

MAR 25 2019

Ryan Niese
Granite Construction Co
P O Box 5127
Bakersfield, CA 93388

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: S-9380
Project Number: S-1151730

Dear Mr. Niese:

Enclosed for your review and comment is the District's analysis of Granite Construction Co's application for an Authority to Construct for the relocation of an asphalt paving mixtures facility, in Kern County.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice period, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Homero Ramirez of Permit Services at (661) 392-5616.

Sincerely,



Arnaud Marjollet
Director of Permit Services

AM:har

Enclosures

cc: Brian Clerico, CARB (w/ enclosure) via email

Samir Sheikh
Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Relocation of Asphalt Paving Mixtures Facility

Facility Name: Granite Construction Co
Mailing Address: P O Box 5127
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Contact Person: Ryan Niese
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E-Mail: Ryan.Niese@gcinc.com
Application #(s): S-9380-1-0 through '6-0
Project #: S-1151730
Deemed Complete: April 18, 2018

Date: March 13, 2019
Engineer: Homero Ramirez
Lead Engineer: Richard Karrs

I. Proposal

Granite Construction Company requests Authority to Construct (ATC) permits to relocate its asphalt paving mixtures facility S-1612 from its current location (which is located on Highway 223 about 3 miles east of Arvin) to the proposed "Solari" location (which is 12 miles south of Arvin), which is assigned facility number S-9380.

In addition to the relocation of the permit units from S-1612 to S-9380, the applicant also proposes the modifications described below:

S-9380-1-0 (formerly S-1612-1): (Hot Mix Asphalt Drum Mix Plant) + (Dry Lime Plant)

Hot Mix Asphalt Drum Mix Plant:

- Add provisions to fire the drum mix plant burner on PUC-quality natural gas (in addition to the already-authorized LPG fuel).
- Add an annual fuel usage limit for drum dryer.
- Replace the existing drum mix plant burner with a 150 MMBtu/hr Genco Ultra II-150 dual fuel burner.
- Increase the combined daily asphalt concrete and recycled asphalt pavement (RAP) process rate limit for the hot mix asphalt drum mix plant from 5,391 to 8,000 tons/day.
- Add annual combined material process rate limits.
- Remove the mineral filler system and associated conditions.
- Correct emission factors to generally-accepted emission factors resulting in changes in assessed potential emissions (as explained in Section VII (General Calculations)).
- Replace annual PM10 specific limiting conditions (SLC) involving current permits S-1612-1, -3, -5, -6, -9, -10 with individual permit emission limits.

Dry Lime Plant:

- Combine the integral dry lime plant equipment listed under current permit S-1612-8 with current permit S-1612-1. The dry lime plant only operates in conjunction with the hot mix asphalt plant as shown in the process flow diagram in Appendix D.
- Clarify that a baghouse is installed on storage silo serving dry lime plant.
- Increase process rate limits for dry limit plant from 5,144 to 8,000 tons/day
- Add annual process rate limit for dry lime plant

S-9380-2-0 (formerly S-1612-3): (Aggregate Crushing and Screening Operation)

- Add enhanced emission controls (to consist of a combination of fogging system, partial enclosures at transfer points, and chemical dust suppression in addition to existing wet suppression) to conveyor transfer points, screens, and crushers as specified in permit conditions.
- Decrease total aggregate process rate limit from 25,600 to 18,000 tons/day
- Add an annual total aggregate process rate limit
- Add two conveyors, one feeder, and one feed bin
- Remove one screen
- Correct emission factors to generally-accepted emission factors resulting in changes in assessed potential emissions.
- Replace annual PM10 SLC condition described in current S-1612-1 with individual permit emission limits
- Remove equipment manufacturer names from permit equipment description

S-9380-3-0 (formerly S-1612-6): (Recycled Asphalt Pavement (RAP) Crushing Plant)

- Add enhanced emissions controls to RAP screen to consist of fogging system and partial enclosure (in addition to existing wet suppression)
- Increase RAP process rate limit from 3,000 to 4,800 tons/day
- Replace annual PM10 SLC condition described in current S-1612-1 with individual permit emission limits

S-9380-4-0 (formerly S-1612-9) (Portable Crumb Rubber Blending Operation):

- Replace annual PM10 SLC condition described in current S-1612-1 with individual permit emission limits

S-9380-5-0 (formerly S-1612-10) (Portable Crumb Rubber Blending Operation)

- Replace annual PM10 SLC condition described in current S-1612-1 with individual permit emission limits

S-9380-6-0: (Sand and Aggregate Storage and Truck Loading Operation)

- Issue a permit for the sand and aggregate storage and truck loading operations that serves the facility. Although the current facility has sand and aggregate storage and a truck loading operation, it currently does not have a permit there.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4202	Particulate Matter Emission Rate (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4305	Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase III (10/16/08)
Rule 4307	Boilers, Steam Generators and Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr (4/21/16)
Rule 4309	Dryers, Dehydrators, and Ovens (12/15/05)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)	
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines	

III. Project Location

The equipment will be relocated to Granite Construction's new Solari facility, which is located 12 miles south of Arvin, in Sections 17, 20, 21, and 29 of Township 11N, Range 18W. A site map is included as Appendix C. The equipment will not be located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Granite Construction Co produces hot mix asphalt and aggregate materials for road construction projects. This project is for the relocation of the entire facility, which consists of the permit units described below. Process flow diagrams for the operations are found in Appendix D.

S-9380-1 (Hot Mix Asphalt Drum Mix Plant)

Hot mix asphalt paving materials are a mixture of size-graded, high quality aggregate (consisting of virgin aggregate and recycled asphalt product (RAP)) and liquid asphalt cement. The liquid asphalt cement is heated and mixed in measured quantities with the aggregate and RAP.

Aggregate and RAP are transferred from the feed bins and screened prior to entering the drum dryer. In the drum dryer, the aggregate and RAP are mixed with the liquid asphalt cement to produce hot mix asphalt, which is then sent to the loadout storage silo and loaded into trucks.

Dry Lime Plant

The dry lime plant is currently permitted separately at facility S-1612, but since the dry lime plant is an integral system to the hot mix asphalt drum mix plant, with the lime plant only operating when the drum mix plant operates. Because of this, the dry lime plant permit will be combined with the hot mix asphalt drum mix plant as permit S-9380-1.

Dry lime is transferred to the facility via truck where it is transferred into a silo, which is served by a baghouse, via a lime guppy blower. The dry lime is then transferred from the silo to a pug mill via covered conveyor where it is mixed with aggregate received from the hot asphalt plant in a wet process at 5% moisture. The dry lime is mixed with to the asphalt mix at a rate of 0.8% of the total asphalt production. The lime/aggregate mixture is then fed into the existing hot mix asphalt plant in the process described above.

S-9380-2 (Aggregate Crushing and Screening Operation)

Rocks are mined from a quarry and moved to the rock crusher. The rocks are crushed into aggregate and transported by conveyor to screens. The screens remove the desired size aggregate and return the unwanted aggregate back to the crusher. The desired crushed aggregate is then transported by conveyor into piles. The piles are moved to the asphalt plant by either front-end-loaders or haul trucks. Water spray and other enhanced control technologies (such as fogging systems, chemical suppression, and partially-enclosed transfer points) are used to control dust emissions the conveyor transfer and drop points, screens, and crushers.

S-9380-3 (Recycled Asphalt Pavement (RAP) Crushing Plant)

Asphalt pavement from old roads is delivered to the facility by truck and stockpiled. On an intermittent basis, stockpiled asphalt pavement is processed through the RAP crushing plant. Asphalt pavement material is transferred onto the feeder using a loader. The material is conveyed to screens for screening to sizes such as 1/2" or 3/8" minus depending on required specifications. The RAP screen will be controlled by additional controls consisting of wet suppression, a fogging system, and partial enclosure. Oversized material is conveyed to a cone crusher where it is reduced in size and recirculated to the screen using a system of conveyors. Processed material is stockpiled and later used as needed to make asphalt concrete mixes with RAP.

Water suppression will be used on most transfer points and the crusher as needed to control visible emissions. Note that all equipment is powered by electric motors.

S-9380-4 and S-9380-5 (Portable Crumb Rubber Blending Operations)

Only one of the portable crumb rubber blending operations (S-9380-4 or S-9380-5) is allowed to operate at any time per current permit conditions.

The units produce asphalt-rubber by blending recycled crumb rubber (such as from recycled tires) with hot asphalt oil and extender oil. The units are served by oil heaters fired on natural gas, but the unit on current permit S-1612-4 is exempt from permit subject to PEER (Permit Exempt Equipment Registration).

The rubber material is loaded into receiving hoppers and discharged through enclosed screw and feed conveyors into a mixing tank containing heated asphalt oil. Asphalt oil and extender oil are delivered in semi tank trucks and will be heated to a maximum temperature of approximately 425 degrees F using a propane/natural gas-fired heater. The crumb rubber is metered out from the hopper and conveyed to the mixer where it is mixed with heated asphalt oil by a high shear mixer. As the crumb rubber and asphalt oil are mixed, they are pumped to a two-compartment storage/curing tank. One compartment is used for newly mixed asphalt oil and rubber, and the other compartment holds the cured mixture, which is ready to be pumped to the hot mix asphalt plant. Both compartments have independent heater coils and mixing augers to keep the crumb rubber in suspension until transferred to the asphalt oil weigh bucket of an asphalt plant.

The mixing tanks, extender oil tanks, and reaction and holding tanks are sealed and equipped with a system which collects displaced blue smoke that is generated during filling of the tanks. The blue smoke is captured through vent lines having a considerable amount of surface area which causes cooling and condensation in air-cooled two condensers. The liquid from the vapor condensers is re-routed to the process vessels.

S-9380-6 (Sand and Aggregate Storage and Truck Loading Operation)

The operation will include stockpiles of sand and aggregate, which is served by water spray systems to reduce loading and wind erosion emissions.

According to AP-42, Section 11.19.1-5 (11/95), water spray systems can reduce emissions by 80 to 90%. The applicant proposes to maintain the stockpiled material moisture content at 3.0% by weight or greater in order to limit visible emissions to no more than 5% opacity for a period or periods aggregating more than 3 minutes in any one hour. Permit conditions will be added to ensure compliance with the moisture content requirement. With those conditions, the control efficiency of the water spray system will be assume to be 90%, which is the high range of the AP-42 section mentioned above.

In addition, pursuant to policy SSP-1610 (Aggregate Permit Processing), since concrete aggregate and mineral aggregate are thoroughly washed during processing to remove silt, the

amount of material that can become entrained in the atmosphere is *de minimus*. Therefore, no emissions will be ascribed to storage piles exclusively containing finished mineral aggregate, or finished concrete aggregate, of 3/8" size or larger. These storage piles shall be included in the conditions defining the finished aggregate storage and loadout operation, but the potential to emit for these storage piles is zero.

V. Equipment Listing

- S-9380-1-0: HOT MIX ASPHALT DRUM MIX PLANT WITH A GENCORP MODEL 500 COUNTERFLOW ULTRADUM WITH GENCO ULTRAFLAME MODEL II-150, 150 MMBTU/HOUR NATURAL GAS-/LPG-FIRED BURNER, WITH RECLAIMED ASPHALT PAVEMENT (RAP) CIRCUIT, GENCORP INDUSTRIES CYCLONE, AND MODEL CFS-210 BAGHOUSE, WITH BLUE SMOKE EMISSION CONTROL SYSTEM (CONSISTING OF FAN, DUSTEX MODEL 3630-1114 BAGHOUSE, INJECTION SEEDING SYSTEM, HOODS AND DUCTWORK) SERVING SILO TRUCK LOADOUT AREAS, WITH DRY LIME PLANT INCLUDING ONE 75 TON STORAGE SILO SERVED BY BAGHOUSE, PUGMILL, TWO CONVEYORS AND A LIME GUPPY BLOWER
- S-9380-2-0: AGGREGATE CRUSHING AND SCREENING OPERATION INCLUDING VIBRATING JAW FEEDER, JAW CRUSHER WITH WATER SPRAYS, TWO 54" CONE CRUSHERS WITH WATER SPRAYS, 4-1/4 FT CONE CRUSHER WITH WATER SPRAYS, THREE SYNTRON FEEDERS, UP TO THREE FEEDER BINS, UP TO FORTY TWO CONVEYORS, HYDRAULIC HAMMER WITH BOOM, 6' X 20'-3 DECK SCREEN, 6' X 20'-2 DECK SCREEN, 7' X 20'-3 DECK SCREEN, 8' X 20'-3 DECK SCREEN, 6' X 12'-1 DECK SHAKER SCREEN AND PERMIT EXEMPT WET PROCESSING OPERATION INCLUDING ONE 6' X 12'-2 DECK SCREEN, ONE TWIN 36" SAND SCREW AND THREE STACKER CONVEYORS
- S-9380-3-0: RECYCLED ASPHALT PAVEMENT (RAP) CRUSHING PLANT CONSISTING OF FEEDER, EL-JAY CONE CRUSHER, 6 CONVEYORS, 6' X 20' EL-JAY SCREEN AND TWO STACKERS
- S-9380-4-0: PORTABLE CRUMB RUBBER BLENDING OPERATION - CONSISTING OF MIXING UNIT EQUIPPED WITH PERMIT EXEMPT HEATER S-6904-PEER-1, TWO RUBBER HOPPERS, ONE ROTARY VANE FEEDER, ONE HIGH SHEAR MIXER, ONE INCLINE SCREW CONVEYOR, 1,500 GALLON MIXING TANK WITH CEI ELECTROSTATIC PRECIPITATOR, HEATER BLOWER, HOT OIL HEATER CIRCULATING PUMP, AND AIR COMPRESSOR; ONE 24,000 GALLON REACTION HOLDING TANK, ONE 22,500 GALLON SPLIT OIL TANK, ONE 2,000 GALLON EXTENDER OIL TANK, ONE AUGER MIXING MOTOR AND ONE AGITATOR MIXING MOTOR; ONE EXTENDER OIL PUMP, SERVED BY CEI 32-TUBE BLUE SMOKE CONDENSER UNIT

S-9380-5-0: PORTABLE CRUMB RUBBER BLENDING OPERATION - PLANT #3 CONSISTING OF MIXING UNIT EQUIPPED WITH 5.2 MMBTU/HR POWERFLAME MODEL NOVA PLUS 2 NATURAL GAS/LPG-FIRED PROCESS HEATER, ONE (1) RECEIVING HOPPER, ONE (1) ROTARY VANE FEEDER, ONE (1) HIGH SHEAR MIXER, ONE (1) INCLINE SCREW CONVEYOR, 500 GALLON MIXING TANK WITH TRANSFER PUMP, HEATER BLOWER, HOT OIL HEATER CIRCULATING PUMP, AND AIR COMPRESSOR; TWO (2) 30,000 GALLON DUAL COMPARTMENT TANKS (THREE (3) 15,000 GALLON REACTION COMPARTMENTS AND ONE (1) 15,000 GALLON EXTENDER OIL COMPARTMENT) WITH ONE (1) AUGER MIXING MOTOR AND ONE (1) AGITATOR MIXING MOTOR; EXTENDER OIL PUMP AND PLANT SUPPLY PUMP SERVED BY 30 TUBE BLUE SMOKE CONDENSER UNIT MODEL CTAV300E8; VIRGIN OIL DELIVERY PUMP

S-9380-6-0: SAND AND AGGREGATE STORAGE AND TRUCK LOADING OPERATION

VI. Emission Control Technology Evaluation

The facility produces hot mix asphalt and aggregate materials for construction projects. This project relocates the equipment to the new facility.

S-9380-1 (Hot Mix Asphalt Drum Mix Plant):

Hot mix asphalt paving materials are a mixture of size-graded, high quality aggregate (consisting of virgin aggregate and recycled asphalt product (RAP)) and liquid asphalt cement, which is heated and mixed in measured quantities.

Aggregate and RAP are transferred from the feed bins and screened prior to entering the drum dryer. In the drum dryer, the aggregate and RAP are mixed with the liquid asphalt cement to produce hot mix asphalt, which is then sent to the loadout storage silo and loaded into trucks.

The cyclone serving the hot asphalt mix plant is expected to collect 75% of the particulate matter in the exhaust stream of the drum mixer. The baghouse is expected to further control particulate. Fabric filter baghouses can achieve collection efficiencies for particulates of 99%. No emissions are expected from handling of collected fines as they are transported through enclosed conveyors to the drum mixer and blended with asphaltic concrete mix.

This hot asphalt mix plant also uses oil in the RAP circuit for emission control. Per previous projects, the oil content of RAP is typically 2.5% to 4%. Based on AP-42, this qualifies it as being controlled for all processes. To ensure compliance, the RAP circuit has been restricted from having visible emissions.

The drum mix plant is served by a blue smoke emission control system (consisting of a fan, baghouse, injection seeding system, hoods, and ductwork) to control blue smoke particulates from the plant's silo truck loadout areas. As trucks are loaded out from under the silos, some asphalt fumes can be generated which, if uncontrolled, can lead to visual as well as odorous emissions. The bottom of the silo dry filter system can aid in the abatement of these emissions

by the constant recirculation of air through the silo containment area during the loadout period. The structure is continuously evacuated through the filtration system which is designed to capture particulate emissions. The filtration system is aided by the addition of an oil absorbent powder which remains on the filtration surface during operation. As the gases flow through this media, particulates and condensable hydrocarbons are captured.

S-9380-1 (Dry Lime Plant):

PM10 is the criteria pollutant emitted from the material handling processes. PM10 emissions are controlled by wet suppression using water spray equipment to control fugitive emissions, in addition to the use of covered conveyors.

S-9380-2 (Aggregate Crushing and Screening Operation):

PM10 is the criteria pollutant emitted from this operation resulting from the transfer, screening, and crushing of aggregate material. In addition to the use of water sprays to control the PM10 emissions, the applicant has also proposed to control the conveyor transfer and drop points, screens, and all but one of the crushers with a combination enhanced control technologies that include a combination of controls consisting of fogging systems, chemical suppression, and partially-enclosed transfer points. As explained in more details in the Emission Factor discussion in Section VII (General Calculations) of this evaluation, such enhanced control technologies will result in additional PM10 controls over the use of water sprays alone.

The wet side of the aggregate process, which includes screens and conveyors, is an extremely wet process with much greater than 6% moisture, so the emissions are assumed to be negligible. The aggregate piles, conveyors, and other equipment in the dry processing side will be watered on an as-needed basis to reduce fugitive emissions.

S-9380-3 (Recycled Asphalt Pavement (RAP) Crushing Plant):

PM10 is the criteria pollutant emitted from this operation resulting from the transfer, screening, and crushing of RAP. Water sprays will be used to control the PM10 emissions from the transfer points, screen, and crusher. In addition to the water sprays, the RAP screen will also be controlled by a fogging system and partial enclosures, which will result in additional PM10 controls over the use of water sprays alone. The proposed fogging system and partial enclosures are described in further detail in the Emission Factor discussion in Section VII (General Calculations) of this evaluation.

S-9380-4 and S-9380-5 (Portable Crumb Rubber Blending Operations):

Only one of the two portable crumb rubber blending operations will be allowed to operate at any one time.

Emissions from the crumb rubber blending operation consist of PM10 and VOC emissions (blue smoke) only. However, according to the particle size distribution data submitted by Granite Construction in project C-1102552, 90% of the crumb rubber (ground up tire rubber) is larger than 300 μm and 99% to 100% is larger than 75 μm . Therefore, the PM10 emissions from the

crumb rubber loading hopper as well as the blue smoke from the tanks were determined to be negligible and independent based on two factors: (1) rubber is not a friable material (i.e. rubber does not abrade into smaller particles with ordinary handling) and (2) the smallest rubber particles in the crumb rubber are 75 μm .

The extender oil and reaction holding tanks of both plants are equipped with vapor condensers with control efficiency of 95%. Asphalt fume condenser condenses gas vapors, commonly known as blue smoke, produced by heating light ends often present in liquid asphalt cement. Condensing the vapors turns them into a liquid state wherein they return to the liquid asphalt cement instead of escaping into the atmosphere through the tank vent.

Condensers used on asphalt storage tanks usually have a number of tubes with external fins. The tubes are cooled by ambient air circulating through the fins. Thus, gases exiting the tank are cooled as they flow through the tubes. The cooling causes vapors to condense and drain back into the tank. This greatly minimizes the release of pollutants into the atmosphere. The vapor condensers have a control efficiency of 95%.

S-9380-6 (Sand and Aggregate Storage and Truck Loading Operation):

The operation will include stockpiles of sand and aggregate, which is served by water spray systems to reduce loading and wind erosion emissions. According to AP-42, Section 11.19.1-5 (11/95), water spray systems can reduce emissions by 80 to 90%. For this project the higher value (90% control) in this range is determined to be appropriate as the stockpiles will be subject to additional requirements than standard operations. Those additional controls include maintaining the proposed stockpiles at a moisture content of 3.0% or greater and maintaining all stockpiled materials adequately moist to prevent visible emissions in excess of 5% opacity for a period or periods aggregating more than 3 minutes in any one hour.

