)	Post Project Cumulative Increase (tons/year)
PM_{10}	0.000	0.406	0.406
$PM_{2.5}$	0.000	0.093	0.093

STATEMENT OF COMPLIANCE

California Environmental Quality Act (CEQA)

Approval of this permit is not subject to CEQA because it is ministerial. The Air District's regulatory requirements that governed the approval of this project did not allow for any subjective judgement related whether or how the project may be carried out. The project must comply with objective numerical standards outlined in the Air District's Permit Handbook. This operation complied with Chapter 11.5 Concrete Batch Plants and Chapter 11.7 Crushing and Grinding. These fixed standards do not allow for or require any subjective judgment or discretion to interpret or apply. Additionally, the Air District is legally compelled to approve the project where it complied with these standards. Furthermore, this project did not trigger Best Available Control Technology (BACT) or BACT for toxics (T-BACT). Thus, the Air District's action was ministerial

Public Notice, - Regulation 2, Rule 1, Section 412

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 is identified as a toxic air contaminant or a hazardous air contaminant in Table 2-5-1 New Source Review of Toxic Air Contaminants shall prepare and distribute a public notice per Regulation 2-1-412 Public Notice. Public notices are also triggered for new or modified sources located in overburdened communities (OBC's) that require an HRA. This facility is located near an overburdened community, but not within it. The nearest school to the sources in this application is located less than 1,000 ft away, therefore a public notice is required for all schools within a quarter mile of the sources. All schools within a quarter mile of the sources are listed in the table below.

Table 11. Plant Cumulative Increase

School	Address
James B Davidson Middle School	280 Woodland Ave., San Rafael, CA 94901
Laurel Dell Elementary School	225 Woodland Ave, San Rafael, CA 94901

Best Available Control Technology (BACT) – Regulation 2, Rule 2, Section 301

Per Regulation 2, Rule 2, Section 301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of precursor organic compound (POC), non-precursor organic compound (NPOC), nitrogen oxide (NO_X), carbon monoxide (CO), sulfur dioxide (SO_2), PM_{10}, or $PM_{2.5}$. Based on emission calculations, no source in this application has the potential to emit more than 10 pounds per highest day of pollutants listed above and therefore does not require BACT.

Offsets – Regulation 2, Rule 2, Section 302 & 303

Regulation 2, Rule 2, Section 302 and 303 require offsets if a facility's potential to emit POC and/or NO_X exceeds 10 tons per year and/or the potential to emit $PM_{2.5}$, PM_{10}, and SO_2 exceeds 100 tons per year. This facility does not have the potential to emit beyond these limits; therefore, offsets are not required for this project.

Prevention of Significant Deterioration (PSD) – Regulation 2, Rule 2, Section 304 & 305

Regulations 2-2, Sections 304 and 305 outline BACT and Source Impact Analysis requirements, respectively, for PSD projects/facilities. This facility/project neither identifies as a major PSD facility nor contributes a significant increase in PSD pollutant emissions, and therefore is not subject to PSD analysis.

New Source Review of Toxic Air Contaminants – Regulation 2, Rule 5

New or modified sources of toxic air contaminants (TAC) requiring an authority construct or permit to operate pursuant to Regulation 2, Rule 1 are subject to review to evaluate potential public exposure and health risk, mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. A Health Risk Assessment (HRA) was required due to the TAC emissions from project exceeding chronic trigger levels for arsenic. The HRA concluded that the project cancer risk was estimated at 0.65 in a million and project chronic and acute hazard indices were estimated at 0.27 and 0.094, respectively.

Table 12. HRA Results Summary

Receptor	Cancer Risk (in a million)	Chronic Non-Cancer Hazard Index	Acute Hazard Index
Resident	0.38	0.043	NA
Worker	0.65	0.27	NA
1-hr PMI	NA	NA	0.094

Best Available Control Technology for Toxics (TBACT) – Regulation 2, Rule 5, Section 301

In accordance with the District's Regulation 2-5-301, Best Available Control Technology for Toxics (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. This project has a cancer risk of 0.65 in a million and a chronic hazard index of 0.27. Although the project's chronic hazard index is greater than 0.20, no source's contribution to the chronic hazard index is greater than 0.20. The contribution for the chronic hazard indexes for sources 1, 2 and 3 are 0.02, 0.09 and 0.15, respectively. Therefore, the risk from each source is below the TBACT thresholds.