In addition, since concrete aggregate and mineral aggregate are thoroughly washed during processing to remove silt, the amount of material that can become entrained in the atmosphere is *de minimus*. Therefore, no emissions will be ascribed to storage piles exclusively containing finished mineral aggregate, or finished concrete aggregate, of 3/8" size or larger. These storage piles shall be included in the conditions defining the finished aggregate storage and loadout operation, but the potential to emit for these storage piles is zero. The following condition will be included on any permit that includes stockpiles of finished concrete aggregate or mineral aggregate of 3/8" size or larger, for which this assumption of negligible emissions has been used in the evaluation.

VII. General Calculations

Post-project Potential Emissions have been calculated using generally-accepted emission factors as explained in this section pursuant to ARP-1110 (Use of Revised Generally Accepted Emission Factors).¹

¹ The current Permits to Operate S-1612-1, -3, -6, -8 have been assessed Potential Emissions that may not reflect generally-accepted emission factors. Over the course of modifications to the permit units, their potential emissions in some cases have been recalculated by taking ratios of pre-and and post-project throughputs or their emission factors may not reflect currently

A. Assumptions

- In instances when the source of the daily emission limit rates is the “current permit”, it refers to the equipment’s current permit at the facility S-1612.

S-9380-1 (Hot Mix Asphalt Drum Mix Plant + Dry Lime Plant):

- Emissions for this permit are from Aggregate Handling, Asphalt Mixing (drum dryer/mixer exhaust to cyclones with baghouse), and Silo Filling and Load-out (after drum dryer/mixer).

Material Handling:

- Material throughput limits are summarized below:

Post-Project Process Rate Limits for S-9380-1 and Asphalt Silo			
	ton/day	ton/yr ²	Source
Combined RAP circuit and Virgin feed circuit (from hot mix batch plant = aggregate + RAP)	8,000	2,440,000	Proposed by applicant
Aggregate storage bins	8,000	2,440,000	
Mineral filler silo	0 (To be removed)		
Asphaltic concrete	8,000	2,440,000	
Dry lime	63.2	19,276	
Aggregate	6,320	1,927,600	

Drum Dryer/Mixer:

- Fuel source for dryer burner:
 - LPG/propane (Pre-Project, Current Permit)
 - LPG/propane or PUC-quality natural gas (Post-Project, Proposed by Applicant)
- Daily heat input limit for the dryer is 1,075.7 MMBtu/day (Current Permit). Daily heat input limit will not change.
- Post-project annual heat input limit for dryer will be limited to 328,089 MMBtu/yr = 328 billion Btu/yr (Proposed by Applicant; based on 305 days/year of operation ³). The pre-project emissions are based on 365 days/year of operation.
- PM10 emissions from the combustion are controlled by a cyclone and baghouse.
- Natural gas heating value: 1,000 Btu/scf (AP-42 Section 1.4)
- F-Factor for natural gas: 8,710 dscf/MMBtu at 68°F (40 CFR 60)
- LPG/propane heating value: 91.5 MMBtu/103 gallons (AP 42 Section 1.5)
- F-Factor for LPG/propane: 8,710 dscf/MMBtu at 68°F (40 CFR 60)

accepted emission factors. As a result, it was determined that this project’s emissions would be re-calculated using generally-accepted emission factors.

² Post-project annual value is daily limit multiplied by 305 days/yr. (Proposed by Applicant)

³ (1,075.7 MMBtu/day)(305 day/yr average operation) = 328,089 MMBtu/yr = 328 billion Btu/yr

Load-Out and Silo Filling Operations:

- Emission Factor Equations for Hot Mix Asphalt Load-Out and Silo Filling Operations are calculated below based on AP-42 Table 11.1-14:

Source	Pollutant	Emission Factor Equation	Uncontrolled Emission Factor- Calculated Value (lb/ton) ⁴
Drum mix or batch mix plant load-out	Total PM	$0.000181 + 0.00141(-V)e^{((0.0251)(T + 460) - 20.43)}$	0.00082
	TOC	$0.0172(-V)e^{((0.0251)(T + 460) - 20.43)}$	0.00779
	CO	$0.00558(-V)e^{((0.0251)(T + 460) - 20.43)}$	0.00253
Silo filling	Total PM	$0.000332 + 0.00105(-V)e^{((0.0251)(T + 460) - 20.43)}$	0.00081
	TOC	$0.0504(-V)e^{((0.0251)(T + 460) - 20.43)}$	0.02282
	CO	$0.00488(-V)e^{((0.0251)(T + 460) - 20.43)}$	0.00221

Where,

V = asphalt volatility = -0.5 (Default value) ⁵

T = HMA mix temperature in °F = 350 F (Current Permit) ⁶

- Silo truck loadout area is served by a blue smoke emission control system. The applicant has provided a manufacturer guarantee of at least 95% control efficiency with the blue smoke system for PM10 and VOC emissions.

Source	Pollutant	Controlled Emission Factor (lb/1,000 ton)
Drum mix or batch mix plant load-out	Total PM	0.041
	TOC	0.390
	CO	2.527
Silo filling	Total PM	0.041
	TOC	1.141
	CO	2.210

⁴ Calculated value is based on the assumed V (asphalt volatility) and T (HMA mix temperature).

⁵ V is the asphalt volatility as determined by ASTM Method D2872-88 "Effects of Heat and Air on a Moving Film of Asphalt (Rolling Thin Film Oven Test - RTFOT)," where a 0.5 percent loss-on-heating is expressed as "-0.5." Regional- or site-specific data for asphalt volatility should be used, whenever possible; otherwise, a default value of -0.5 should be used for V in these equations.

⁶ T is the HMA site-specific temperature data should be used, whenever possible; otherwise a default temperature of 325°F can be used. The permit is currently limited to a maximum temperature of 350°F, so that will be the T value.

S-9380-2 (Aggregate Crushing and Screening Operation)

Post-Project Process Rate Limits for S-9380-3			
	ton/day	ton/yr ⁷	Source
Aggregate process rate (normal mode)	18,000	5,490,000	Proposed by Applicant ⁸
Aggregate process rate (base mode)	12,000	3,660,000	

S-9380-3 (Recycled Asphalt Pavement (RAP) Crushing Plant)

Post-Project Process Rate Limits for S-9380-3			
	ton/day	ton/yr ⁹	Source
RAP process rate	4,800	1,464,000	Proposed by Applicant

S-9380-4 (Portable Crumb Rubber Blending Operation)

- Only one of the two portable crumb rubber blending operations (S-9380-4 or -5) shall operate at any one time. (Permit Conditions).
- Outstanding ATC S-1612-9-3 (which shall be implemented prior to this ATC ¹⁰) removed the 4.5 MMBtu/hr process heater from the permit as it is now under Permit-Exempt Equipment Registration (PEER) S-6904-PEER-1. Therefore, the combustion emissions from the permit-exempt process heater will not be assessed to S-9380-4. Fuel usage limits, combustion emission factors, and other conditions associated with process heater shall be removed.
- Extender oil tank's throughput is limited to: 2,000 gallon/day, 168,000 gallon/yr (Current Permit)
- Mixing and reaction tanks throughput is limited to: 65,000 gallon/day or 5,460,000 gallon/yr (Current Permit)
- Mixing tank emissions are limited to 0.3 lb-VOC/day (Current Permit).
- Reaction tank emissions are limited to 0.2 lb-VOC/day (Current Permit).

S-9380-5 (Portable Crumb Rubber Blending Operation)

- Only one of the two portable crumb rubber blending operations (S-9380-4 or -5) shall operate at any one time. (Permit Conditions)
- Rating of unit's process heater is 5.2 MMBtu/hr (Current Permit)

⁷ Post-project annual value is daily limit multiplied by 305 days/yr (Proposed by Applicant).

⁸ The worst case emissions will be used. In this case the "normal mode" will result in higher emissions, so its throughput rates will be used to calculate potential emissions. According to the applicant, "normal mode" is the plant mode in which the aggregates are crushed and separated into several products used in the asphalt plant, Portland cement mixes, and general sales. It requires the use of much more of the plant equipment. In "base mode" all product is crushed and sent to the base stacker, making only road base. It uses less equipment, but the unused equipment is mostly conveyors and washing equipment.

⁹ Post-project annual value is daily limit multiplied by 305 days/yr (Proposed by Applicant).

¹⁰ A condition shall be added requiring that outstanding ATC S-1612-9-3 shall be implemented prior to or concurrently with this ATC.

- The unit's process heater is fired on PUC-quality natural gas or LPG/propane (Current Permit)
- Annual heat input is limited to 10.483 billion Btu/yr (10,483 MMBtu/yr per Current Permit)
- Extender oil tank's throughput is limited to: 2,000 gallon/day, 168,000 gallon/yr (Current Permit)
- Mixing and reaction tanks throughput is limited to: 65,000 gallon/day or 5,460,000 gallon/yr (Current Permit)
- Mixing tank emissions are limited to 0.3 lb-VOC/day (Current Permit).
- Reaction tank emissions are limited to 0.2 lb-VOC/day (Current Permit).
- Natural gas heating value: 1,000 Btu/scf (AP-42 Section 1.4)
- F-Factor for natural gas: 8,710 dscf/MMBtu at 68°F (40 CFR 60)
- LPG/propane heating value: 91.5 MMBtu/103 gallons (AP 42 Section 1.5)
- F-Factor for LPG/propane: 8,710 dscf/MMBtu at 68°F (40 CFR 60)

S-9380-6 (Sand and Aggregate Storage and Truck Loading Operation)

- This operation exists at the current location but had not secured permits for that location. It was determined with this project that permits would be issued at the new location.
- Maximum storage area: 1.5 acre (Proposed by Applicant)
- Maximum truck loading throughput: 25,000 ton/day, 2,500,000 ton/yr (Proposed by Applicant)

B. Emission Factors

The following emission factors in the table below are for those material processing operations that are not utilizing enhanced emission controls that are described following this table. The controlled emission factors in the table below are for operations that utilize only water sprays (wet suppression) as its controls.

Material Processing Emission Factors (for S-9380-1, -2, -3, -6)		
Category	Emission Factor	Source
Truck Unloading	0.000016 lb-PM ₁₀ /ton of material	District Policy SSP-1610 (using AP-42, Section 11.19 Table 11.19.2 and Section 13.2.5)
Transfer Point (Conveyor or front- end loader drop)	0.000046 lb-PM ₁₀ /ton of material (controlled)*	
	0.0011 lb-PM ₁₀ /ton of material (uncontrolled)	
Screening	0.0087 lb-PM ₁₀ /ton of material (uncontrolled)	
	0.00074 lb-PM ₁₀ /ton of material (controlled)*	
Crushing	0.0024 lb-PM ₁₀ /ton of material (uncontrolled)	
	0.00054 lb-PM ₁₀ /ton of material (controlled)*	
Storage Piles (uncontrolled)	5.27 lb-PM ₁₀ /acre/day 0.121 lb-PM ₁₀ /1,000 ft ² /day	

* Note that the "controlled" emission factor is based on the process being controlled with wet suppression. For certain operations the applicant proposes to utilize enhanced controls consisting of additional controls over wet suppression for which lower emission factors are proposed as described below.

There are certain specified operations (conveyor transfer points, screens, and crushing operations) that the applicant proposes to install enhanced PM₁₀ controls (consisting of a combination of chemical suppression, fogging systems, and partial enclosures) in addition to standard wet suppression. To account for the extra controls provided over wet suppression alone for those processing utilizing enhanced controls, it is proposed that the emission factors in the table above be adjusted as below:

Wet Suppression Only:

First, it was determined that standard wet suppression is assessed an equivalent PM₁₀ control efficiency of 96% (95.8%) for transfer points. This is based on a comparison of the uncontrolled AP-42 Table 11.19.2 emission factor of 0.0011 lb-PM₁₀ versus the controlled emission factor of 0.000046 lb-PM₁₀ for transfer points.¹¹

¹¹ Control efficiency for wet suppression only = $(0.0011 - 0.000046)/0.0011 = 0.958 = 95.8\%$. (Emission factor: $0.0011 \text{ lb-PM}_{10} \times (1 - 0.958) = 0.000046 \text{ lb-PM}_{10}$)

Chemical Suppression (and Wet Suppression):

For the use of chemical suppression in conjunction with wet suppression, it is proposed that the PM10 control efficiency be assumed to be 97% (compared to 96% for wet suppression alone as explained above). The applicant has provided documentation for the proposed control efficiency for wet and chemical suppressant control efficiency in Appendix F. That document indicates that as a standalone control, chemical suppressant has received 97% emissions control efficiency for PM/PM10 in other air districts (notably at Granite's Bee Rock Quarry under the jurisdiction of Santa Barbara County APCD). The applicant proposes to add an extra 1% emissions control over wet suppression alone (for a total of 97% control) for the use of a combination of both wet and chemical suppression.

As a result, the following emission factor for conveyor transfer points controlled by both water and chemical suppression is proposed:

Conveyor transfer:

$(0.0011 \text{ lb-PM10/ton, uncontrolled})(1 - 97\% \text{ control}) = 0.000033 \text{ lb-PM10/ton, controlled}$ (compared to the AP-42 value of 0.000046 lb-PM10/ton for wet suppression controls only)

Thus, the following sample condition will be added to the permits utilizing chemical suppression and wet suppression, such as on ATC S-9380-2:

- PM10 emissions from the following emission points shall be controlled by Wet Suppression and Chemical Dust Suppression: Conveyor Transfer to Surge Stacker (PB-1), Surge Stacker Transfer to Main Surge Pile (SS-1), CL II Base Collector Belt to CL II Base Carry Belt (C-9), Recirculation Belt from Secondary Screen to Cone (C-4), Stackers (3/4", 3/8", 1/2", Rock Dust, 1 1/2", 1") (PC-3 through PC-9), Base Stacker. The PM10 emission rate for equipment subject to these controls shall not exceed the following: Conveyor Transfer: 0.00033 lb-PM10/ton of material processed. [District Rule 2201]

The chemical dust suppressant is expected to carry its control effect to downstream points. According to the applicant, several manufactures have guaranteed control efficiencies of at least 90% emission control for a chemical suppressant alone (without accounting for the control provided by wet suppression). Provided that the permittee adheres to the manufacturer's specifications for achieving 90% from the use of the chemical dust suppressant alone, the use of chemical suppressant in conjunction with wet suppression (whose control effective is explained above) will be assumed to provide 97% control.

In order to ensure that the control efficiency identified above is achieved, the following condition shall be added to the permits:

- Equipment required to be controlled by Chemical Suppression shall be controlled as described in this condition. The permittee shall adhere to chemical dust suppressant's manufacturer specifications for achieving 90% control efficiency solely from the chemical dust suppressant for all the emission points required to be

controlled by chemical suppression. The permittee shall receive confirmation that the chemical suppression is achieving the required control efficiency for all emission points required to be controlled. The permittee shall maintain onsite the manufacturer's specification for achieving the required control efficiency solely from the chemical dust suppressant. The permittee shall maintain records demonstrating compliance with the manufacturer's specifications. [District Rule 2201]

Fogging System and Partial Enclosures (and Wet Suppression):

Another technology the applicant proposes is the use of fogging systems and partial enclosures. Fogging systems are also referred to as Superfogging Systems, High Pressure Sprays, Dry Fog and Water Atomizers, Sonic Fog Dust Suppression Systems. They differ from standard water spray systems in their method of water application. Standard water spray systems are designed to apply surface moisture which "...causes fine particles to agglomerate on or adhere to the faces of larger stones...(AP-42, 2004)." Fogging systems are designed to apply a fog of fine, or atomized, water particles around an emissions point targeting the particles rather than the surface of the material.

For the applicant's proposed use of a fogging and partial enclosures in conjunction with wet suppression, it is proposed that the total controlled emission factor be adjusted to 98% over the uncontrolled emission factor for transfer points. The proposed 98% control is based on a control efficiency of 97% for a "sonic fog dust suppression system" (another term for the fogging system) as shown in Appendix F. The applicant has proposed the use of partial enclosures, with the transfer points fully enclosed on all sides except at the discharge opening, and with each screen equipped with a dust curtain composed of rubber skirt boards which create a seal between the discharge chute and the conveyor belt. A control efficiency of 98% over the uncontrolled emission factor for transfer points is proposed. As a result, the following emission factor is proposed for the use of water and chemical suppression:

Conveyor transfer:

$(0.0011 \text{ lb-PM}_{10}/\text{ton, uncontrolled})(1 - 98\% \text{ control}) = 0.000022 \text{ lb-PM}_{10}/\text{ton, controlled}$ (compared to the AP-42 value of 0.000046 lb-PM₁₀/ton for wet suppression controls only)

In order to ensure that the control efficiency identified above is achieved, the following conditions shall be added to the permits:

- Equipment required to be controlled by Fogging Systems (also known as high pressure sprays, dry fog, and water atomizers) shall consist of a fogging system that is designed to apply a fog of fine, or atomized, water particles around an emission point targeting the particle rather the surface of the material. [District Rule 2201]
- Equipment required to be controlled by Partial Enclosures shall be enclosed as described in this condition. Each screen that is required to be partially enclosed shall be fully enclosed on all sides except at the discharge opening, and each screen shall be equipped with a dust curtain composed of rubber skirt boards which create

a seal between the discharge chute and the conveyor belt. Each crusher that is required to be partially enclosed shall consist of a crusher box with sufficient volume to allow the settling of the dust with assistance from Fogging System before it exits through the opening to the conveyor, and the crusher box and conveyor shall have skirt board rubber seals. Each conveyor drop point that is required to be partially enclosed shall be enclosed by a 3-sided chute. [District Rule 2201]

Fogging System, Partial Enclosure, and Chemical Suppression (and Wet Suppression):

For the use all the technologies, fogging systems, partial enclosures, and chemical suppression (and wet suppression), the applicant proposes that the controlled emission factor be adjusted to 99% over the uncontrolled emission factor for transfer points. The proposed control efficiency is based a 98% control for the use a fogging system and partial enclosure plus the additional control provided by chemical suppression. As a result, the following emission factor is proposed for the use of water and chemical suppression:

Conveyor transfer:

$(0.0011 \text{ lb-PM}_{10}/\text{ton, uncontrolled})(1 - 99\% \text{ control}) = 0.000011 \text{ lb-PM}_{10}/\text{ton, controlled}$ (compared to the AP-42 value of 0.000046 lb-PM₁₀/ton for wet suppression controls only)

Screening:

$(0.0087 \text{ lb-PM}_{10}/\text{ton, uncontrolled})(1 - 99\% \text{ control}) = 0.000087 \text{ lb-PM}_{10}/\text{ton, controlled}$ (compared to the AP-42 value of 0.00074 lb-PM₁₀/ton for screens controlled with wet suppression only)

Crushing:

$(0.0024 \text{ lb-PM}_{10}/\text{ton, uncontrolled})(1 - 99\% \text{ control}) = 0.000024 \text{ lb-PM}_{10}/\text{ton, controlled}$ (compared to the AP-42 value of 0.00054 lb-PM₁₀/ton for crushing operations controlled with wet suppression only)

Thus, the following condition will be added to the permits utilizing a fogging system, partial enclosures, and chemical suppression (and wet suppression):

- PM₁₀ emissions from the following equipment shall be controlled by Wet Suppression, Fogging System, Partial Enclosures at Transfer Points, and Chemical Dust Suppression: TRANSFER POINTS: Conveyors PB-2, and PB-3, Tunnel Belts (TB-1 and TB-2), Primary Screen to Cone Belt (C-1), Cone Collector Belt (C-2), Primary Screens Sand Collector Belt to Sand to Base Belt Via Tri-verter (C-11), Primary Screen to Secondary Cone Belt (C-17), Primary Screen to Wash Plant Carry Belt (C-18), Primary Screen Coarse Material Collector Belt (C-22), Primary Screen Sand Collector Belt to Wash (C-26), Secondary Screen Feed Belt (C-3), Finish Screen to CL II Carry Belt (C-5), Secondary Screens Bottom Deck Collector Belt to Bottom Deck to Finish Screen Route Belt Via Diverter (C-7), Trip Belts (TR-1 through TR-7), Primary Screens Bottom Deck Collector Belt to Wash Plant 1x4 Surge Feed Belt Via Diverter (C-10), Primary Screens Sand Collector Belt to Sand Stacker Via Tri-verter (C-20), CI II Base Carry Belt to CI II Base Stacker Belt (C-8);

SCREENS: Primary Screen (SC-1), Finish Screen 1 and 2 (SC-2 and SC-3); CRUSHERS: Cone Crusher 2 and 3 (RC-2 and RC-3). The PM10 emission rate for equipment subject to these controls shall not exceed the following: Conveyor Transfer: 0.000011 lb-PM10/ton of material processed; Screens: 0.000087 lb-PM10/ton of material processed; Crushers: 0.000024 lb-PM10/ton of material processed. [District Rule 2201]

S-9380-1 (Hot Mix Asphalt Drum Mix Plant):

Emission Factors (for LPG/Propane)			
Pollutant	Emission Factor		Source
NO _x	4.3 ppmv @ 19% O ₂	0.0484 lb/MMBtu ¹²	Current permit (and Rule 4309 limit)
SO _x	0.0164 lb/MMBtu		AP-42 Table 1.5-1 (10/98)
PM10	0.000066 lb/MMBtu		AP-42 Table 1.5-1 (10/98) & 99% Control from Cyclone & Baghouse
CO	42 ppmv @ 19% O ₂	0.288 lb/MMBtu ¹³	Current permit (and Rule 4309 limit)
VOC	0.0055 = 0.006 lb/MMBtu		Current Permit and AP-42 Table 1.5-1 (10/98)

Emission Factors (for Natural Gas)			
Pollutant	Emission Factor		Source
NO _x	4.3 ppmv @ 19% O ₂	0.0484 lb/MMBtu	Rule 4309 limit (and Current Permit)
SO _x	0.00285 lb/MMBtu		District Policy APR 1720 (and Current Permit)
PM10	0.000076 lb/MMBtu		AP-42 Table 1.4-2 (7/98) & 99% Control from Cyclone & Baghouse
CO	42 ppmv @ 19% O ₂	0.288 lb/MMBtu	Rule 4309 limit (and Current Permit)
VOC	0.0055 = 0.006 lb/MMBtu		AP-42 Table 1.4-2 (7/98) (and Current Permit)

S-9380-4 (Portable Crumb Rubber Blending Operation):

- Mixing tank emissions are limited to 0.3 lb-VOC/day. (Current Permit)
- Reaction tank emissions are limited to 0.2 lb-VOC/day. (Current Permit)

¹² NO_x: 4.3 ppmv @ 19% O₂ = (4.3E-6)(20.9/(20.9-19))(8710 dscf/MMBtu)(46-lb-NO_x/lb-mole)(1 lb-mole/379.5 ft³) = 0.0484 lb/MMBtu

¹³ CO: 42 ppmv @ 19% O₂ = (42E-6)(20.9/(20.9-19))(8710 dscf/MMBtu)(28-lb-CO/lb-mole)(1 lb-mole/379.5 ft³) = 0.288 lb/MMBtu

- Combustion emissions associated with the operation's process heater are not assessed. The process heater emissions are assessed to and calculated with PEER S-6904-PEER-1 as explained in project S-1182436.