Project Health Risk Limits – Regulation 2, Rule 5, Section 302

In accordance with the District's Regulation 2-5-302, a project may not exceed a cancer risk of 10.0 in a million, for projects not located within overburdened communities (OBC's), or a chronic or acute hazard index of 1. As shown above in Table 12, the project cancer risk, chronic risk and acute hazard index, are 0.65, 0.27, and 0.094, respectively. All comply with the requirements of 2-5-302.

Particulate Matter – Regulation 6, Rule 1, Sections 301, 302, 303 and 305

These rules all limit visible fugitive dust emissions to varying degrees, including Ringelmann No. 1, opacity limits, Ringelmann No. 2 and visible particles. Bauman is expected to comply with all of the above visible emission limitations through the use of abatement devices on all applicable sources, including water spray on stockpiles and filters on silos.

Particulate Matter – Regulation 6, Rule 1, Section 307

Bauman meets the definition of regulated bulk material site in Regulation 6-1-208. As such it is required to clean up bulk material spills by the end of the workday unless the spill is adequately wetted or covered. Compliance with this section is expected.

Total Suspended Particulate (TSP) Weight Limits – Regulation 6, Rule 1, Section 311.2

No applicable sources from this project shall emit TSP at a rate in excess of the limit indicated for the source's Process Weight Rate in Table 6-1-311.1. From the emission calculations, all applicable source TSP emission rates are well below their respective process weight limits as outlined in Table 6-1-311.1, see below table.

Table 13. TSP Emissions

Source	Process Description	Material Processed	Unabated Emission Factor (TSP/ton)	Abatement	Process Weight Rate (lbs/hr)	Hourly Emission Rate (lbs TSP/hr)	TSP Emission Limit (lbs TSP/hr)
S-1	Cement Silo (Silo Loading)	Cement	0.73[1]	98.7%	44,000	0.208	
S-1	Cement Silo (Truck Loading)	Cement	0.73[1]	98.7%	44,000	0.208	
S-1	**Total**	**Cement**			**44,000**	0.418	33.6
S-2	Flyash Silo (Silo Loading)	Cement Supplement	3.14[2]	98.7%	13,200	0.269	
S-2	Flyash Silo (Truck Loading)	Cement Supplement	3.14[2]	98.7%	13,200	0.269	
S-2	**Total**	**Cement Supplement**			**13,200**	**0.539**	**26.5**

Notes:

1) Emission factors from AP-42 Table 11.12-2 "Total PM uncontrolled cement pneumatic unloading to elevator storage silo." A 98.7% control efficiency is then assumed for the bin vent.

2) Emission factors from AP-42 Table 11.12-2 "Total PM uncontrolled cement supplement pneumatic unloading to elevator storage silo." A 98.7% control efficiency is then assumed for the bin vent.

Particulate Matter – Regulation 6, Rule 6, Section 301 and 302

Bauman meets the definition of regulated bulk material site in Regulation 6-6-207. As such it shall not cause or allow trackout at any active exit from such site onto an adjacent paved public roadway or shoulder of a paved public roadway that exceeds cumulative 25 linear feet and creates fugitive dust visible emissions without cleaning up such trackout within 4 hours of when the owner/operator identifies such excessive trackout; and shall not cause or allow more than 1 quart of trackout to remain on the adjacent paved public roadway or the paved shoulder of the paved public roadway at the end of any workday.

Additionally, it shall not cause or allow a fugitive dust visible emission during cleanup of any trackout that exceeds 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

Given the nature of this operation, compliance with this rule is expected.

New Source Performance Standards (NSPS) – Regulation 10

All new/modified sources must meet applicable New Source Performance Standards (NSPS) as stated in 40 CFR Part 60. There are no subparts of NSPS that apply to concrete batch plants; therefore, NSPS does not apply to this project.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

There are no NESHAP's applicable to these types of sources.

PERMIT CONDITIONS

Condition #100581

For Application 31809 – Applies to the following sources:

S-1 Cement Silo abated by A-1 Bin Vent
S-2 Fly Ash Silo abated by A-2 Bin Vent
S-3 Stockpiles; abated by A-3 Water Spray

1. The owner/operator shall not exceed the following throughput limits in any consecutive 12-month period:
    a. S-1: 5,720 tons of cement
    b. S-2: 1,716 tons of cement and cement supplement combined
    c. S-3: 7,436 tons of materials received at stockpiles. Materials can be sand or aggregates.