S-9380-5 (Portable Crumb Rubber Blending Operation)

Emission Factors for Process Heater S-9380-5			
Category	Emission Factor (lb/MMBtu) when firing on natural gas	Emission Factor (lb/MMBtu) when firing on LPG	Source
NO _x	0.011	0.011	Current Permit and AP-42 Tables 1.4-2 (7/98) and 1.5-1 (10/98)
SO _x	0.00285	0.016	
PM ₁₀	0.0076	0.0076	
CO	0.0303	0.0370	
VOC	0.0055	0.0055	

- Mixing tank emissions are limited to 0.3 lb-VOC/day. (Current Permit)
- Reaction tank emissions are limited to 0.2 lb-VOC/day. (Current Permit)

S-9380-6 (Sand and Aggregate Storage and Truck Loading Operation)

- Post-Project Truck loading emission factor: 0.000016 lb-PM/ton-material (AP-42 Table 11.19.2)
- Storage piles emission factor, uncontrolled: 5.27 lb-PM₁₀/acre/day (AP-42 Table 11.19.2)
- Storage pile control efficiency for moisture content: 90% control
- Storage piles emission factor, controlled: 0.527 lb-PM₁₀/acre/day ¹⁴
- Stockpiles for 3/8" and larger aggregates that have been thoroughly washed as necessary to remove silt to 1% by mass or less shall be considered "emission exempt" pursuant to District policy SSP-1610.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since these are new emissions units, PE1 = 0 for all pollutants for all units.

2. Post Project Potential to Emit (PE2)

PE2 emission calculations are shown in Appendix E.

¹⁴ This value is based on AP-42 Section 11.19.1-5 (11/95) uncontrolled emission rate of 5.27 lb-PM₁₀/acre/day and a 90% control (as confirmed by District policy SSP-1610).

S-9380-1:

Daily PE2 (lb/day) for S-9380-1			
Pollutant	PE2, material processing	PE2, dryer	PE2 Total
NO _x	0	52.1	52.1
SO _x	0	3.1	17.6
PM10	2.3	0.1	2.4
CO	37.9	309.8	347.7
VOC	12.2	6.5	8.7

Annual PE2 (lb/yr) for S-9380-1			
Pollutant	PE2, material processing	PE2, dryer	PE2 Total
NO _x	0	15,879	15,879
SO _x	0	5,381	5,381
PM10	501	25	526
CO	11,558	94,489	106,047
VOC	3,735	1,969	5,704

S-9380-2:

PE2 emission calculations are shown in Appendix E.

PE2 for S-9380-2		
Pollutant	PE2 (lb/day)	PE2 (lb/yr)
NO _x	0	0
SO _x	0	0
PM10	8.2	2,491
CO	0	0
VOC	0	0

S-9380-3:

PE2 emission calculations are shown in Appendix E.

PE2 for S-9380-3		
Pollutant	PE2 (lb/day)	PE2 (lb/yr)
NO _x	0	0
SO _x	0	0
PM10	3.5	1,072
CO	0	0
VOC	0	0

S-9380-4:

PE2 emission calculations are shown in Appendix E.

PE2 for S-9380-4		
Pollutant	PE2 (lb/day)	PE2 (lb/yr)
NO _x	0	0
SO _x	0	0
PM10	0	0
CO	0	0
VOC	0.5	42

S-9380-5:

PE2 emission calculations are shown in Appendix E.

PE2 for S-9380-5		
Pollutant	PE2 (lb/day)	PE2 (lb/yr)
NO _x	1.4	115
SO _x	2.0	168
PM10	0.9	80
CO	4.6	388
VOC	1.2	100

S-9380-6:

PE2 emission calculations are shown in Appendix E.

PE2 for S-9380-6		
Pollutant	PE2 (lb/day)	PE2 (lb/yr)
NO _x	0	0
SO _x	0	0
PM ₁₀	1.1	329
CO	0	0
VOC	0	0

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Since this is a new facility, there are no valid ATCs, PTOs, or ERCs at the Stationary Source; therefore, the SSPE1 is equal to zero.

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-9380-1-0	15,879	5,381	526	106,048	5,703
S-9380-2-0	0	0	2,491	0	0
S-9380-3-0	0	0	1,072	0	0
S-9380-4-0 / 5-0 ¹⁵	115	168	80	388	100
S-9380-6-0	0	0	329	0	0
SSPE2	15,994	5,549	4,498	106,436	5,803

¹⁵ Only one of the S-9380-4 and S-9380-5 units shall operate at one time, so the worst case of the two will be selected.

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
SSPE1	0	0	0	0	0	0
SSPE2	15,994	5,549	4,498	4,498	106,436	5,803
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source?	No	No	No	No	No	No

Note: PM_{2.5} assumed to be equal to PM₁₀

As seen in the table above, the facility is not an existing Major Source and is not becoming a Major Source as a result of this project.

Rule 2410 Major Source Determination:

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant.

Therefore BE=PE1 for all pollutants.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Total PE from New and Modified Units	8.0	2.9	2.8	53.2	2.2	2.2
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	No	No	No	No	No	No

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix J.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- Any new emissions unit with a potential to emit exceeding two pounds per day,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

* Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As discussed in Section I above, there are no new emissions units associated with this project. Therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, all of the emissions units in this stationary source are being relocated from another stationary source. Daily emissions were calculated in Section VII.C.2.

S-9380-1 (Hot Mix Asphalt Drum Mix Plant) + (Dry Lime Plant):

The aggregate handling operations of S-9380-1 consist of several emission units for material handling that emit PM₁₀, but none of the emission units have potential emissions greater than 2.0 lb/day. Therefore, BACT is not triggered for these emission units.

S-9380-1 consists of an asphalt drum dryer/mixer with NO_x, SO_x, CO, and VOC emissions greater than 2.0 lb/day. Therefore, BACT is triggered for NO_x, SO_x, and VOC only since the PEs are greater than 2 lb/day. BACT is not triggered for CO since the SSPE₂ for CO is not greater than 200,000 lb/year, as demonstrated in Section VII.C.5 above.

S-9380-3 (Aggregate Crushing and Screening Operation):

None of the emission units have potential emissions greater than 2.0 lb/day. Therefore, BACT is not triggered for these emission units.

S-9380-3 (Recycled Asphalt Pavement (RAP) Crushing Plant) :

None of the emission units have potential emissions greater than 2.0 lb/day. Therefore, BACT is not triggered for these emission units.

S-9380-4 (Portable Crumb Rubber Blending Operation):

Only the CO emissions from this unit are greater than 2.0 lb/day. However, BACT is not triggered for CO since the SSPE₂ for CO is not greater than 200,000 lb/year, as demonstrated in Section VII.C.5 above. Therefore, BACT is not triggered for this emission unit.

S-9380-5 (Portable Crumb Rubber Blending Operation):

Only the CO emissions from this unit are greater than 2.0 lb/day. However, BACT is not triggered for CO since the SSPE₂ for CO is not greater than 200,000 lb/year, as

demonstrated in Section VII.C.5 above. Therefore, BACT is not triggered for this emission unit.

S-9380-6 (Sand and Aggregate Storage and Truck Loading Operation):

None of the emission units have potential emissions greater than 2.0 lb/day. Therefore, BACT is not triggered for these emission units.

c. Modification of emissions units – AIPE > 2 lb/day

As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for any pollutant. Therefore BACT is not triggered for any pollutant.

2. BACT Guideline

As is discussed above, BACT is only triggered for the asphalt drum dryer on permit S-9380-1. Listed below is the applicable guideline.

S-9380-1 (Asphalt Drum Dryer/Mixer):

- BACT Guideline 6.3.1 (Asphaltic Concrete – Drum Mix Plant, = or > 2,000 ton/day or = or > 75.6 MMBtu/hr burner) applies to this operation as it was the applicable guideline when the project was deemed complete as explained in the Top-Down BACT Analysis in Appendix H.

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Appendix H), BACT has been satisfied with the following:

S-9380-1 (Asphalt Drum Dryer/Mixer):

NOx:	Low NOx burner (< 0.088 lb-NOx/MMBtu) and the use of natural gas or LPG as primary fuel.
SOx:	PUC quality natural gas or LPG as primary fuel
VOC:	Natural gas or LPG as a primary fuel; and enclosed hot mix silos and loadout operation vented to the rotary dryer burner

The applicant proposes the use of Low NO_x burner achieving 0.0484 lb-NO_x/MMBtu, firing on PUC-quality natural gas or LPG as primary fuels, and the use of enclosed hot mix silos and loadout operation vented to the rotary dryer burner. Therefore, BACT is satisfied.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	15,994	5,549	4,498	106,436	5,803
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	No

2. Quantity of Offsets Required

As seen above, the SSPE2 is not greater than the offset thresholds for all the pollutants; therefore offset calculations are not necessary and offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

- New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- Any project which results in the offset thresholds being surpassed,
- Any project with an SSPE2 of greater than 20,000 lb/year for any pollutant, and/or
- Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. As shown in Section VII.C.5 above, the SSPE2 is not greater than the Major Source threshold for any pollutant. Therefore, public noticing is not required for this project for new Major Source purposes.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements.

The asphalt drum dryer under permit S-9380-1 has CO emissions greater than 100 lb/day.

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	0	15,994	20,000 lb/year	No
SO _x	0	5,549	54,750 lb/year	No
PM ₁₀	0	4,498	29,200 lb/year	No
CO	0	106,436	200,000 lb/year	No
VOC	0	5,803	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	15,994	0	15,994	20,000 lb/year	No
SO _x	5,549	0	5,549	20,000 lb/year	No
PM ₁₀	4,498	0	4,498	20,000 lb/year	No
CO	106,436	0	106,436	20,000 lb/year	Yes
VOC	5,803	0	5,803	20,000 lb/year	No

As demonstrated above, the SSIPE for CO emissions was greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

e. Title V Significant Permit Modification

Since this facility does not have a Title V operating permit, this change is not a Title V Significant Modification, and therefore public noticing is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for CO emissions in excess of 100 lb/day and the SSIPE being greater than 20,000 lb-CO/yr. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATCs for this project.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

S-9380-1 (Hot Mix Asphalt Drum Mix Plant) + (Dry Lime Plant):

- Burner shall be equipped with fuel flow meter/recorder, and burner shall not consume more than 1,075.7 MMBtu in any one day nor 328 billion Btu in any one calendar year total fuel. [District Rule 2201]
- PM10 emissions rates from each of the following sources shall not exceed any of the following: Truck Unloading - 0.000016 lb-PM10 per ton of material processed; Conveyor Transfer - 0.00046 lb-PM10 per ton of material processed; Lime Silo Filing - 0.00034 lb-PM10 per ton of material processed; Grizzly Feeder

- 0.000016 lb-PM10 per ton of material processed; Transfer to Lime Pugmill - 0.000046 lb-PM10 per ton of material processed . [District Rule 2201]

- Particulate matter concentration in exhaust gas from the baghouse shall not exceed 0.04 grains/dscf. [District Rule 4001]
- The dryer burner shall only be fueled on PUC-quality natural gas or commercial-grade LPG/propane. [District Rules 2201 and 4309]
- Emissions rates from the drum dryer/mixer shall not exceed any of the following limits: 4.3 ppmvd-NOx @ 19% O2 (equivalent to 0.0484 lb-NOx/MMBtu), 0.00285 lb-SOx/MMBtu, 42 ppmvd-CO @ 19% O2 (equivalent to 0.288 lb-CO/MMBtu), or 0.006 lb-VOC/MMBtu. If measured O2 concentration is greater than 19%, the corrected NOx and CO concentration is equal to the measured NOx or CO concentration. [District Rules 2201 and 4309]
- The amount of hot mix asphaltic concrete transferred into the storage silos or loaded into trucks shall not exceed 8,000 tons in any one day nor 2,440,000 tons in any one calendar year. [District Rule 2201]
- Emissions from the silo filling of the produced asphaltic concrete shall not exceed any of the following limits: 0.041 lb-PM10/1,000 ton-asphaltic concrete, 2.52 lb-CO/1,000 ton-asphaltic concrete, or 0.390 lb-VOC/1,000 ton-asphaltic concrete transferred. [District Rule 2201]
- Emissions from the truck loading of the produced asphaltic concrete shall not exceed any of the following limits: 0.041 lb-PM10/1,000 ton-asphaltic concrete, 2.21 lb-CO/1,000 ton-asphaltic concrete, or 1.14 lb-VOC/1,000 ton-asphaltic concrete transferred. [District Rule 2201]
- The total combined process rate from the hot mix asphalt drum mix plant (from the RAP circuit and the virgin feed circuit) shall not exceed 8,000 tons of material per day nor 2,440,000 tons of material per calendar year. [District Rule 2201]
- Total process weight of dry lime from dry lime plant shall not exceed 63.2 tons in any one day nor 19,276 tons in any one calendar year. [District Rule 2201]
- Total process weight of aggregate from dry lime plant shall not exceed 6,320 tons in any one day nor 1,927,600 tons in any one calendar year. [District Rule 2201]

S-9380-3 (Aggregate Crushing and Screening Operation)

- PM10 emissions rates from each of the following sources (except for those operations that are subject to additional controls as specified in this permit in the conditions below) shall not exceed any of the following: Truck Unloading - 0.000016 lb-PM10 per ton of material processed; Crushers - 0.00054 lb-PM10 per ton of material processed. [District Rule 2201]
- PM10 emissions from the following emission points shall be controlled by Wet Suppression and Chemical Dust Suppression: Conveyor Transfer to Surge Stacker (PB-1), Surge Stacker Transfer to Main Surge Pile (SS-1), CL II Base Collector Belt to CI II Base Carry Belt (C-9), Recirculation Belt from Secondary Screen to Cone (C-4), Stackers (3/4", 3/8", 1/2", Rock Dust, 1 1/2", 1") (PC-3 through PC-6, PC-8, and PC-9), Base Stacker. The PM10 emission rate for equipment subject to these controls shall not exceed the following: Conveyor Transfer: 0.00033 lb-PM10/ton of material processed. [District Rule 2201]
- PM10 emissions from the following emission points shall be controlled by Wet Suppression, Fogging System, and Partial Enclosures at Transfer Points: Waste and Sand Stacker (PC-11). The PM10 emission rate for equipment subject to these controls shall not exceed the following: Conveyor Transfer: 0.00022 lb-PM10/ton of material processed. [District Rule 2201]
- PM10 emissions from the following equipment shall be controlled by Wet Suppression, Fogging System, Partial Enclosures at Transfer Points, and Chemical Dust Suppression: TRANSFER POINTS: Conveyors PB-1, PB-2, and PB-3, Tunnel Belts (TB-1 and TB-2), Primary Screen to Cone Belt (C-1), Cone Collector Belt (C-2), Primary Screens Sand Collector Belt to Sand to Base Belt Via Tri-verter (C-11), Primary Screen to Secondary Cone Belt (C-17), Primary Screen to Wash Plant Carry Belt (C-18), Primary Screen Coarse Material Collector Belt (C-22), Primary Screen Sand Collector Belt to Wash (C-26), Secondary Screen Feed Belt (C-3), Finish Screen to CL II Carry Belt (C-5), Secondary Screens Bottom Deck Collector Belt to Bottom Deck to Finish Screen Route Belt Via Diverter (C-7), Trip Belts (TR-1 through TR-7), Primary Screens Bottom Deck Collector Belt to Wash Plant 1x4 Surge Feed Belt Via Diverter (C-10), Primary Screens Sand Collector Belt to Sand Stacker Via Tri-verter (C-20), CI II Base Carry Belt to CI II Base Stacker Belt (C-8); SCREENS: Primary Screen (SC-1), Finish Screen 1 and 2 (SC-2 and SC-3); CRUSHERS: Cone Crusher 2 and 3 (RC-2 and RC-3). The PM10 emission rate for equipment subject to these controls shall not exceed the following: Conveyor Transfer: 0.00011 lb-PM10/ton of material processed; Screens: 0.000087 lb-PM10/ton of material processed; Crushers: 0.000024 lb-PM10/ton of material processed. [District Rule 2201]
- The following processes shall be wet processes (greater than 6% moisture content by weight) and shall not result in emissions or visible emissions: Finish Screen #4 (SC-4), Cone Crusher #4 (RC-4), Wash Screen to Wash Cone Belt (C-12), Wash Cone to CL II Collector Belt (C-13), Wash Cone Recirculation Belt

(C-14), Wash Screen Bypass to Wash Cone (C-16), 1" x #4 Stacker (PC-1), Washed Sand Stacker (PC-2), 3/8" Washed Stacker (PC-7). [District Rule 2201]

- Total material processed by this permit unit shall not exceed 18,000 tons in any one day nor 5,490,000 tons in any calendar year. [District Rule 2201]
- PM10 emissions from this permit unit shall not exceed 8.2 lb-PM10 in any one day nor 2,491 lb-PM in any calendar year. [District Rule 2201]

S-9380-3 (Recycled Asphalt Pavement (RAP) Crushing Plant):

- The feeder's maximum throughput shall not exceed 4,800 ton per day nor 1,464,000 ton per calendar year. [District Rule 2201]
- The crusher's maximum throughput shall not exceed 2,400 ton per day nor 732,000 ton per calendar year. [District Rule 2201]
- PM10 emissions rates from each of the following sources shall not exceed any of the following: RAP screen - 0.00017 lb-PM10 per ton of material processed; Truck Unloading - 0.000016 lb-PM10 per ton of material processed; Conveyor Transfer - 0.00046 lb-PM10 per ton of material processed; Crushers - 0.000054 lb-PM10 per ton of material processed . [District Rule 2201]

S-9380-4 (Portable Crumb Rubber Blending Operation)

- The extender oil tank's throughput shall not exceed either of the following limits: 2,000 gallon per day or 168,000 gallon per year. [District Rule 2201]
- The mixing and reaction tanks throughput shall not exceed either of the following limits: 65,000 gallon per day or 5,460,000 gallon per year. [District Rule 2201]
- VOC emission rate from the mixing tank shall not exceed 0.3 lb/day. [District Rule 2201]
- VOC emission rate from the reaction tank shall not exceed 0.2 lb/day. [District Rule 2201]

S-9380-5 (Portable Crumb Rubber Blending Operation)

- The annual heat input shall not exceed 10,483 MMBtu/year. [District Rule 2201]
- When fired on natural gas, emission rates shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 42 ppmvd CO @ 3% O2 or 0.0303 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]

- When fired on LPG, emission rates shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.016 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0370 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
- The extender oil tank's throughput shall not exceed either of the following limits: 2,000 gallon per day or 168,000 gallon per year. [District Rule 2201]
- The mixing and reaction tanks throughput shall not exceed either of the following limits: 65,000 gallon per day or 5,460,000 gallon per year. [District Rule 2201]
- VOC emission rate from the mixing tank shall not exceed 0.3 lb/day nor 25.2 lb/yr. [District Rule 2201]
- VOC emission rate from the reaction tank shall not exceed 0.2 lb/day nor 16.8 lb/yr. [District Rule 2201]

S-9380-6 (Sand and Aggregate Storage and Truck Loading Operation)

- The total amount of materials loaded out shall not exceed 20,000 tons in any one day nor 2,500,000 tons in any calendar year. [District Rule 2201]
- Emissions from truck loading operation shall not exceed 0.000016 lb-PM10/ton of material handled. [District Rule 2201]
- The total area of sand and aggregate storage piles, excluding emission-exempt stockpiles described below, shall not exceed 1.5 acres. [District Rule 2201]
- Emissions from the storage of sand and aggregate shall not exceed 0.527 lb-PM10/acre/day. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

Source testing is required for follows for the following units at the facility as indicated below:

S-9380-1 (Hot Mix Asphalt Drum Mix Plant)

Source testing to measure NOx and CO emissions is required for the drum mix plant upon startup at the new location and least once every 24 months. The following conditions will be included in the permit:

- Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of startup at the new location at least once every 24 months. [District Rules 2201 and 4309]

- {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
- Source testing to measure NO_x and CO emissions from the asphalt/concrete plant shall be conducted utilizing one of the following options: (a) Test the unit using locally mined aggregate in the dryer. If the source test using locally mined aggregate fails, the operator may re-run the source test using aggregate from a different source. (b) Test the unit using aggregate from a source different from the source used during normal operations. (c) Test the unit using a heat-absorbing material in the dryer, but no aggregate. (d) Test the unit with no material in the dryer. [District Rule 4309]

S-9380-3 (Aggregate Crushing and Screening Operation) and -6 (Recycled Asphalt Pavement (RAP) Crushing Plant):

An initial performance test is required at the new location to demonstrate compliance with the opacity limits. The following condition will ensure compliance:

- An initial performance test at the new location according 40 CFR 60.11 and 40 CFR 60.675 to demonstrate compliance with the opacity limits shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after initial startup as required under 40 CFR 60.11. [40 CFR §60.670(f) & §60.11 and District Rule 4001]

S-9380-5 (Portable Crumb Rubber Blending Operation):

Source testing to measure NO_x and CO emissions is required for S-9380-5 upon startup at the new location and least once every 24 months. The following conditions will be included in the permits:

- Source testing to measure NO_x and CO emissions from this unit shall be conducted upon startup at the new location and at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
- {4346} NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
- {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]

2. Monitoring

The following monitoring conditions are listed on the permits:

S-9380-1 (Hot Mix Asphalt Drum Mix Plant)

- Differential operating pressure shall be monitored and recorded on each day that the baghouse operates. [District Rule 2201]
- The asphalt batch plant permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month in which asphalt is produced on at least five days or for at least 32 hours, whichever comes first (and in which a source test is not performed), using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 production days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
- {3742} If either the NO_x or CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]
- {3743} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309]

S-9380-5 (Portable Crumb Rubber Blending Operation)

- {4315} The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- {4316} If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
- {4317} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

No other monitoring is required to demonstrate compliance with Rule 2201 for the other permit units.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following recordkeeping condition(s) are listed on the permit to operate:

S-9380-1 (Hot Mix Asphalt Drum Mix Plant):

- Differential operating pressure shall be monitored and recorded on each day that the baghouse operates. [District Rule 2201]
- Burner shall be equipped with fuel flow meter/recorder, and burner shall not consume more than 1,075.7 MMBtu in any one day nor 328 billion Btu in any one calendar year total fuel. [District Rule 2201]
- The asphalt batch plant permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month in which asphalt is produced on at least five days or for at least 32 hours, whichever comes first (and in which a source test is not performed), using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 production days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
- {3744} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
- Records of all maintenance of the baghouse, including all change outs of filter media, shall be maintained [District Rule 2201]
- Permittee shall maintain daily records of drum dryer/mix product temperature. [District Rule 2201]
- Permittee shall maintain daily and annual records of the following: quantity and type of material (RAP or virgin material) processed by hot mix asphalt drum mix plant, quantity of dry lime and aggregate processed by dry lime plant, quantity of fuel consumed by dryer (in Btu). [District Rule 2201]
- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201]

S-9380-2 (Aggregate Crushing and Screening Operation)

- Plant shall maintain a record of the process weight rate with a continuous chart recorder, and notify the District if this recorder is not operational at any time. [District Rule 2201]

- Records of daily amount of material (in ton) processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rule 1070 and 2201]
- Records of monthly moisture content of material processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon. [District Rule 1070 and 2201]
- {3451} Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

S-9380-3 (Recycled Asphalt Pavement (RAP) Crushing Plant):

- The permittee shall maintain a logbook that contains the following information: 1) dates of water spray nozzles inspections, 2) finding, 3) dates and any corrective actions taken, and 4) inspector name and signature. The logbook must be kept onsite and the permittee shall make hard or electronic copies (whichever is requested) of the logbook available to the Administrator or the District inspection upon request. [40 CFR §60.676(b) and District Rule 4001]
- Records of daily and annual sand, aggregate and RAP throughput shall be maintained. [District Rules 1070 and 2201]
- {3451} Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

S-9380-4 (Portable Crumb Rubber Blending Operation):

- The permittee shall maintain records of each location where the portable crumb rubber blending operation operates, including dates and duration of residency at each location, and shall update those records each time the crumb rubber blending operation is moved. [District Rules 2201 and 4623]

- Permittee shall maintain records on a daily basis of extender oil tank throughput (in gallons), daily reaction tank throughput (in gallons), temporary tank capacity and duration of time that the temporary tank is used. [District Rules 1070, 2201 and 4623]

S-9380-5 (Portable Crumb Rubber Blending Operation):

- {4315} The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- {4318} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]
- The permittee shall maintain records of each location where the portable crumb rubber blending operation operates, including dates and duration of residency at each location, and shall update those records each time the crumb rubber blending operation is moved. [District Rules 2201 and 4623]
- The permittee shall maintain on an annual basis the heat input (in MMBtu) and quantity of natural gas combusted (in cubic feet) and LPG/propane (in gallons) for the process heater at each site it operates. [District Rules 2201 and 4320]
- Records of daily and annual backup fuel consumption consisting of the date the process heater operated on LPG/propane as backup fuel and the amount of time the process heater was operated, in hours, on LPG/propane as backup fuel shall be maintained. [District Rules 2201, 4306 and 4320]
- Permittee shall maintain records on a daily basis of extender oil tank throughput (in gallons), daily reaction tank throughput (in gallons), temporary tank capacity and duration of time that the temporary tank is used. [District Rules 1070, 2201 and 4623]

S-9380-6 (Sand and Aggregate Storage and Truck Loading Operation)

- Permittee shall maintain records of daily and annual total amount of material loaded out, and monthly records of area of materials stockpiled. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

- {3451} Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix I of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_x, CO, and SO_x. As shown by the AAQA summary sheet in Appendix I the proposed equipment will not cause a violation of an air quality standard for NO_x, CO, or SO_x.

The proposed location is in a non-attainment area for the state's PM₁₀ as well as federal and state PM_{2.5} thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM₁₀ and PM_{2.5}.¹⁶

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII. C. 9. above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

Since this facility's potential emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

¹⁶ Please note that when the Health Risk Assessment/Ambient Air Quality Analysis was conducted, the project was being conducted with the intent of issuing the ATCs under modifications to current facility S-1612 since the entire facility would be relocated. Subsequently, it was determined that the ATC should be issued under a new facility number (S-9380). Thus the ATCs in the HRA Summary in Appendix I have changed as follows: S-1612-1 S-9380-1, S-1612-3 S-9380-2, S-1612-6 S-9380-3, S-1612-9 S-9380-4, S-1612-10 S-9380-5, S-1612-14 S-9380-6.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

40 CFR Part 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units)

40 CFR Part 60, Subpart Dc applies to affected Small Industrial-Commercial-Institutional Steam Generation Units between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction). This project includes a crumb rubber blending operation (S-9380-5), but its maximum heat input rating is less than 10 MMBtu/hr. Therefore, this subpart does not apply to this project.

40 CFR Part 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984)

40 CFR Part 60, Subpart Kb applies to Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

Section 60.110b (d) states that this subpart does not apply to storage vessels with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

Permit units S-9380-4 and -5 have petroleum liquid storage vessels, but none of the tanks have capacities greater than 151 m³ (which is equivalent to 39,890 gallons) and their stored volatile organic liquid will have true vapor pressures less than 3.5 kPa (which is equivalent to 0.507 psi). As mentioned in the Rule 4623 discussion, the portable crumb rubber operation tanks will store organic liquids with TVP less than 0.0019 psia. Therefore, this subpart does not apply to the storage vessels in this project.

40 CFR Part 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities)

40 CFR Part 60, Subpart I applies to Hot Mix Asphalt Facilities that commenced construction or modification after June 11, 1973.

The hot mix asphalt drum mix plant (S-9380-1) already satisfies the grain loading requirement of 0.04 gr/dscf and the 20 percent opacity requirements of §60.92 with the following existing condition:

- Particulate matter concentration in exhaust gas from the baghouse shall not exceed 0.04 grains/dscf. [District Rule 4001]

Therefore, no additional notification or reporting is required. Continued compliance is expected.

40 CFR Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plan)

The requirements of the Code of Federal Regulations, Chapter 40 (40 CFR), Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station who have commenced construction, reconstruction or modification after August 31, 1983.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, Portland cement plants, or any other facility processing nonmetallic minerals except as provided in §60.670 (b) and (c).

Based on the applicability requirements and exemptions, permits S-9380-2 and S-9380-3 have been determined to be subject to this subpart. Those are the only operations identified as equipment used to crush or grind nonmetallic minerals.

Pursuant to §60.670(a)(1), except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

Paragraph §60.670(b) states that an affected facility that is subject to the provisions of subparts F (Standards of Performance for Portland Cement Plants) or I (Standards of Performance for Hot Mix Asphalt Facilities) of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart. Thus, the hot mix asphalt is not subject to this subpart even if it was involved in the crushing or grinding of nonmetallic minerals.

Pursuant to §60.670(c)(2) portable sand and gravel plants and crushed stone plant with capacities of 150 tons per hour or less are not subject to the provisions of this subpart. The applicant is proposing to install and operate portable conveyors, crushers, and screens, which will occur after August 31, 1983 and the process rate will be greater than 150 tons/hour. Therefore, the permit units will be subject to this subpart.

Permit units S-9380-2 and -3 are nonmetallic mineral processing operations which are not equipped with capture and control devices which emit pollutants through a stack (i.e. wet

scrubbers and baghouses). Therefore, all emissions are classified as “fugitive” and only the PM₁₀ standard of § 60.672(b) is applicable. Per § 60.672(b), all affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 which pertain to “affected facilities that commence construction, modification, or reconstruction on or after April 22, 2008.”

The following conditions will be placed on ATCs S-9380-2 and -3 to ensure compliance with the PM₁₀ standards in this regulation:

- Visible emissions from the following sources shall not exceed any of the following opacities: feeders, screens, conveyors - 5% opacity; crushers - 5% opacity; stockpiles - 5% opacity. Compliance with the opacity standards shall be determined in accordance with Title 40, Code of Federal Regulations, Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). [District Rule 4001 and 40 CFR §60.672(b)]
- The District shall be notified at least 30 days prior to each performance test to demonstrate compliance with opacity limits. [District Rule 4001]
- The results of each performance test to demonstrate compliance with opacity limits shall be submitted to the District within 60 days following completion of the test. [District Rule 4001]

According to §60.670(f), Table 1, the requirements of §60.11 (Compliance with standards and maintenance requirements) apply to this subpart. §60.11 requires the opacity observations be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the facility. The following condition will be included on each of the mineral processing equipment ATCs (S-9380-2 and -3):

- An initial performance test at the new location according 40 CFR 60.11 and 40 CFR 60.675 to demonstrate compliance with the opacity limits shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after initial startup as required under 40 CFR 60.11. [40 CFR §60.670(f) & §60.11 and District Rule 4001]

§60.671 lists definitions.

§60.672(a) states that the requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

Both permits are nonmetallic mineral processing operations which are not equipped with capture and control devices which emit pollutants through a stack (i.e. wet scrubbers and baghouses). Therefore, all emissions are classified as “fugitive” and only the PM₁₀ standard of § 60.672(b) is applicable. Per § 60.672(b), all affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 which pertain to “affected facilities that commence construction, modification, or reconstruction on or after April 22, 2008.”

§60.672(b) states the affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

Table 3 (Fugitive Emissions Limits) states that for affected facility that commence construction, modification, or reconstruction on or after April 22, 2008, the following affected facilities are subject to 7 percent opacity: grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations. Crushers are subject to 12 percent opacity.

The owner or operator must demonstrated compliance with these limits by conducting an initial performance test according to §60.11 of this part and §60.675 of this subpart; and periodic inspections of water sprays according to §60.674(b) and §60.676(b); and a repeat performance test according to §60.11 of this part and §60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.

Note that since open storage stockpiles are not included in the list of affected facilities specified in §60.670, these fugitive opacity limits do not apply to the stockpiles, although opacity may be limited under Rule 2201. The following conditions will be included on the mineral processing equipment on ATCs S-9380-2 and -3 to enforce these requirements for new facilities:

- Visible emissions from the following sources shall not exceed any of the following opacities: feeders, screens, conveyors - 5% opacity; crushers - 5% opacity; stockpiles - 5% opacity. Compliance with the opacity standards shall be determined in accordance with Title 40, Code of Federal Regulations, Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). [District Rule 4001 and 40 CFR §60.672(b)]

§60.674 has monitoring requirements.

§60.674(a) does not apply as it pertains to an affected facility that uses a wet scrubber to control emissions.

§60.674(b) states that the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility, must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not

flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

The following conditions will be included on ATCs S-9380-2 and -3 to enforce these requirements:

- The permittee shall perform an initial startup inspection and monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. [40 CFR §60.674(b) and District Rule 4001]

§60.674(c) and (d) do not apply as they pertain to an affected facility that uses a baghouse to control emissions.

§60.674(e) does not apply as they pertain to an affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP

§60.675 lists test methods and procedures.

§60.675(a) and (b) do not apply since performance tests required in §60.8 and the PM standards in §60.672(a) do not apply.

§60.675(c)(1) states that in determining compliance with the particulate matter standards in §60.672(b), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in §60.11, with the additional requirements specified in §60.675(c)(1)(i) through §60.675(c)(1)(iii).

§60.675(c)(2) does not apply as it relates to opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin.

§60.675(c)(3) states that when determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) of this subpart, the duration of the Method 9 (40 CFR Part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

Therefore, the following condition will be included in the permits S-9380-2 and -3 to ensure compliance with these requirements:

- Demonstration of the visible emissions opacity limits shall be determined using EPA Method 9 and the procedures listed in §60.11, with the additional requirements specified in §60.675(c)(1)(i) through §60.675(c)(1)(iii). The duration of the Method 9 observations must be based on the average of the five 6-minute averages. [40 CFR §60.675(c)(1) and (c)(3) and 40 CFR §60.11, and District Rule 4001]

§60.675(d) does not apply as it relates to compliance with the fugitive emission limits for buildings.

§60.675(e) specifies alternatives to the reference methods and procedures specified in this section.

§60.676 has reporting and recordkeeping requirements.

§60.676(a) does not apply as the owner/operator is not seeking to comply with §60.670(d).

§60.676(b) requires that the owner or operator of any affected facility must record each periodic inspection required under §60.674(b), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request. Therefore, the following condition will be included on the permits S-9380-2 and -3 to ensure compliance with this requirement:

- The permittee shall maintain a logbook that contains the following information: 1) dates of water spray nozzles inspections, 2) finding, 3) dates and any corrective actions taken, and 4) inspector name and signature. The logbook must be kept onsite and the permittee shall make hard or electronic copies (whichever is requested) of the logbook available to the Administrator or the District inspection upon request. [40 CFR §60.676(b) and District Rule 4001]

§60.676(c), (d), and (e) only apply to initial performance tests of wet scrubbers.

According to §60.676(f), the owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including the reports of opacity observations made using Method 9 to demonstrate compliance with §60.672(b). The following condition will be included on the permits S-9380-2 and -3:

- The permittee shall submit written reports of initial demonstration of visible emission opacity compliance made using the methods and procedures listed in 40 CFR §60.675(c)(1) and §60.675(c)(3) to the District within 60 days after the completion of initial opacity tests. [40 CFR §60.676(f), District Rules 1070 & 4001]

Therefore, compliance with this rule is expected.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to asphalt pavement and concrete recycling operations.

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

The applicant is proposing to use dust control systems that include a combination of wet and chemical suppression, fogging systems, and partial enclosure at transfer and processing points to maintain emissions at levels below Ringelmann 1 or 20% opacity. Therefore, continued compliance with this regulation is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix I), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary ¹⁷		
Unit	Cancer Risk	T-BACT Required
S-9380-1-0	3.59 per million	Yes
S-9380-2-0	0.085 per million	No
S-9380-3-0	0.016 per million	No
S-9380-4-0/-5-0	0.19 per million	No
S-9380-6-0	0.01 per million	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is required for unit S-9380-1 (hot mix asphalt drum mix plant) because the HRA indicates that the risk is above the District's thresholds for triggering T-BACT requirements.

T-BACT is triggered for PM₁₀ and VOC for hot mix asphalt drum mix plant S-9380-1. T-BACT is satisfied with BACT for PM₁₀ and VOC as is shown in the Top Down BACT Analysis in Appendix H. Therefore, compliance this requirement is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 20 in a million). As outlined by the HRA Summary in Appendix I of this report, the emissions increases for this project was determined to be less than significant.

Therefore, compliance with this section is expected.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. This standard is applicable to an operation with a dust control device or vent. The following permits units are subject to this requirement with compliance shown with the conditions specified below:

S-9380-1:

- Particulate matter concentration in exhaust gas from the baghouse shall not exceed 0.04 grains/dscf. [District Rule 4001]

¹⁷ Please note that when the Health Risk Assessment/Ambient Air Quality Analysis was conducted, the project was being conducted with the intent of issuing the ATCs under modifications to current facility S-1612 since the entire facility would be relocated. Subsequently, it was determined that the ATC should be issued under a new facility number (S-9380). Thus the ATCs in the HRA Summary in Appendix I have changed as follows: S-1612-1 S-9380-1, S-1612-3 S-9380-2, S-1612-6 S-9380-3, S-1612-9 S-9380-4, S-1612-10 S-9380-5, S-1612-11 S-9380-6.

S-9380-4 and -5:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Therefore, continued compliance with this rule is expected.

Rule 4301 Fuel Burning Equipment

This rule applies to fuel burning equipment, defined as “any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.” The dryers in this project are direct fired, so the products of combustion come in direct contact with the material being heated; therefore, the rule does not apply and no further discussion is required.

Rule 4309 Dryers, Dehydrators, and Ovens

The purpose of this rule is to limit NO_x and CO emissions from dryers, dehydrators, and ovens.

This rule applies to any dryer, dehydrator, or oven that is fired on gaseous fuel, liquid fuel, or is fired on gaseous and liquid fuel sequentially, and the total rated heat input for the unit is 5.0 MMBtu/hr or greater. This rule applies to asphalt dryer on permit S-9380-1, which has a maximum heat input capacity of 150 MMBtu/hr.

Section 5.2 requires that units subject to this rule, except dehydrators, NO_x and CO emissions shall not exceed the limits specified in the table below on and after the full compliance schedules specified in Sections 7.1 and 7.3, as appropriate. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 19 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 19 percent oxygen in accordance with Section 5.0.

NO_x and CO Limits (for S-9380-1)				
Process Description	NO _x Limit (in ppmv)		CO Limit (in ppmv)	
	Gaseous Fuel Fired	Liquid Fuel Fired	Gaseous Fuel Fired	Liquid Fuel Fired
Asphalt/Concrete Plants	4.3	12.0	42	64
Milk, Cheese, and Dairy Processing < 20 MMBtu/hr	3.5	3.5	42	42
Milk, Cheese, and Dairy Processing ≥ 20 MMBtu/hr	5.3	5.3	42	42
Other processes not described above	4.3	4.3	42	42

The unit in this project is an asphalt dryer (S-9380-1) with a maximum heat input capacity of 150 MMBtu/hr; therefore it is subject to the requirements of the “Asphalt/Concrete Plants” category listed in the table above.

For the unit:

- the current NO_x emission limit is 4.3 ppmvd @ 19% O₂ (0.0492 lb/MMBtu), and
- the current CO emission limit is 42 ppmvd @ 19% O₂ (0.2924 lb/MMBtu).

Therefore, continued compliance with this section is expected.

Section 5.3 provides for a limited exemption from the emission limitations of Section 5.2 during well-defined and permitted startup and shutdown operations. Except as provided in Section 5.3.3, startup and shut down periods may not exceed 1 hour in duration for units not equipped with a NO_x exhaust control system, or 2 hours for units with a NO_x exhaust control system. The applicant has not proposed any special startup or shutdown considerations, so this section is not relevant to the application.