    [Basis: Cumulative Increase, Toxics]

2. The owner/operator of S-3 shall not exceed the following throughput limits on any given day:
    a. 18 truck pickups/deliveries per day.

    [Basis: Cumulative Increase, Toxics]

3. The owner/operator of S-1 shall abate S-1 with A-1, with an overall collection and abatement efficiency of 98.7 percent by weight at all times.

    [Basis: BACT Avoidance, TBACT Avoidance, Cumulative Increase, Section 2-1-403]

4. The owner/operator of S-2 shall abate S-2 with A-2, with an overall collection and abatement efficiency of 98.7 percent by weight at all times.
   [Basis: BACT Avoidance, TBACT Avoidance, Cumulative Increase, Section 2-1-403]

5. The owner/operator shall equip Baghouse/bin vents, (A-1, A-2) with a device (magnehelic pressure gauge) for measuring the pressure drop across the baghouse. Each device shall be checked for plugging at least every week.
   [Basis: Regulation 6-1-301, 6-1-310, 6-1-311, 2-1-403]

6. The owner/operator shall inspect Baghouse/bin vents, (A-1, A-2) weekly to ensure proper operation. The following items shall be checked:
   a. The pressure drop across the baghouse shall be checked weekly. The pressure drop shall be no lower than 0 inches of water and no greater than 6 inches of water.
   b. The baghouse exhaust shall be checked weekly for evidence of particulate breakthrough. If breakthrough is evident from plume observations, dust buildup near the stack outlet, or abnormal pressure drops, the filter bags shall be checked for any tears, holes, abrasions, and scuffs, and replaced as needed.

   [Basis: Regulation 2-1-403]

7. 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]

8. The owner/operator shall abate all stockpiles (S-3) and unpaved roads as necessary with A-3 Water Spray system to minimize particulate emissions and prevent visible emissions.
   [Basis: Cumulative Increase, Toxics]

9. No later than 60 days from receiving a permit for A-1 and A-2, the owner/operator shall conduct Air District approved source test to determine the initial compliance with the limits in Part 3 and 4. The owner/operator shall comply with all applicable testing requirements as specified in Volume IV of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. The owner/operator shall submit the source test results to the Air District staff no later than 60 days after the source test.
   [Basis: TBACT, Cumulative Increase]

10. In order to demonstrate compliance with Parts 1 and 5 the following records shall be maintained in an Air District approved log.
    a) Monthly throughput for each material handled by each source listed in Part 1.
    b) Monthly throughput shall be totaled for each consecutive twelve-month period.
    c) Records of all inspections and all maintenance work including bag replacement for the baghouse and bin filters. Records of each inspection shall consist of a log containing the date of inspection and the initials of the personnel that inspect the equipment.
    d) Daily records of truck deliveries/pickups.

    The owner/operator shall keep this log on-site for at least two years from the date of entry and make it available to Air District staff upon request.
    [Basis: Cumulative Increase, Recordkeeping]

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. The preliminary recommendation is to issue an Authority to Construct for the equipment listed below. However, the proposed sources will emit TAC's within 1,000 feet of a kindergarten through grade 12 school site which triggers the public notification requirements of Air District Regulation 2-1-412. After the comments 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 for the following sources:

S-1 Cement Silo, Make: Cementech, Model: CT-350P, Capacity: 1,400 cubic feet abated by A-1 Bin Vent
S-2 Cement Supplement Silo, Make: Cementech, Model: CT-350P, Capacity: 1,400 cubic feet abated by A-2 Bin Vent
S-3 Four (4) Stockpiles, 10 feet x 10 feet; abated by A-3 Water Spray

Abated by:
A-1 Bin Vent, Make: Cementech, Model: 330 Pulse Jet, Efficiency: 98.7%, for S-1
A-2 Bin Vent, Make: Cementech, Model: 330 Pulse Jet, Efficiency: 98.7%, for S-2
A-3 Water Spray for S-3

Kevin Creaven Date 6/25/2025
Senior Air Quality Engineer