Section 5.4.1 states that except for dehydrators, the operator of any unit subject to the applicable emission limits in Sections 4.3.2, or 5.2 shall monitor emissions using one of the techniques specified in Sections 5.4.1.1 (APCO-approved CEMS for NO_x) or 5.4.1.2 (alternate emissions monitoring). The dryer is currently subject to the alternate emissions monitoring.

Section 5.4.1.2.1 states that the APCO shall not approve an alternative monitoring system unless it is documented that continued operation within ranges of specified emissions-related performance indicators or operational characteristics provides a reasonable assurance of compliance with applicable emission limits.

Section 5.4.1.2.2 states that the approved alternate emission monitoring system shall monitor operational characteristics necessary to assure compliance with the emission limit. Operational characteristics shall be one or more of the following:

- Periodic NO_x exhaust emission concentrations,
- Periodic exhaust oxygen concentration,
- Flow rate of reducing agent added to exhaust,
- Catalyst inlet and exhaust temperature,
- Catalyst inlet and exhaust oxygen concentration,
- Periodic flue gas recirculation rate,
- Other surrogate operating parameter(s) that demonstrate compliance with the emission limit.

In order to satisfy the requirements of District Rule 4309, the applicant uses pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO_x, CO, and O₂ exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following existing conditions on permit S-9380-1 ensure compliance with the requirements of the alternate monitoring plan:

- The asphalt batch plant permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month in which asphalt is produced on at least five days or for at least 32 hours, whichever comes first (and in which a source

test is not performed), using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 production days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]

- If either the NO_x or CO concentrations corrected to 19% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4309]
- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309]
- The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]

Section 5.5.1 states that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the PTO.

Section 5.5.2 states that except for as provided in Section 5.5.3, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0.

The following condition on permit S-9380-1 assures compliance with Sections 5.5.1 and 5.5.2.

- {3713} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to

Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rule 4309]

Section 5.5.5 states that for emissions monitoring pursuant to Section 5.4.1.2.2.1, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive minute period.

The following condition on permit S-9380-1 assures compliance with this section:

- {3743} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309]

Section 5.5.6 states that for emissions source testing performed pursuant to Section 6.3.1 to determine compliance with an applicable emission limit of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two of the three runs individually demonstrate emissions above the applicable limit, the test cannot be used to demonstrate compliance for the unit, even if the averaged emissions of all three test runs is less than the applicable limit. The following condition on permit S-9380-1 assures compliance with this section:

- {3715} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4309]

Section 6.1 details the record keeping requirements the operator must satisfy to document compliance with the rule. The following condition on permit S-9380-1 assures compliance with this section:

- {3723} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4309]

Section 6.2 specifies the acceptable test methods for monitoring or compliance determinations. The following conditions on permit S-9380-1 assure compliance with this section:

- {3718} NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]

- {3719} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
- {3720} Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]

Section 6.3.2 states that each unit subject to the requirements in Sections 4.3, or 5.2 shall be initially source tested to determine compliance with the applicable emission limits not later than the applicable full compliance schedule specified in Section 7.0. Thereafter, each unit subject to Section 5.2 emission limits shall be source tested at least once every 24 months. Units subject to Section 5.2 and operating less than 50 days per calendar year shall follow the source test frequency prescribed in Section 6.3.3. The facility has already performed and passed an initial start-up source test on 6/4/09 and a new initial test will not be required. The following condition assures on permit S-9380-1 compliance with this section:

- Source testing to measure NO_x and CO emissions from this unit shall be conducted within 60 days of startup at the new location at least once every 24 months. [District Rules 2201 and 4309]

Section 6.3.5 states that the APCO shall be notified according to the provisions of Rule 1081 (Source Sampling). The following conditions on permit S-9380-1 assure compliance with this section:

- Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rules 1081 and 4309]
- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 4309]

Section 6.3.6 states that emissions source testing shall be conducted with the unit operating either at conditions representative of normal operations or conditions specified in the PTO. The requirements of this section will be satisfied by the condition listed in Sections 5.5.1 and 5.5.2 of this rule evaluation.

Section 6.3.7 states that all test results for NO_x and CO shall be reported in ppmv, corrected to dry stack conditions and adjusted using the oxygen correction factor. The following condition on permit S-9380-1 assures compliance with this section:

- {3722} All test results for NO_x and CO shall be reported in ppmv @ 19% O₂ (or no correction if measured above 19% O₂), corrected to dry stack conditions. [District Rule 4309]

Section 6.3.8 states that for the purpose of determining compliance with an applicable emission limit, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply.

Section 6.3.9 states that if two of the three runs specified by Section 6.3.8 individually demonstrate emissions above the applicable limit, the test cannot be used to demonstrate compliance for the unit, even if the averaged emissions of all three runs is less than the applicable limit.

The requirements of Sections 6.3.8 and 6.3.9 will be satisfied by the condition listed in Section 5.5.6 of this rule evaluation.

Section 6.4 states that in addition to the provisions of Section 6.3, asphalt/concrete plants shall choose one of the following options for source testing:

- Test the unit using locally mined aggregate in the dryer. If the source test using locally mined aggregate fails, the operator may re-run the source test using aggregate from a different source.
- Test the unit using aggregate from a source different from the source used during normal operations.
- Test the unit using a heat-absorbing material in the dryer, but no aggregate.
- Test the unit with no material in the dryer.

The following conditions on permit S-9380-1 assure compliance with this section:

- Source testing to measure NO_x and CO emissions from the asphalt/concrete plant shall be conducted utilizing one of the following options: (a) Test the unit using locally mined aggregate in the dryer. If the source test using locally mined aggregate fails, the operator may re-run the source test using aggregate from a different source. (b) Test the unit using aggregate from a source different from the source used during normal operations. (c) Test the unit using a heat-absorbing material in the dryer, but no aggregate. (d) Test the unit with no material in the dryer. [District Rule 4309]

Therefore, continued compliance with this rule is expected.

Rule 4623 Storage of Organic Liquids

This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored. The portable crumb rubber blending operations S-9380-4 and -5 have tanks that are subject to this rule which store organic liquids, asphalt oil and extender oil.

Section 4.2.2 states that tanks with capacities of 21,000 gallons (500 barrels) or less, and left on site for six months or less are categorized as temporary tanks and are exempted from the requirements of this rule. The portable crumb rubber blending operations S-9380-4 and -5 includes several organic liquid storage tanks that are temporary tanks with capacities of 21,000 gallons or less that left on site for six months or less, and as such are exempt from Rule 4623 pursuant to Section 4.2.2.

S-9380-4 consists of one 1,500 gallon mixing tank, one 24,000 gallon reaction holding tank, one 22,500 gallon split oil tank, and one 2,000 gallon extender oil tank. Only the 24,000 gallon

reaction tank and the 22,500 gallon split oil tank on permit -4 are subject to the rule as the other tanks are exempt pursuant to Section 4.2.2.

S-9380-5 consists of one 500 gallon mixing tank, three 15,000 gallon reaction holding tanks, and one 15,000 gallon extender oil tank. Since all these tanks on permit -5 are less than 21,000 gallons and are portable, they are all exempt from Rule 4623 pursuant to Section 4.2.2.

The following existing conditions on permits S-9380-4 and -5 ensures compliance with this section for the temporary tanks with capacities of 21,000 gallons or smaller:

- This portable crumb rubber plant shall be operated at one location for no more than 6 consecutive months and shall meet all the requirements for a temporary tank, per Rule 4623. [District Rule 4623, 4.2.2]

Only permit unit S-9380-4 has tanks with capacities greater than 21,000 gallons, so only those tanks are subject to Rule 4623 as described below.

Section 4.4 states that tanks exclusively receiving and/or storing an organic liquid with a true vapor pressure (TVP) less than 0.5 psia are exempt from all other requirements of the rule except for complying with the following provisions:

- 4.4.1 TVP and API Gravity Testing provisions pursuant to Section 6.2,
- 4.4.2 Recordkeeping provisions pursuant to Section 6.3.6,
- 4.4.3 Test Methods provisions pursuant to Section 6.4, and
- 4.4.4 Compliance schedules pursuant to Section 7.2.

The requirements of Section 4.4 shall not apply to tanks that are exempt pursuant to Sections 4.1 through 4.3.

As mentioned above, the tanks greater than 21,000 gallons on permit S-9380-5 subject to the Section 4.4 exemption from the requirements of this rule. Pursuant to Section 4.4.1, the tanks are subject to the TVP and API gravity testing provisions of Section 6.2. Section 6.2 requires the TVP and/or API Gravity measurement at the actual storage conditions during initial start-up and once every 24 months between July and September months, or whenever there is a change in the source or type of organic liquid stored in a tank.

The tanks store asphalt oil and extender oil, both of which have TVP much less than 0.5 psia. Pursuant to the Safety Data Sheets of the asphalt oil and the extender oil, which are found in Appendix K, the vapor pressure at 100 degrees F is less than 1 mm Hg (0.019 psia) for the asphalt oil and less than 0.1 mm Hg (0.0019 psia) for the extender oil. Since the physical properties of the products are a part of the specifications for quality control of the product being purchased and the margin of compliance with the 0.5 psia limit is substantial, compliance with this requirement will be satisfied by maintaining documentation of the TVP from the suppliers of the asphalt oil and extender oil. The following conditions will be placed on the ATC to ensure compliance with this section:

- Tanks shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]

- Permittee shall maintain documentation of the true vapor pressure (TVP) of the organic liquids stored in the tanks and shall obtain new documentation whenever there is a change in the source or type of liquid stored in the tank in order to maintain exemption from the rule. [District Rule 4623]

No other requirements apply. Therefore, compliance with the requirements of this rule is expected.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

The drum dryer and process heater serving the crumb rubber plant are fired on PUC-quality natural gas or commercial grade propane.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows for both natural gas and LPG combustion for the equipment in this project:

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With:

N = moles SO₂

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

R (Universal Gas Constant) = $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$

EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to

$$\text{Corrected F-factor} = \left(\frac{8,710 \text{ dscf}}{\text{MMBtu}} \right) \times \left(\frac{60^\circ \text{F} + 459.6}{68^\circ \text{F} + 459.6} \right) = 8,578 \frac{\text{dscf}}{\text{MMBtu}} \text{ at } 60^\circ \text{F}$$

Natural Gas Combustion:

$$\frac{0.00285 \text{ lb-SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ \text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1.97 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = 1.97 parts/million < 2,000 ppm (or 0.2%)

LPG Combustion:

$$\frac{5 \text{ gr-S}}{100 \text{ dscf fuel gas}} \times \frac{1 \text{ lb-S}}{7,000 \text{ gr-S}} \times \frac{\text{lbmole-S}}{34 \text{ lb-S}} \times \frac{379 \text{ ft}^3 \text{ S}}{\text{lbmole-S}} \times \frac{1,000,000 \text{ parts}}{\text{million}} = 79.6 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = 79.6 parts/million < 2,000 ppm (or 0.2%)

Therefore, compliance with District Rule 4801 requirements is expected.

Rule 8011 General Requirements

This rule contains general requirements pertaining to all Regulation XIII prohibitions. Applicable sections of Rule 8011 are referenced from the specific prohibitory rules. Therefore, compliance with Rules 8031, 8041, and 8071, as evaluated below, will meet the requirements of Rule 8011.

Rule 8031 Bulk Materials

This rule limits Visible Dust Emissions (VDE) from bulk material handling operations to a maximum 20% opacity. Section 5, Table 8031-1, prescribes the required control measures.

Bulk materials (sand and aggregate) are stored and handled by the sand and aggregate storage and truck loading operations (S-9380-6). Therefore, the following requirements apply to S-9380-6.

Handling of Bulk Materials:

Table 8031-1, Section A, prescribes the following control measures for handling of bulk materials:

- a) Apply water or chemical/organic stabilizers/suppressants sufficient to limit Visible Dust Emissions to 20% opacity or;
- b) Construct and maintain wind barriers sufficient to limit Visible Dust Emissions to 20% opacity and with less than 50% porosity. If utilizing wind fences or barriers, control measure (a) shall also be implemented.

The following condition will be placed on the ATC S-9380-6 to ensure compliance:

- When handling bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, wind barriers with less than 50% opacity shall also be used. [District Rules 8011 and 8031]

Storage of Bulk Materials:

Table 8031-1, Section B, prescribes the following control measures for storage of bulk materials:

- a) When storing bulk materials, comply with the conditions for a stabilized surface as defined in Rule 8011; or
- b) Cover bulk materials stored outdoors with tarps, plastic, or other suitable material and anchor in such a manner that prevents the cover from being removed by wind action; or
- c) Construct and maintain wind barriers sufficient to limit Visible Dust Emissions to 20% opacity and with less than 50% porosity. If utilizing fences or wind barriers, apply water or chemical/organic stabilizers/suppressants to limit Visible Dust Emissions to 20% opacity or;
- d) Utilize a 3-sided structure with a height at least equal to the height of the storage pile and with less than 50% porosity.

The following condition will be placed on the ATC S-9380-6 to ensure compliance:

- When storing bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, all bulk material piles shall also be either maintained with a stabilized surface as defined in Section 3.58 of District Rule 8011, or shall be protected with suitable covers or barriers as prescribed in Table 8031-1, Section B, of District Rule 8031. [District Rules 8011 and 8031]

On-Site Transporting of Bulk Materials:

Table 8031-1, Section C, prescribes the following control measures for on-site transporting of bulk materials:

- a) Limit vehicular speed while traveling on the work site sufficient to limit Visible Dust Emissions to 20% opacity; or
- b) Load all haul trucks such that the freeboard is not less than six (6) inches when material is transported across any paved public access road sufficient to limit Visible Dust Emissions to 20% opacity, or
- c) Apply water to the top of the load sufficient to limit Visible Dust Emissions to 20% opacity, or
- d) Cover haul trucks with a tarp or other suitable cover.

The following condition will be placed on the ATC S-9380-6 to ensure compliance:

- When transporting bulk materials outside an enclosed structure or building, all bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]

Off-Site Transporting of Bulk Materials:

Table 8031-1 Section D, prescribes the following control measures for off-site transporting of bulk materials:

- a) Clean the interior of the cargo compartment or cover the cargo compartment before the empty truck leaves the site; and
- b) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate; and
- c) Load all haul trucks such that the freeboard is not less than six (6) inches when material is transported on any paved public access road, and apply water to the top of the load sufficient to limit Visible Dust Emissions to 20% opacity; or cover haul trucks with a tarp or other suitable cover.

Since this facility will only be receiving aggregate provided by an independent supplier, and will not be transporting bulk materials off-site, the above provisions do not apply to this facility.

Outdoor Transport of Bulk Materials with a Chute or Conveyor:

Table 8031-1, Section E, prescribes the following control measures for outdoor transport of bulk materials with a chute or conveyor:

- a. Fully enclose the chute or conveyor; or
- b. Operate water spray equipment that sufficiently wets materials to limit VDE to 20% opacity; or
- c. Wash separated or screened materials to remove conveyed materials having an aerodynamic diameter of 10 microns or less sufficient to limit VDE to 20% opacity.

The following condition will be placed on the ATC S-9380-6 to ensure compliance:

- All outdoor chutes and conveyors shall be controlled by any of the following options: 1) full enclosure, 2) operation with water spray equipment that sufficiently wets materials to limit VDE to 20% opacity, or 3) the concentration of particles having an aerodynamic diameter of 10 microns or less in the conveyed material shall be sufficiently small to limit VDE to 20% opacity. [District Rules 8011 and 8031]

Section 6.0 of Rule 8031 requires the facility to maintain records in accordance with the requirements of Rule 8011. The following condition will ensure compliance:

- Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant

and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8031, 8071, and 8011]

Based on the above evaluation of the proposed VDE control measures, compliance with Rule 8031 is expected.

Rule 8041 Carryout and Trackout

This rule applies to all sites that are subject to any of the following rules where carryout or trackout has occurred or may occur on paved public roads or the paved shoulders of a paved public road: Rules 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), 8031 (Bulk Materials), 8061 (Paved and Unpaved Roads), and 8071 (Unpaved Vehicle and Equipment Traffic Areas).

This rule requires an owner/operator to sufficiently prevent or cleanup carryout and trackout as specified in sections 5.1 through 5.9. In addition to the specific requirements of this rule, the facility shall comply with all other applicable requirements of Regulation VIII.

The following condition will be placed on the ATC S-9380-6 to ensure compliance:

- An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rules 8041 and 8011]

Rule 8071 Unpaved Vehicle/Equipment Traffic Areas

The purpose of this rule is to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas. Section 5.1 of this rule requires implementation of at least one specific control measure for Visible Dust Emissions whenever the Average Annual Daily Trips (AADT) will exceed 50, Vehicle Daily Trips (VDT) will exceed 150, VDT with 3 or more axles will exceed 25, or when 1000 or more vehicles will park or travel in the area in a given day. Specified control measures are:

- a. Implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements);
- b. Watering
- c. Uniform layer of washed gravel
- d. Chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications;
- e. Vegetative materials
- f. Paving
- g. Roadmix
- h. Any other method(s) that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.

Section 5.2 requires that one or more specific control measures be implemented on each day that 50 or more VDT, or 25 or more VDT with 3 or more axles, originates from within and remains exclusively within an unpaved vehicle/equipment traffic area.

Since this facility will transport sand and aggregate using a front-end loader over unpaved areas, the AADT of 50 is expected to be exceeded, requiring implementation of a control measure. The following conditions will ensure compliance:

- Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8071 and 8011]
- Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

Section 5.3 requires an owner/operator to restrict access and periodically stabilize a disturbed surface area whenever a site becomes inactive to comply with the conditions for a stabilized surface as defined in Rule 8011. The following condition will ensure compliance:

- Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8071 and 8011]

Section 6.0 of this rule requires the owner/operator to comply with the recordkeeping requirements specified in Rule 8011. The following condition will ensure compliance:

- Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8031, 8071, and 8011]

Compliance with this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

District is a Responsible Agency

It is determined that another agency has prepared an environmental review document for the project. The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency, the District is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating greenhouse gas emissions. The District has determined that the applicant is responsible for implementing greenhouse gas mitigation measures, if any, imposed by the Lead Agency.

District CEQA Findings

The County of Kern (County) is the public agency having principal responsibility for approving the Solari Sand and Gravel project for which this Project is covered under. As such, the County served as the Lead Agency for the Project. On September 22, 2016, the County certified the Environmental Impact Report (EIR), finding that greenhouse emissions and water supplies would have a significant, unavoidable impact. The County approved the project and adopted a Statement of Overriding Consideration (SOC).

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency the District complies with CEQA by considering the EIR prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project involved (CEQA Guidelines §15096). The District has considered the Final EIR certified by the County.

The District's engineering evaluation of the project (this document) demonstrates that the District would impose permit conditions requiring the applicant to meet BACT and the District would impose permit conditions to reduce stationary source emissions. Thus, the District concludes that through a combination of project design elements and permit conditions, project specific stationary source emissions on air quality will be reduced.

As a Responsible Agency the District is required to issue findings for significant air quality impacts detailed in the Lead Agency's EIR and adopt an SOC. The District has required all feasible mitigation measures to lessen the impacts to air quality from this Project, after reviewing the Planning Commission's SOC and the substantial evidence it relied on in adopting the SOC concerning economic, social, and other benefits produced by the Project, the District found no basis on which to disagree with the evidence or the SOC.

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATCs S-9380-1-0 through -6-0 subject to the permit conditions on the attached draft ATCs in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-9380-1-0	3020-02-H	150 MMBtu/hr	\$ 1,183.00
S-9380-2-0	3020-01-H	3,549 hp electric motor	\$ 1,183.00
S-9380-3-0	3020-01-E	400 hp electric motor	\$ 473.00
S-9380-4-0	3020-05-D	50,000 gallons total storage	\$ 213.00
S-9380-5-0	3020-02-G	5.2 MMBtu/hr heater	\$ 936.00
S-9380-6-0	3020-06	Miscellaneous	\$ 122.00

Appendixes

- A: Draft Authorities to Construct
- B: Current Permits to Operate
- C: Location Map
- D: Process Flow Diagrams
- E: Post-Project Emission Calculations
- F: Control Efficiency Documentation
- G: BACT Guidelines
- H: BACT Analysis
- I: Health Risk Assessment/Ambient Air Quality Analysis Results
- J: Quarterly Net Emissions Change
- K: Asphalt Oil and Extender Oil MSDSs

APPENDIX A
Draft Authorities to Construct

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-9380-1-0

LEGAL OWNER OR OPERATOR: GRANITE CONSTRUCTION CO

MAILING ADDRESS: P O BOX 5127
BAKERSFIELD, CA 93388-5127

LOCATION: 12 MI S OF ARVIN (SEC 17, 20, 21, 29 T11N, R18W)
ARVIN, CA

EQUIPMENT DESCRIPTION:

HOT MIX ASPHALT DRUM MIX PLANT WITH A GENCORP MODEL 500 COUNTERFLOW ULTRADRUM WITH GENCO ULTRAFLAME MODEL II-150, 150 MMBTU/HOUR NATURAL GAS-/LPG-FIRED BURNER, WITH RECLAIMED ASPHALT PAVEMENT (RAP) CIRCUIT, GENCORP INDUSTRIES CYCLONE, AND MODEL CFS-210 BAGHOUSE, WITH BLUE SMOKE EMISSION CONTROL SYSTEM (CONSISTING OF FAN, DUSTEX MODEL 3630-1114 BAGHOUSE, INJECTION SEEDING SYSTEM, HOODS AND DUCTWORK) SERVING SILO TRUCK LOADOUT AREAS, WITH DRY LIME PLANT INCLUDING ONE 75 TON STORAGE SILO SERVED BY BAGHOUSE, PUGMILL, TWO CONVEYORS AND A LIME GUPPY BLOWER

CONDITIONS

1. Permit to Operate S-1612-1 shall be cancelled and the equipment it authorizes shall be taken out of service prior to or upon implementation of this Authority to Construct. [District Rule 2201]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Operation shall include one four-compartment and one five-compartment aggregate storage bin with bottom feeders, up to 9 material handling conveyors, a RAP circuit consisting of two feeders, two bins, underbelt, 2-deck screen, and two conveyors. [District Rule 2201]
4. Visible emissions from baghouse serving cyclone and drum dryer/mixer, and all other sources shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
5. No air contaminant shall be discharged from dry lime plant into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is darker than Ringelmann 1/4 or 5% opacity. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

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6. The asphalt silo truck loadout area shall be served by a blue smoke emission control system such that visible emissions from this area shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
7. Burner blue smoke ventilation system shall vent to secondary air intake of drum dryer/mixer. [District Rule 2201]
8. Covered hot asphaltic concrete conveyors, silos, and loadout chute shall be vented through 1,300 cfm in-line fan to secondary air intake of Genco burner. [District Rule 2201]
9. Drum dryer/mixer shall vent only to cyclone. [District Rule 2201]
10. Exhaust from cyclone shall vent only to the baghouse. [District Rule 2201]
11. The baghouse and dust collector listed on this permit shall be equipped with an operational pressure differential gauge, mounted in an accessible location, which indicates the pressure drop across the bags. [District Rule 2201]
12. The differential pressure gauge reading range shall be established per manufacturer's recommendation at time of start up inspection. [District Rule 2201]
13. Differential operating pressure shall be monitored and recorded on each day that the baghouse operates. [District Rule 2201]
14. Exhaust fan damper shall be set to maintain a negative pressure at the drum dryer/mixer seal(s). [District Rule 2201]
15. Drum dryer/mixer shall be equipped with product temperature indicator. [District Rule 2201]
16. Drum dryer/mixer product shall not exceed 350 degrees F. [District Rule 2201]
17. The total combined process rate from the hot mix asphalt drum mix plant (from the RAP circuit and the virgin feed circuit) shall not exceed 8,000 tons of material in any one day nor 2,440,000 tons of material in any calendar year. [District Rule 2201]
18. Exhaust stack shall be equipped with adequate provisions for the collection of exhaust gas samples consistent with EPA test methods. [District Rule 1081]
19. Burner shall be equipped with fuel flow meter/recorder, and burner shall not consume more than 1,075.7 MMBtu in any one day nor 328 billion Btu in any one calendar year total fuel. [District Rule 2201]
20. PM10 emissions rates from each of the following sources shall not exceed any of the following: Truck Unloading - 0.000016 lb-PM10 per ton of material processed; Conveyor Transfer - 0.000046 lb-PM10 per ton of material processed; Lime Silo Filling - 0.00034 lb-PM10 per ton of material processed; Grizzly Feeder - 0.000016 lb-PM10 per ton of material processed; Transfer to Lime Pugmill - 0.000046 lb-PM10 per ton of material processed. [District Rule 2201]
21. Particulate matter concentration in exhaust gas from the baghouse shall not exceed 0.04 grains/dscf. [District Rule 4001]
22. The dryer burner shall only be fueled on PUC-quality natural gas or commercial-grade LPG/propane. [District Rules 2201 and 4309]
23. Emissions rates from the drum dryer/mixer shall not exceed any of the following limits: 4.3 ppmvd-NOx @ 19% O2 (equivalent to 0.0484 lb-NOx/MMBtu), 0.00285 lb-SOx/MMBtu, 42 ppmvd-CO @ 19% O2 (equivalent to 0.288 lb-CO/MMBtu), or 0.006 lb-VOC/MMBtu. If measured O2 concentration is greater than 19%, the corrected NOx and CO concentration is equal to the measured NOx or CO concentration. [District Rules 2201 and 4309]
24. The amount of hot mix asphaltic concrete transferred into the storage silos or loaded into trucks shall not exceed 8,000 tons in any one day nor 2,440,000 tons in any one calendar year. [District Rule 2201]
25. Emissions from the silo filling of the produced asphaltic concrete shall not exceed any of the following limits: 0.041 lb-PM10/1,000 ton-asphaltic concrete, 2.52 lb-CO/1,000 ton-asphaltic concrete, or 0.390 lb-VOC/1,000 ton-asphaltic concrete transferred. [District Rule 2201]
26. Emissions from the truck loading of the produced asphaltic concrete shall not exceed any of the following limits: 0.041 lb-PM10/1,000 ton-asphaltic concrete, 2.21 lb-CO/1,000 ton-asphaltic concrete, or 1.14 lb-VOC/1,000 ton-asphaltic concrete transferred. [District Rule 2201]

27. Total process weight of dry lime from dry lime plant shall not exceed 63.2 tons in any one day nor 19,276 tons in any one calendar year. [District Rule 2201]
28. Total process weight of aggregate from dry lime plant shall not exceed 6,320 tons in any one day nor 1,927,600 tons in any one calendar year. [District Rule 2201]
29. Source testing to measure NO_x and CO emissions from this unit shall be conducted within 60 days of startup at the new location at least once every 24 months. [District Rule 2201 and 4309]
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rules 1081 and 4309]
31. Source testing to measure NO_x and CO emissions from the asphalt/concrete plant shall be conducted utilizing one of the following options: (a) Test the unit using locally mined aggregate in the dryer. If the source test using locally mined aggregate fails, the operator may re-run the source test using aggregate from a different source. (b) Test the unit using aggregate from a source different from the source used during normal operations. (c) Test the unit using a heat-absorbing material in the dryer, but no aggregate. (d) Test the unit with no material in the dryer. [District Rule 4309]
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 4309]
33. {3713} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rule 4309]
34. {3715} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4309]
35. {3718} NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
36. {3719} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
37. {3720} Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]
38. {3722} All test results for NO_x and CO shall be reported in ppmv @ 19% O₂ (or no correction if measured above 19% O₂), corrected to dry stack conditions. [District Rule 4309]
39. The asphalt batch plant permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month in which asphalt is produced on at least five days or for at least 32 hours, whichever comes first (and in which a source test is not performed), using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 production days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
40. {3742} If either the NO_x or CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]

41. {3743} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309]
42. {3744} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
43. The baghouses and dust collectors associated with this permit shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]
44. The baghouses and dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]
45. Material removed from the baghouses and dust collectors shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]
46. A spare set of bags for each baghouse and dust collector associated with this permit shall be maintained on the premises at all times. [District Rule 2201]
47. Replacement bags numbering at least 10% of the total number of bags in the baghouse shall be maintained on the premises [District Rule 2201]
48. Records of all maintenance of the baghouse, including all change outs of filter media, shall be maintained [District Rule 2201]
49. Permittee shall maintain daily records of drum dryer/mix product temperature. [District Rule 2201]
50. Permittee shall maintain daily and annual records of the following: quantity and type of material (RAP or virgin material) processed by hot mix asphalt drum mix plant, quantity of dry lime and aggregate processed by dry lime plant, quantity of fuel consumed by dryer (in Btu). [District Rule 2201]
51. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-9380-2-0

LEGAL OWNER OR OPERATOR: GRANITE CONSTRUCTION CO

MAILING ADDRESS: P O BOX 5127
BAKERSFIELD, CA 93388-5127

LOCATION: 12 MI S OF ARVIN (SEC 17, 20, 21, 29 T11N, R18W)
ARVIN, CA

EQUIPMENT DESCRIPTION:

AGGREGATE CRUSHING AND SCREENING OPERATION INCLUDING VIBRATING JAW FEEDER, JAW CRUSHER WITH WATER SPRAYS, TWO 54" CONE CRUSHERS WITH WATER SPRAYS, 4-1/4 FT CONE CRUSHER WITH WATER SPRAYS, THREE SYNTRON FEEDERS, UP TO THREE FEEDER BINS, UP TO FORTY TWO CONVEYORS, HYDRAULIC HAMMER WITH BOOM, 6' X 20'-3 DECK SCREEN, 6' X 20'-2 DECK SCREEN, 7' X 20'-3 DECK SCREEN, 8' X 20'-3 DECK SCREEN, 6' X 12'-1 DECK SHAKER SCREEN AND PERMIT EXEMPT WET PROCESSING OPERATION INCLUDING ONE 6' X 12'-2 DECK SCREEN, ONE TWIN 36" SAND SCREW AND THREE STACKER CONVEYORS

CONDITIONS

1. Permit to Operate S-1612-3 shall be cancelled and the equipment it authorizes shall be taken out of service prior to or upon implementation of this Authority to Construct. [District Rule 2201]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. This unit shall only be used to crush rocks. [District Rule 2201]
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is darker than Ringelmann 1/4 or 5% opacity from any emission point in this permit. [District Rule 2201, 4001 and 4101]
5. PM10 emissions from crushing operations, screens, conveyors, transfer points and storage piles shall be minimized when needed with water sprays or water sprays containing wetting agents. Specific emission points shall be controlled by additional controls as specified in this permit. [District Rule 2201]
6. Moisture content of material being processed shall be at least 1.5% by weight. Additional controls shall be applied to specific emission points as specifically required by separate conditions in this permit. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

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7. PM10 emissions rates from each of the following sources (except for those operations that are subject to additional controls as specified in this permit in the conditions below) shall not exceed any of the following: Truck Unloading - 0.000016 lb-PM10 per ton of material processed; Crushers - 0.00054 lb-PM10 per ton of material processed. [District Rule 2201]
8. PM10 emissions from the following emission points shall be controlled by Wet Suppression and Chemical Dust Suppression: Conveyor Transfer to Surge Stacker (PB-1), Surge Stacker Transfer to Main Surge Pile (SS-1), CL II Base Collector Belt to CI II Base Carry Belt (C-9), Recirculation Belt from Secondary Screen to Cone (C-4), Stackers (3/4", 3/8", 1/2", Rock Dust, 1 1/2", 1") (PC-3 through PC-6, PC-8, and PC-9), Base Stacker. The PM10 emission rate for equipment subject to these controls shall not exceed the following: Conveyor Transfer: 0.00033 lb-PM10/ton of material processed. [District Rule 2201]
9. PM10 emissions from the following emission points shall be controlled by Wet Suppression, Fogging System, and Partial Enclosures at Transfer Points: Waste and Sand Stacker (PC-11). The PM10 emission rate for equipment subject to these controls shall not exceed the following: Conveyor Transfer: 0.00022 lb-PM10/ton of material processed. [District Rule 2201]
10. PM10 emissions from the following equipment shall be controlled by Wet Suppression, Fogging System, Partial Enclosures at Transfer Points, and Chemical Dust Suppression: TRANSFER POINTS: Conveyors PB-2, and PB-3, Tunnel Belts (TB-1 and TB-2), Primary Screen to Cone Belt (C-1), Cone Collector Belt (C-2), Primary Screens Sand Collector Belt to Sand to Base Belt Via Tri-verter (C-11), Primary Screen to Secondary Cone Belt (C-17), Primary Screen to Wash Plant Carry Belt (C-18), Primary Screen Coarse Material Collector Belt (C-22), Primary Screen Sand Collector Belt to Wash (C-26), Secondary Screen Feed Belt (C-3), Finish Screen to CL II Carry Belt (C-5), Secondary Screens Bottom Deck Collector Belt to Bottom Deck to Finish Screen Route Belt Via Diverter (C-7), Trip Belts (TR-1 through TR-7), Primary Screens Bottom Deck Collector Belt to Wash Plant 1x4 Surge Feed Belt Via Diverter (C-10), Primary Screens Sand Collector Belt to Sand Stacker Via Tri-verter (C-20), CI II Base Carry Belt to CI II Base Stacker Belt (C-8); SCREENS: Primary Screen (SC-1), Finish Screen 1 and 2 (SC-2 and SC-3); CRUSHERS: Cone Crusher 2 and 3 (RC-2 and RC-3). The PM10 emission rate for equipment subject to these controls shall not exceed the following: Conveyor Transfer: 0.000011 lb-PM10/ton of material processed; Screens: 0.000087 lb-PM10/ton of material processed; Crushers: 0.000024 lb-PM10/ton of material processed. [District Rule 2201]
11. The following processes shall be wet processes (greater than 6% moisture content by weight) and shall not result in emissions or visible emissions: Finish Screen #4 (SC-4), Cone Crusher #4 (RC-4), Wash Screen to Wash Cone Belt (C-12), Wash Cone to CL II Collector Belt (C-13), Wash Cone Recirculation Belt (C-14), Wash Screen Bypass to Wash Cone (C-16), 1" x #4 Stacker (PC-1), Washed Sand Stacker (PC-2), 3/8" Washed Stacker (PC-7). [District Rule 2201]
12. Crushers shall be shrouded at bases. [District Rule 2201]
13. Total material processed by this permit unit shall not exceed 18,000 tons in any one day nor 5,490,000 tons in any calendar year. [District Rule 2201]
14. PM10 emissions from this permit unit shall not exceed 8.2 lb-PM10 in any one day nor 2,491 lb-PM in any calendar year. [District Rule 2201]
15. Equipment required to be controlled by Chemical Suppression shall be controlled as described in this condition. The permittee shall adhere to chemical dust suppressant's manufacturer specifications for achieving 90% control efficiency solely from the chemical dust suppressant for all the emission points required to be controlled by chemical suppression. The permittee shall receive confirmation that the chemical suppression is achieving the required control efficiency for all emission points required to be controlled. The permittee shall maintain onsite the manufacturer's specification for achieving the required control efficiency solely from the chemical dust suppressant. The permittee shall maintain records demonstrating compliance with the manufacturer's specifications. [District Rule 2201]
16. Equipment required to be controlled by Fogging Systems (also known as high pressure sprays, dry fog, and water atomizers) shall consist of a fogging system that is designed to apply a fog of fine, or atomized, water particles around an emission point targeting the particle rather the surface of the material. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

17. Equipment required to be controlled by Partial Enclosures shall be enclosed as described in this condition. Each screen that is required to be partially enclosed shall be fully enclosed on all sides except at the discharge opening, and each screen shall be equipped with a dust curtain composed of rubber skirt boards which create a seal between the discharge chute and the conveyor belt. Each crusher that is required to be partially enclosed shall consist of a crusher box with sufficient volume to allow the settling of the dust with assistance from Fogging System before it exits through the opening to the conveyor, and the crusher box and conveyor shall have skirt board rubber seals. Each conveyor drop point that is required to be partially enclosed shall be enclosed by a 3-sided chute. [District Rule 2201]
18. Moisture content of material being processed shall be measured when requested by the District and at least once a month for any month this permit unit is in operation. [District Rule 2201]
19. The percent moisture shall be determined by a California Department of Transportation approved moisture content test method or by weighing an approximately 2-lb sample of material being processed from any point of the operation, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the initial weigh of the sample, all multiplied by 100% is the moisture content (% moisture = ((initial weight - dry weight)/initial weight) x 100%). [District Rule 2201]
20. Visible emissions from the following sources shall not exceed any of the following opacities: feeders, screens, conveyors - 5% opacity; crushers - 5% opacity; stockpiles - 5% opacity. Compliance with the opacity standards shall be determined in accordance with Title 40, Code of Federal Regulations, Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). [District Rule 4001 and 40 CFR §60.672(b)]
21. An initial performance test at the new location according 40 CFR 60.11 and 40 CFR 60.675 to demonstrate compliance with the opacity limits shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after initial startup as required under 40 CFR 60.11. [40 CFR §60.670(f) & §60.11 and District Rule 4001]
22. The District shall be notified at least 30 days prior to each performance test to demonstrate compliance with opacity limits. [District Rule 4001]
23. The results of each performance test to demonstrate compliance with opacity limits shall be submitted to the District within 60 days following completion of the test. [District Rule 4001]
24. The permittee shall perform an initial startup inspection and monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. [40 CFR §60.674(b) and District Rule 4001]
25. Upstream wet suppression spray nozzles required for controlling opacity of visible emissions pursuant to 40 CFR 60, Subpart OOO shall be identified at the time of the initial performance test. [District Rule 4001]
26. Demonstration of the visible emissions opacity limits shall be determined using EPA Method 9 and the procedures listed in §60.11, with the additional requirements specified in §60.675(c)(1)(i) through §60.675(c)(1)(iii). The duration of the Method 9 observations must be based on the average of the five 6-minute averages. [40 CFR §60.675(c)(1) and (c)(3) and 40 CFR §60.11, and District Rule 4001]
27. The permittee shall maintain a logbook that contains the following information: 1) dates of water spray nozzles inspections, 2) finding, 3) dates and any corrective actions taken, and 4) inspector name and signature. The logbook must be kept onsite and the permittee shall make hard or electronic copies (whichever is requested) of the logbook available to the Administrator or the District inspection upon request. [40 CFR §60.676(b) and District Rule 4001]
28. The permittee shall submit written reports of initial demonstration of visible emission opacity compliance made using the methods and procedures listed in 40 CFR §60.675(c)(1) and §60.675(c)(3) to the District within 60 days after the completion of initial opacity tests. [40 CFR §60.676(f), District Rules 1070 & 4001]
29. Records of daily and annual amounts of material (in ton) processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rules 1070 and 2201]
30. Records of monthly moisture content of material processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rules 1070 and 2201]

31. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
32. {3446} All outdoor chutes and conveyors shall be controlled by any of the following options: 1) full enclosure, 2) operation with water spray equipment that sufficiently wets materials to limit VDE to 20% opacity, or 3) the concentration of particles having an aerodynamic diameter of 10 microns or less in the conveyed material shall be sufficiently small to limit VDE to 20% opacity. [District Rules 8011 and 8031]
33. {3450} Whenever any portion of the site becomes inactive, permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]
34. {3451} Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-9380-3-0

LEGAL OWNER OR OPERATOR: GRANITE CONSTRUCTION CO

MAILING ADDRESS: P O BOX 5127
BAKERSFIELD, CA 93388-5127

LOCATION: 12 MI S OF ARVIN (SEC 17, 20, 21, 29 T11N, R18W)
ARVIN, CA

EQUIPMENT DESCRIPTION:

RECYCLED ASPHALT PAVEMENT (RAP) CRUSHING PLANT CONSISTING OF FEEDER, EL-JAY CONE CRUSHER, 6 CONVEYORS, 6' X 20' EL-JAY SCREEN AND TWO STACKERS

CONDITIONS

1. Permit to Operate S-1612-6 shall be cancelled and the equipment it authorizes shall be taken out of service prior to or upon implementation of this Authority to Construct. [District Rule 2201]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. Visible emissions from the following sources shall not exceed any of the following opacities: RAP screen - 5% opacity; feeders, screens (except RAP screen), conveyors - 7% opacity; crushers - 12% opacity; stockpiles - 5% opacity. Compliance with the opacity standards shall be determined in accordance with Title 40, Code of Federal Regulations, Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). [District Rules 2201 and 4001 and 40 CFR §60.672(b)]
5. An initial performance test at the new location according 40 CFR 60.11 and 40 CFR 60.675 to demonstrate compliance with the opacity limits shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after initial startup as required under 40 CFR 60.11. [40 CFR §60.670(f) & §60.11 and District Rule 4001]
6. The District shall be notified at least 30 days prior to each performance test to demonstrate compliance with opacity limits. [District Rule 4001]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

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7. The results of each performance test to demonstrate compliance with opacity limits shall be submitted to the District within 60 days following completion of the test. [District Rule 4001]
8. The permittee shall perform an initial startup inspection and monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. [40 CFR §60.674(b) and District Rule 4001]
9. Upstream wet suppression spray nozzles required for controlling opacity of visible emissions pursuant to 40 CFR 60, Subpart OOO shall be identified at the time of the initial performance test. [District Rule 4001]
10. Demonstration of the visible emissions opacity limits shall be determined using EPA Method 9 and the procedures listed in §60.11, with the additional requirements specified in §60.675(c)(1)(i) through §60.675(c)(1)(iii). The duration of the Method 9 observations must be based on the average of the five 6-minute averages. [40 CFR §60.675(c)(1) and (c)(3) and 40 CFR §60.11, and District Rule 4001]
11. The permittee shall maintain a logbook that contains the following information: 1) dates of water spray nozzles inspections, 2) finding, 3) dates and any corrective actions taken, and 4) inspector name and signature. The logbook must be kept onsite and the permittee shall make hard or electronic copies (whichever is requested) of the logbook available to the Administrator or the District inspection upon request. [40 CFR §60.676(b) and District Rule 4001]
12. The permittee shall submit written reports of initial demonstration of visible emission opacity compliance made using the methods and procedures listed in 40 CFR §60.675(c)(1) and §60.675(c)(3) to the District within 60 days after the completion of initial opacity tests. [40 CFR §60.676(f), District Rules 1070 & 4001]
13. The RAP Screen shall be controlled by additional controls consisting of a Wet Suppression, Fogging System, and Partial Enclosures. [District Rule 2201]
14. Equipment required to be controlled by Fogging Systems (also known as high pressure sprays, dry fog, and water atomizers) shall consist of a fogging system that is designed to apply a fog of fine, or atomized, water particles around an emission point targeting the particle rather the surface of the material. [District Rule 2201]
15. Equipment required to be controlled by Partial Enclosures shall be enclosed as described in this condition. Each screen that is required to be partially enclosed shall be fully enclosed on all sides except at the discharge opening, where each screen shall be equipped with a dust curtain composed of rubber skirt boards which create a seal between the discharge chute and the conveyor belt. Each crusher that is required to be partially enclosed shall consist of a crusher box with sufficient volume to allow the settling of the dust with assistance from Fogging System before it exits through the opening to the conveyor, and the crusher box and conveyor shall have skirt board rubber seals. Each conveyor drop point that is required to be partially enclosed shall be enclosed by a 3-sided chute. [District Rule 2201]
16. Spray nozzles shall be installed and operated by equipment listed on this permit as needed to maintain compliance with the opacity limits listed on this permit. [District Rule 2201]
17. The feeder's maximum throughput shall not exceed 4,800 tons in any one day nor 1,464,000 tons in any calendar year. [District Rule 2201]
18. The crusher's maximum throughput shall not exceed 2,400 tons in any one day nor 732,000 tons in any calendar year. [District Rule 2201]
19. PM10 emissions rates from each of the following sources shall not exceed any of the following: RAP screen - 0.00017 lb-PM10 per ton of material processed; Truck Unloading - 0.000016 lb-PM10 per ton of material processed; Conveyor Transfer - 0.00046 lb-PM10 per ton of material processed; Crushers - 0.000054 lb-PM10 per ton of material processed . [District Rule 2201]
20. Records of daily and annual sand, aggregate and RAP throughput shall be maintained. [District Rules 1070 and 2201]
21. {3246} All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

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CONDITIONS CONTINUE ON NEXT PAGE

22. {3451} Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-9380-4-0

LEGAL OWNER OR OPERATOR: GRANITE CONSTRUCTION CO

MAILING ADDRESS: P O BOX 5127
BAKERSFIELD, CA 93388-5127

LOCATION: 12 MI S OF ARVIN (SEC 17, 20, 21, 29 T11N, R18W)
ARVIN, CA

EQUIPMENT DESCRIPTION:

PORTABLE CRUMB RUBBER BLENDING OPERATION - CONSISTING OF MIXING UNIT EQUIPPED WITH PERMIT EXEMPT HEATER S-6904-PEER-1, TWO RUBBER HOPPERS, ONE ROTARY VANE FEEDER, ONE HIGH SHEAR MIXER, ONE INCLINE SCREW CONVEYOR, 1,500 GALLON MIXING TANK WITH CEI ELECTROSTATIC PRECIPITATOR, HEATER BLOWER, HOT OIL HEATER CIRCULATING PUMP, AND AIR COMPRESSOR; ONE 24,000 GALLON REACTION HOLDING TANK, ONE 22,500 GALLON SPLIT OIL TANK, ONE 2,000 GALLON EXTENDER OIL TANK, ONE AUGER MIXING MOTOR AND ONE AGITATOR MIXING MOTOR; ONE EXTENDER OIL PUMP, SERVED BY CEI 32-TUBE BLUE SMOKE CONDENSER UNIT

CONDITIONS

1. Permit to Operate S-1612-9 shall be cancelled and the equipment it authorizes shall be taken out of service prior to or upon implementation of this Authority to Construct. [District Rule 2201]
2. ATC S-1612-9-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
3. The equipment and operations authorized by this ATC shall be taken out of service at the Highway 223 site prior to commencing operation at the Solari location. [District Rule 2201]
4. Units S-9380-4 and '-5 shall not operate simultaneously at facility S-9380. [District Rule 2201]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
7. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

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8. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
9. This unit shall not operate outside the boundaries of Facility S-1612. [District Rule 4102]
10. The extender oil tank's throughput shall not exceed either of the following limits: 2,000 gallon per day or 168,000 gallon per year. [District Rule 2201]
11. The mixing and reaction tanks throughput shall not exceed either of the following limits: 65,000 gallon per day or 5,460,000 gallon per year. [District Rule 2201]
12. VOC emission rate from the mixing tank shall not exceed 0.3 lb/day. [District Rule 2201]
13. VOC emission rate from the reaction tank shall not exceed 0.2 lb/day. [District Rule 2201]
14. This portable crumb rubber plant shall be operated at one location for no more than 6 consecutive months and shall meet all the requirements for a temporary tank, per Rule 4623. [District Rules 2201 and 4623, 4.2.2]
15. The permittee shall maintain records of each location where the portable crumb rubber blending operation operates, including dates and duration of residency at each location, and shall update those records each time the crumb rubber blending operation is moved. [District Rules 2201 and 4623]
16. Permittee shall maintain records on a daily basis of extender oil tank throughput (in gallons), daily reaction tank throughput (in gallons), temporary tank capacity and duration of time that the temporary tank is used. [District Rules 1070, 2201 and 4623]
17. Tanks shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
18. Permittee shall maintain documentation of the true vapor pressure (TVP) of the organic liquids stored in the tanks and shall obtain new documentation whenever there is a change in the source or type of liquid stored in the tank in order to maintain exemption from the rule. [District Rule 4623]
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4307 and 4623]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-9380-5-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: GRANITE CONSTRUCTION CO

MAILING ADDRESS: P O BOX 5127
BAKERSFIELD, CA 93388-5127

LOCATION: 12 MI S OF ARVIN (SEC 17, 20, 21, 29 T11N, R18W)
ARVIN, CA

EQUIPMENT DESCRIPTION:

PORTABLE CRUMB RUBBER BLENDING OPERATION - PLANT #3 CONSISTING OF MIXING UNIT EQUIPPED WITH 5.2 MMBTU/HR POWERFLAME MODEL NOVA PLUS 2 NATURAL GAS/LPG-FIRED PROCESS HEATER, ONE (1) RECEIVING HOPPER, ONE (1) ROTARY VANE FEEDER, ONE (1) HIGH SHEAR MIXER, ONE (1) INCLINE SCREW CONVEYOR, 500 GALLON MIXING TANK WITH TRANSFER PUMP, HEATER BLOWER, HOT OIL HEATER CIRCULATING PUMP, AND AIR COMPRESSOR; TWO (2) 30,000 GALLON DUAL COMPARTMENT TANKS (THREE (3) 15,000 GALLON REACTION COMPARTMENTS AND ONE (1) 15,000 GALLON EXTENDER OIL COMPARTMENT) WITH ONE (1) AUGER MIXING MOTOR AND ONE (1) AGITATOR MIXING MOTOR; EXTENDER OIL PUMP AND PLANT SUPPLY PUMP SERVED BY 30 TUBE BLUE SMOKE CONDENSER UNIT MODEL CTAV300E8; VIRGIN OIL DELIVERY PUMP

CONDITIONS

1. Permit to Operate S-1612-10 shall be cancelled and the equipment it authorizes shall be taken out of service prior to or upon implementation of this Authority to Construct. [District Rule 2201]
2. Units S-9380-4 and -5 shall not operate simultaneously at facility S-9380. [District Rule 2201]
3. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
4. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
5. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
6. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
7. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Arnaud Marjolle, Director of Permit Services

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8. {4565} Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
9. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
10. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
11. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
12. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
13. This unit is only authorized within the boundaries of facility S-9380. [District Rule 4102]
14. The heater shall be equipped with a non-resettable fuel flow meter/recorder. [District Rule 2201]
15. The unit shall only be fired on PUC-quality natural gas or LPG/propane. [District Rule 2201]
16. The annual heat input shall not exceed 10,483 MMBtu/year. [District Rule 2201]
17. When fired on natural gas, emission rates shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 42 ppmvd CO @ 3% O2 or 0.0303 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
18. When fired on LPG, emission rates shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.016 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0370 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
19. The extender oil tank's throughput shall not exceed either of the following limits: 2,000 gallon per day or 168,000 gallon per year. [District Rule 2201]
20. The mixing and reaction tanks throughput shall not exceed either of the following limits: 65,000 gallon per day or 5,460,000 gallon per year. [District Rule 2201]
21. VOC emission rate from the mixing tank shall not exceed 0.3 lb/day nor 25.2 lb/yr. [District Rule 2201]
22. VOC emission rate from the reaction tank shall not exceed 0.2 lb/day nor 16.8 lb/yr. [District Rule 2201]
23. {4356} Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]
24. {4357} Fuel gas sulfur content shall not exceed 5 gr S/100 scf. [District Rules 2201 and 4320]
25. {4315} The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
26. {4316} If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]

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CONDITIONS CONTINUE ON NEXT PAGE

27. {4317} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]
28. {4318} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]
29. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
30. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted upon startup at new location and at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
32. {4346} NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
33. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
34. {4348} Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
35. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
36. {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
37. {4351} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
38. {4352} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
39. This portable crumb rubber plant shall be operated at one location for no more than 6 consecutive months and shall meet all the requirements for a temporary tank, per Rule 4623. [District Rules 2201 and 4623, 4.2.2]
40. The permittee shall maintain records of each location where the portable crumb rubber blending operation operates, including dates and duration of residency at each location, and shall update those records each time the crumb rubber blending operation is moved. [District Rules 2201 and 4623]
41. The permittee shall maintain on an annual basis the heat input (in MMBtu) and quantity of natural gas combusted (in cubic feet) and LPG/propane (in gallons) for the process heater at each site it operates. [District Rules 2201 and 4320]
42. Records of daily and annual backup fuel consumption consisting of the date the process heater operated on LPG/propane as backup fuel and the amount of time the process heater was operated, in hours, on LPG/propane as backup fuel shall be maintained. [District Rules 2201, 4306 and 4320]

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CONDITIONS CONTINUE ON NEXT PAGE

43. Permittee shall maintain records on a daily basis of extender oil tank throughput (in gallons), daily reaction tank throughput (in gallons), temporary tank capacity and duration of time that the temporary tank is used. [District Rules 1070, 2201 and 4623]
44. Tanks shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
45. Permittee shall maintain documentation of the true vapor pressure (TVP) of the organic liquids stored in the tanks and shall obtain new documentation whenever there is a change in the source or type of liquid stored in the tank tank in order to maintain exemption from the rule. [District Rule 4623]
46. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320 and 4623]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-9380-6-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: GRANITE CONSTRUCTION CO

MAILING ADDRESS: P O BOX 5127
BAKERSFIELD, CA 93388-5127

LOCATION: 12 MI S OF ARVIN (SEC 17, 20, 21, 29 T11N, R18W)
ARVIN, CA

EQUIPMENT DESCRIPTION:

SAND AND AGGREGATE STORAGE AND TRUCK LOADING OPERATION

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The total amount of materials loaded out shall not exceed 20,000 tons in any one day nor 2,500,000 tons in any calendar year. [District Rule 2201]
3. Emissions from truck loading operation shall not exceed 0.000016 lb-PM10/ton of material handled. [District Rule 2201]
4. Visible emissions from truck unloading operation shall be less than 5% opacity for a period or periods aggregating more than 3 minutes in any one hour. [District Rule 2201]
5. The total area of sand and aggregate storage piles, excluding emission-exempt stockpiles described below, shall not exceed 1.5 acres. [District Rule 2201]
6. Stockpiles for 3/8" and larger concrete or mineral aggregates shall be clearly designated and used only for the storage of aggregate that has been thoroughly washed as necessary to remove silt. Washing shall be sufficient to reduce silt content to 1% by mass or less. Such stockpiles shall be considered "emission exempt". [District Rule 2201]
7. Emissions from the storage of sand and aggregate shall not exceed 0.527 lb-PM10/acre/day. [District Rule 2201]
8. Moisture content of the stockpiled material, after application of wet suppression control, shall be 3.0% by weight or greater. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

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9. All stockpiled materials shall be maintained adequately moist to prevent visible emissions in excess of 5% opacity for a period or periods aggregating more than 3 minutes in any one hour . [District Rule 2201]
10. Moisture content of stockpiled material shall be measured on a monthly basis and when requested by the District. [District Rule 2201]
11. The percent moisture shall be determined by a California Department of Transportation approved moisture content test method or by weighing an approximately 2-lb sample of material being processed from any point of the operation, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the initial weigh of the sample, all multiplied by 100% is the moisture content (% moisture = ((initial weight - dry weight)/initial weight) x 100%). [District Rule 2201]
12. Permittee shall maintain records of daily and annual total amount of material loaded out, and monthly records of area of materials stockpiled. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
13. {3443} When handling bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, wind barriers with less than 50% porosity shall also be used. [District Rules 8011 and 8031]
14. {3444} When storing bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, all bulk material piles shall also be either maintained with a stabilized surface as defined in Section 3.58 of District Rule 8011, or shall be protected with suitable covers or barriers as prescribed in Table 8031-1, Section B, of District Rule 8031. [District Rules 8011 and 8031]
15. {3445} When transporting bulk materials outside an enclosed structure or building, all bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
16. {3446} All outdoor chutes and conveyors shall be controlled by any of the following options: 1) full enclosure, 2) operation with water spray equipment that sufficiently wets materials to limit VDE to 20% opacity, or 3) the concentration of particles having an aerodynamic diameter of 10 microns or less in the conveyed material shall be sufficiently small to limit VDE to 20% opacity. [District Rules 8011 and 8031]
17. {3447} An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8041]
18. {3448} Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]
19. {3449} On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]
20. {3450} Whenever any portion of the site becomes inactive, permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

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CONDITIONS CONTINUE ON NEXT PAGE

21. {3451} Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

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APPENDIX B

Current Permits to Operate

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1612-1-19

EXPIRATION DATE: 06/30/2021

SECTION: 29 **TOWNSHIP:** 31S **RANGE:** 30E

EQUIPMENT DESCRIPTION:

HOT MIX ASPHALT DRUM MIX PLANT WITH A GENCOR MODEL 500 COUNTERFLOW ULTRADRUM WITH GENCO ULTRAFLAME MODEL II-135, 135 MMBTU/HR LPG-FIRED BURNER, WITH RECLAIMED ASPHALT PAVEMENT (RAP) CIRCUIT, GENCOR INDUSTRIES CYCLONE, AND MODEL CFS-210 BAGHOUSE, WITH BLUE SMOKE EMISSION CONTROL SYSTEM (CONSISTING OF FAN, DUSTEX MODEL 3630-1114 BAGHOUSE, INJECTION SEEDING SYSTEM, HOODS AND DUCTWORK) SERVING SILO TRUCK LOADOUT AREAS AND A MINERAL FILLER SYSTEM CONSISTING OF A MINERAL FILLER SILO, ENCLOSED SCREW CONVEYOR, DUST COLLECTOR, VANE FEEDER, AND RECEIVING GUPPY

PERMIT UNIT REQUIREMENTS

1. Operation shall include one four compartment and one five compartment aggregate storage bin with bottom feeders, up to 19 material handling conveyors, a RAP circuit consisting of two feeders, two bins, underbelt, 2-deck screen, and two conveyors, and a mineral filler system consisting of a silo, enclosed screw conveyor, C.P. environmental dust collector, vane feeder, and guppy. [District Rule 2201]
2. Annual PM10 emissions from portable crumb rubber plant listed under permit C-590-14-0, portable crumb rubber plant listed under permit C-590-15-0, hot mix asphalt drum mix plant listed under permit S-1612-1, aggregate crushing and screening operation listed under permit S-1612-3, lime marination plant listed under permit S-1612-5, and reclaimed asphalt (RAP) crushing plant listed on S-1612-6 shall not exceed 95,590 lb-PM10/year. [District Rule 2201]
3. Visible emissions from baghouse serving cyclone and drum dryer/mixer, and all other sources shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
4. The silo truck loadout area shall be served by a blue smoke emission control system such that visible emissions from this area shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
5. Visible emissions from dust collector serving the mineral filler system and all other sources shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
6. Burner blue smoke ventilation system shall vent to secondary air intake of drum dryer/mixer. [District Rule 2201]
7. Covered hot asphaltic concrete conveyors, silos, and loadout chute shall be vented through 1300 cfm in-line fan to secondary air intake of Genco burner. [District Rule 2201]
8. Drum dryer/mixer shall vent only to cyclone. [District Rule 2201]
9. Exhaust from cyclone shall vent only to the baghouse. [District Rule 2201]
10. The baghouse and dust collector listed on this permit shall be equipped with an operational pressure differential gauge, mounted in an accessible location, which indicates the pressure drop across the bags. [District Rule 2201]
11. The differential pressure gauge reading range shall be established per manufacturer's recommendation at time of start up inspection. [District Rule 2201]
12. Differential operating pressure shall be monitored and recorded on each day that the baghouse operates. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Exhaust fan damper shall be set to maintain a negative pressure at the drum dryer/mixer seal(s). [District Rule 2201]
14. Drum dryer/mixer shall be equipped with product temperature indicator. [District Rule 2201]
15. Drum dryer/mixer product shall not exceed 350 degrees F. [District Rule 2201]
16. The RAP circuit shall not process more than 1,350 tons of recycled asphalt pavement per day. [District Rule 2201]
17. The hot mix batch plant shall not process more than 5,110 tons of aggregate and recycled asphalt pavement per day. [District Rule 2201]
18. The aggregate storage bins shall receive a combined maximum of 5,110 tons of aggregate, RAP, and mineral filler per day. The 5 compartment bin shall receive a maximum of 4,000 tons per day, the 4 compartment bin shall receive a maximum of 5,110 tons per day, and the mineral filler silo shall receive a maximum of 81 tons per day. [District Rule 2201]
19. The hot mix batch plant shall not process more than 5,391 tons of asphaltic concrete, recycled asphalt pavement, and mineral filler per day. [District Rule 2201]
20. Exhaust stack shall be equipped with adequate provisions for the collection of exhaust gas samples consistent with EPA test methods. [District Rule 1081]
21. Burner shall be equipped with fuel flow meter/recorder and burner shall not consume more than 11,814.9 gallons per day or 1,075.7 MMBtu/day of either LPG or propane. [District Rule 2201]
22. Particulate matter concentration in exhaust gas from the baghouse shall not exceed 0.04 grains/dscf. [District Rule 4001]
23. Particulate matter concentration in exhaust gas from the baghouse serving cyclone and drum dryer/mixer shall not exceed 8.2 lb PM10/1,000 tons of asphaltic concrete produced. [District Rule 2201]
24. Particulate matter emission rate from the silo filling and load out shall not exceed 0.78 lb PM10/1,000 tons of asphaltic concrete produced. [District Rule 2201]
25. Particulate emission rate from the aggregate handling operation shall not exceed 0.59 lb PM10/1,000 tons of aggregate. [District Rule 2201]
26. Particulate emission rate from the RAP circuit shall not exceed 0.00163 lb-PM10 per ton of reclaimed asphalt pavement processed. [District Rule 2201]
27. Particulate matter emission rate from the mineral filler system shall not exceed 0.78 lb PM10/1,000 ton. [District Rule 2201]
28. The dryer burner shall only be fired on LPG/propane as fuel. [District Rules 2201 and 4309]
29. Emissions rates from the drum dryer/mixer shall not exceed any of the following limits: 4.3 ppmv NOx @ 19% O2 (equivalent to 0.0484 lb-NOx/MMBtu), 0.00285 lb-SOx/MMBtu, 42 ppmvd CO @ 19% O2 (equivalent to 0.288 lb-CO/MMBtu), or 0.006 lb-VOC/MMBtu. If measured O2 concentration is greater than 19%, the corrected NOx and CO concentration is equal to the measured NOx or CO concentration. [District Rules 2201 and 4309]
30. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every 24 months. [District Rule 2201 and 4309]
31. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
32. Source testing to measure NOx and CO emissions from the asphalt/concrete plant shall be conducted utilizing one of the following options: (a) Test the unit using locally mined aggregate in the dryer. If the source test using locally mined aggregate fails, the operator may re-run the source test using aggregate from a different source. (b) Test the unit using aggregate from a source different from the source used during normal operations. (c) Test the unit using a heat-absorbing material in the dryer, but no aggregate. (d) Test the unit with no material in the dryer. [District Rule 4309]
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rule 4309]
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4309]
36. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
37. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
38. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]
39. All test results for NOx and CO shall be reported in ppmv @ 19% O2 (or no correction if measured above 19% O2), corrected to dry stack conditions. [District Rule 4309]
40. If the unit is fired on back-up fuel for a period exceeding 48 cumulative hours in a calendar year, the permittee shall monitor and record the stack concentration of NOx at least once during that year using an APCO approved portable NOx analyzer. Monitoring for back-up fuel NOx emissions shall not be required when the unit is operating on primary fuel, i.e. the unit need not be fired on back-up fuel solely to perform monitoring. [District Rule 4309]
41. Back-up fuel NOx emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309]
42. The permittee shall maintain records of: (1) the date and time of back-up fuel NOx measurements, (2) the measured back-up fuel NOx concentration (in ppmv or lb/MMBtu) corrected to 19% O2 (or no correction if measured above 19% O2), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
43. The asphalt batch plant permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month in which asphalt is produced on at least five days or for at least 32 hours, whichever comes first (and in which a source test is not performed), using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 production days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
44. If either the NOx or CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309]
46. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
47. The baghouse and dust collectors associated with this permit shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]
48. The baghouse and dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]
49. Material removed from the bag house and dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]
50. A spare set of bags for each baghouse and dust collector associated with this permit shall be maintained on the premises at all times. [District Rule 2201]
51. Replacement bags numbering at least 10% of the total number of bags in the baghouse shall be maintained on the premises [District Rule 2201]
52. Records of all maintenance of the baghouse, including all change outs of filter media, shall be maintained [District Rule 2201]
53. Daily records of drum dryer/mix product temperature, quantity of aggregate and asphaltic concrete processed, quantity of reclaimed asphalt product processed, quantity of mineral filler processed, and quantity of propane/LPG consumed shall be maintained. [District Rule 2201]
54. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limit. [District Rule 2201]
55. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4309]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1612-3-16

EXPIRATION DATE: 06/30/2021

SECTION: 29 **TOWNSHIP:** 31S **RANGE:** 30E

EQUIPMENT DESCRIPTION:

1,340 HP AGGREGATE CRUSHING AND SCREENING OPERATION INCLUDING VIBRATING JAW FEEDER, TELSMITH JAW CRUSHER WITH WATER SPRAYS, TWO ELJAY 54" CONE CRUSHERS WITH WATER SPRAYS, NORDBERG SYMON 4-1/4 FT CONE CRUSHER WITH WATER SPRAYS, THREE SYNTRON FEEDERS, UP TO THREE FEEDER BINS, UP TO FORTY TWO CONVEYORS, HYDRAULIC HAMMER WITH BOOM, DEISTER 6' X 20'-3 DECK SCREEN, HEWIT ROBINS 6' X 20'-2 DECK SCREEN, JCI 7' X 20'-3 DECK SCREEN, TELSMITH 8' X 20'-3 DECK SCREEN, VARI-VIBE 6' X 12'-1 DECK SHAKER SCREEN AND PERMIT EXEMPT WET PROCESSING OPERATION INCLUDING ONE 6' X 12'-2 DECK SCREEN, ONE TWIN 36" SAND SCREW AND THREE STACKER CONVEYORS

PERMIT UNIT REQUIREMENTS

1. Annual PM10 emissions from portable crumb rubber plant listed under permit C-590-14-0, portable crumb rubber plant listed under permit C-590-15-0, hot mix asphalt drum mix plant listed under permit S-1612-1, aggregate crushing and screening operation listed under permit S-1612-3, lime marination plant listed under permit S-1612-5, and reclaimed asphalt (RAP) crushing plant listed on S-1612-6 shall not exceed 95,590 lb-PM10/year. [District Rule 2201]
2. This unit shall only be used to crush rocks [District Rule 2201]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is darker than Ringelmann 1/4 or 5% opacity. [District Rule 2201, 4001 and 4101]
4. Dust emissions from crushing operations, screens, conveyors, transfer points and storage piles shall be minimized when needed with water sprays or water sprays containing wetting agents. The foam-based agent shall be used to control PM10 emissions from the jaw crusher. [District Rule 2201]
5. Crushers shall be shrouded at bases. [District Rule 2201]
6. Total process weight of aggregate shall not exceed 25,600 tons per day. [District Rule 2201]
7. Plant shall maintain a record of the process weight rate with a continuous chart recorder, and notify the District if this recorder is not operational at any time. [District Rule 2201]
8. Particulate matter emissions from crushing, screening, conveying, and storage piling shall not exceed 206.6 lb-PM10 per day. [District Rule 2201]
9. Moisture content of material being processed shall be at least 1.5% by weight. [District Rule 2201]
10. Moisture content of material being processed shall be measured when requested by the District and at least once a month for any month this permit unit is in operation. [District Rule 2201]
11. The percent moisture shall be determined by weighing an approximately 2-lb sample of material being processed from any point of the operation, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the initial weigh of the sample, all multiplied by 100% is the moisture content (% moisture = ((initial weight - dry weight)/initial weight) x 100%). [District Rule 2201]
12. Records of daily amount of material (in ton) processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rule 1070 and 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Records of monthly moisture content of material processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon. [District Rule 1070 and 2201]
14. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]
15. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
16. When transporting bulk materials outside an enclosed structure or building, all bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
17. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]
18. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]
19. Whenever any portion of the site becomes inactive, permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]
20. When storing bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, all bulk material piles shall also be either maintained with a stabilized surface as defined in Section 3.58 of District Rule 8011, or shall be protected with suitable covers or barriers as prescribed in Table 8031-1, Section B, of District Rule 8031. [District Rule 8001 and 8031]
21. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limit. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1612-5-2

EXPIRATION DATE: 06/30/2021

SECTION: 32 **TOWNSHIP:** 31S **RANGE:** 30E

EQUIPMENT DESCRIPTION:

LIME MARINATION PLANT, INCLUDING CONVEYORS, SILO WITH BIN VENT FILTER, GUPPY, PUGMILL, AND MIXER

PERMIT UNIT REQUIREMENTS

1. Annual PM10 emissions from portable crumb rubber plant listed under permit C-590-14-0, portable crumb rubber plant listed under permit C-590-15-0, hot mix asphalt drum mix plant listed under permit S-1612-1, aggregate crushing and screening operation listed under permit S-1612-3, lime marination plant listed under permit S-1612-5, and reclaimed asphalt (RAP) crushing plant listed on S-1612-6 shall not exceed 95,590 lb-PM10/year. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is darker than Ringelmann 1/4 or 5% opacity. [District Rules 2201, 4001, and 4101]
4. The moisture content of the material being processed shall be at least 1.5% by weight. [District Rule 2201]
5. Moisture content of material being processed shall be measured when requested by the District and at least once a month for any month this permit unit is in operation. [District Rule 2201]
6. The percent moisture shall be determined by weighing an approximately 2-lb sample of material being processed from any point of the operation, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the initial weigh of the sample, all multiplied by 100% is the moisture content ($\% \text{ moisture} = ((\text{initial weight} - \text{dry weight}) / \text{initial weight}) \times 100\%$). [District Rule 2201]
7. Particulate matter emissions from this operation shall not exceed 2.2 lb-PM10 per day. [District Rule 2201]
8. Total process weight of aggregate shall not exceed 6,000 ton/day or 1,062,000 ton/yr. [District Rule 2201]
9. Total process weight of dry lime shall not exceed 100 ton/day or 17,700 ton/yr. [District Rule 2201]
10. Plant shall maintain a record of the process weight rate with a continuous chart recorder, and notify the District if this recorder is not operational at any time. [District Rule 2201]
11. Records of daily amount of material (in ton) processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rule 2201]
12. Records of monthly moisture content of material processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rule 2201]
13. Records of all maintenance of the bin vent filter, including all change outs of filter media, shall be maintained. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]
15. When transporting bulk materials outside an enclosed structure or building, all bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
16. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rules 8011 and 8041]
17. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]
18. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]
19. Whenever any portion of the site becomes inactive, permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]
20. When storing bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, all bulk material piles shall also be either maintained with a stabilized surface as defined in Section 3.58 of District Rule 8011, or shall be protected with suitable covers or barriers as prescribed in Table 8031-1, Section B, of District Rule 8031. [District Rules 8011 and 8031]
21. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limit. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1612-6-1

EXPIRATION DATE: 06/30/2021

EQUIPMENT DESCRIPTION:

RECYCLED ASPHALT (RAP) CRUSHING PLANT CONSISTING OF FEEDER, EL-JAY CONE CRUSHER, SIX CONVEYORS, 6' X 20' EL-JAY SCREEN AND TWO STACKERS

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Annual PM10 emissions from portable crumb rubber plant listed under permit C-590-14-0, portable crumb rubber plant listed under permit C-590-15-0, hot mix asphalt drum mix plant listed under permit S-1612-1, aggregate crushing and screening operation listed under permit S-1612-3, lime marination plant listed under permit S-1612-5, and reclaimed asphalt (RAP) crushing plant listed on S-1612-6 shall not exceed 95,590 lb-PM10/year. [District Rule 2201]
4. Visible emissions from any grinding mills, screening operations, bucket elevators, transfer points on belt conveyors or from any other affected facility in this permit unit shall not exceed 7% opacity as measured per Code of Federal Regulation, Part 60, Chapter 1, Title 40, Subpart OOO. [District Rules 2201 and 4001]
5. Visible emissions from all crushers shall not exceed 12% opacity as measured per Code of Federal Regulation, Part 60, Chapter 1, Title 40, Subpart OOO. [District Rule 4001]
6. Spray nozzles shall be installed and operated by equipment listed on this permit as needed to maintain compliance with the opacity limits listed on this permit. [District Rule 2201]
7. The feeder's maximum throughput shall not exceed 3000 ton/day or 90,000 ton/yr. [District Rule 2201]
8. PM10 emissions from screens shall not exceed 0.00074 lb-PM10/ton. [District Rule 2201]
9. PM10 emissions from conveyors shall not exceed 0.000046 lb-PM10/ton. [District Rule 2201]
10. PM10 emissions from crushing shall not exceed 0.00054 lb-PM-10/ton. [District Rule 2201]
11. Upstream wet suppression spray nozzles used to control opacity shall be inspected monthly to confirm adequate water flow. If any spray nozzle is determined to not be operating properly, the owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical. [District Rule 4001]
12. An initial performance test to according 40 CFR 60.11 and 40 CFR 60.675 to demonstrate compliance with the opacity limits shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after initial startup as required under 40 CFR 60.11. [District Rule 4001]
13. The District shall be notified at least 30 days prior to each performance test to demonstrate compliance with opacity limits. [District Rule 4001]
14. The results of each performance test to demonstrate compliance with opacity limits shall be submitted to the District within 60 days following completion of the test. [District Rule 4001]
15. Upstream wet suppression spray nozzles required for controlling opacity of visible emissions pursuant to 40 CFR 60, Subpart OOO shall be identified at the time of the initial performance test. [District Rule 4001]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

16. The owner or operator shall maintain a logbook and therein record each inspection of the wet suppression spray nozzles used to control opacity, including the date of each inspection and any corrective actions taken. [District Rule 4001]
17. Records of daily and annual sand, aggregate and RAP throughput shall be maintained. [District Rules 1070 and 2201]
18. When handling bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, wind barriers with less than 50% porosity shall also be used. [District Rules 8011 and 8031]
19. When storing bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, all bulk material piles shall also be either maintained with a stabilized surface as defined in Section 3.58 of District Rule 8011, or shall be protected with suitable covers or barriers as prescribed in Table 8031-1, Section B, of District Rule 8031. [District Rules 8011 and 8031]
20. When transporting bulk materials outside an enclosed structure or building, all bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]
21. All outdoor chutes and conveyors shall be controlled by any of the following options: 1) full enclosure, 2) operation with water spray equipment that sufficiently wets materials to limit VDE to 20% opacity, or 3) the concentration of particles having an aerodynamic diameter of 10 microns or less in the conveyed material shall be sufficiently small to limit VDE to 20% opacity. [District Rules 8011 and 8031]
22. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8041]
23. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]
24. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]
25. Whenever any portion of the site becomes inactive, permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]
26. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]
27. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limit. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1612-8-0

EXPIRATION DATE: 06/30/2021

EQUIPMENT DESCRIPTION:

DRY LIME PLANT INCLUDING ONE 75 TON STORAGE SILO, PUGMILL, TWO CONVEYORS AND A LIME GUPPY BLOWER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Total process weight of dry lime shall not exceed either 44 ton/day or 3,200 ton/yr. [District Rule 2201]
3. Total process weight of aggregate shall not exceed either 5,110 ton/day or 1,062,000 ton/yr. [District Rule 2201]
4. PM10 emissions from the pug mill shall not exceed 0.00008 lb-PM10/ton. [District Rule 2201]
5. PM10 emissions from conveyors shall not exceed 0.00034 lb-PM10/ton. [District Rule 2201]
6. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is darker than Ringelmann 1/4 or 5% opacity. [District Rule 2201]
7. Records of daily amount of material (in ton) processed shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rule 2201]
8. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1612-9-2

EXPIRATION DATE: 06/30/2021

EQUIPMENT DESCRIPTION:

PORTABLE CRUMB RUBBER BLENDING OPERATION - CONSISTING OF MIXING UNIT EQUIPPED WITH 4.5 MMBTU/HR CEI MODEL HDI-600 LPG-FIRED PROCESS HEATER, TWO RUBBER HOPPERS, ONE ROTARY VANE FEEDER, ONE HIGH SHEAR MIXER, ONE INCLINE SCREW CONVEYOR, 1,500 GALLON MIXING TANK WITH CEI ELECTROSTATIC PRECIPITATOR, HEATER BLOWER, HOT OIL HEATER CIRCULATING PUMP, AND AIR COMPRESSOR; ONE 24,000 GALLON REACTION HOLDING TANK, ONE 22,500 GALLON SPLIT OIL TANK, ONE 2,000 GALLON EXTENDER OIL TANK, ONE AUGER MIXING MOTOR AND ONE AGITATOR MIXING MOTOR; ONE EXTENDER OIL PUMP, SERVED BY CEI 32-TUBE BLUE SMOKE CONDENSER UNIT - TO BE OPERATED AS A TEMPORARY REPLACEMENT EMISSIONS UNIT (TREU) FOR C-590-15 AT S-1612

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
7. This unit shall only be used to temporarily replace an existing unit that is shut down for maintenance or repair, and may only be used in this capacity if it meets the criteria set forth for a TREU in Rule 2201, Sections 3.41.1 through 3.41.3. [District Rule 2201]
8. This unit shall not be located at this stationary source for more than 180 days in any 12 month period. The time spent at a maintenance or storage facility is not considered time located at the stationary source. [District Rule 2201]
9. The operator shall maintain records of the specific equipment that this unit replaces, and of the dates and location of its operation. Operator shall maintain a record of each individual period of time and of the total time that this unit is located at this stationary source. [District Rule 2201]
10. Annual PM10 emissions from the portable crumb rubber plants listed under permit C-590-14-0, C-590-15 and S-1612-9, the hot mix asphalt drum mix plant listed under permit S-1612-1, the aggregate crushing and screening operation listed under permit S-1612-3 and the lime marination plant listed under permit S-1612-5 shall not exceed 99,095 lb-PM10/year. [District Rule 2201]
11. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
12. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
13. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
15. This portable crumb rubber blending plant shall not operate at the same site as portable crumb rubber blending plant #1 (C-590-14). [District Rule 2201]
16. This unit shall not operate outside the boundaries of Facility S-1612. [District Rule 4102]
17. This unit shall not operate within 457 meters (1,499 feet) of the nearest sensitive receptor (Day Care, hospital, Care facility, and outer boundary of any K-12 school). [District Rule 4102]
18. The heater shall be equipped with a non-resettable fuel flow meter/recorder. [District Rule 2201]
19. The unit shall only be fired on PUC-quality natural gas or LPG/propane. [District Rule 2201]
20. The annual heat input shall not exceed 5 billion Btu/year. [District Rule 4307]
21. Maximum daily burner heat input shall not exceed 68 MMBtu/day. [District Rule 2080]
22. Emission rates shall not exceed any of the following limits: 27 ppmvd NO_x @ 3% O₂ or .0329 lb-NO_x/MMBtu, 0.016 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4307]
23. The extender oil tank's throughput shall not exceed either of the following limits: 2,000 gallon per day or 168,000 gallon per year. [District Rule 2201]
24. The mixing and reaction tanks throughput shall not exceed either of the following limits: 65,000 gallon per day or 5,460,000 gallon per year. [District Rule 2201]
25. VOC emission rate from the mixing tank shall not exceed 0.3 lb/day. [District Rule 2201]
26. VOC emission rate from the reaction tank shall not exceed 0.2 lb/day. [District Rule 2201]
27. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rule 1081]
28. Fuel gas sulfur content shall not exceed 5 gr S/100 scf. [District Rule 2201]
29. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 2080]
30. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 2080]
31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 2080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 2080]
33. This portable crumb rubber plant shall be operated at one location for no more than 6 consecutive months and shall meet all the requirements for a temporary tank, per Rule 4623. [District Rules 2201 and 4623, 4.2.2]
34. Reaction tank shall only store, place, or hold asphalt-rubber mixture (an organic liquid) unless such tank is equipped with a VOC control system identified in Rule 4623, Table 1. [District Rules 2201 and 4623, 5.1, Table 1]
35. The reaction tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to blue smoke vapor condenser. [District Rules 2201 and 4623]
36. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
37. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]
38. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
39. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
40. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]
41. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limit. [District Rule 2201]
42. The permittee shall maintain records of each location where the portable crumb rubber blending operation operates, including dates and duration of residency at each location, and shall update those records each time the crumb rubber blending operation is moved. [District Rules 2201 and 4623]
43. The operator shall maintain daily and annual records of the burner heat input in MMBtu. [District Rules 2201 and 4307]
44. Permittee shall maintain daily records of extender oil tank throughput (in gallons), daily reaction tank throughput (in gallons), temporary tank capacity and duration of time that the temporary tank is used. [District Rules 1070, 2201 and 4623]
45. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4307 and 4623]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1612-10-0

EXPIRATION DATE: 06/30/2021

EQUIPMENT DESCRIPTION:

PORTABLE CRUMB RUBBER BLENDING OPERATION - PLANT #3 CONSISTING OF MIXING UNIT EQUIPPED WITH 5.2 MMBTU/HR POWERFLAME MODEL NOVA PLUS 2 NATURAL GAS/LPG-FIRED PROCESS HEATER, ONE (1) RECEIVING HOPPER, ONE (1) ROTARY VANE FEEDER, ONE (1) HIGH SHEAR MIXER, ONE (1) INCLINE SCREW CONVEYOR, 500 GALLON MIXING TANK WITH TRANSFER PUMP, HEATER BLOWER, HOT OIL HEATER CIRCULATING PUMP, AND AIR COMPRESSOR; TWO (2) 30,000 GALLON DUAL COMPARTMENT TANKS (THREE (3) 15,000 GALLON REACTION COMPARTMENTS AND ONE (1) 15,000 GALLON EXTENDER OIL COMPARTMENT) WITH ONE (1) AUGER MIXING MOTOR AND ONE (1) AGITATOR MIXING MOTOR; EXTENDER OIL PUMP AND PLANT SUPPLY PUMP SERVED BY 30 TUBE BLUE SMOKE CONDENSER UNIT MODEL CTAV300E8; VIRGIN OIL DELIVERY PUMP

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
7. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
8. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
10. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
11. Approved operational locations for this equipment: facility S-1612 near Arvin. [District Rule 2201]
12. This unit shall not operate outside the boundaries of facility S-1612. [District Rule 4102]
13. This unit shall not operate within 457 meters (1,499 feet) of the nearest sensitive receptor (Day Care, hospital, Care facility, and outer boundary of any K-12 school). [District Rule 4102]
14. The heater shall be equipped with a non-resettable fuel flow meter/recorder. [District Rule 2201]
15. The unit shall only be fired on PUC-quality natural gas or LPG/propane. [District Rule 2201]
16. The annual heat input shall not exceed 10,483 MMBtu/year. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. When fired on natural gas, emission rates shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 42 ppmvd CO @ 3% O₂ or 0.0303 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
18. When fired on LPG, emission rates shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.016 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.0370 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
19. The extender oil tank's throughput shall not exceed either of the following limits: 2,000 gallon per day or 168,000 gallon per year. [District Rule 2201]
20. The mixing and reaction tanks throughput shall not exceed either of the following limits: 65,000 gallon per day or 5,460,000 gallon per year. [District Rule 2201]
21. VOC emission rate from the mixing tank shall not exceed 0.3 lb/day. [District Rule 2201]
22. VOC emission rate from the reaction tank shall not exceed 0.2 lb/day. [District Rule 2201]
23. Annual PM₁₀ emissions from portable crumb rubber plant listed under permit S-1612-10, hot mix asphalt drum mix plant listed under permit S-1612-1, aggregate crushing and screening operation listed under permit S-1612-3, lime marination plant listed under permit S-1612-5, and reclaimed asphalt (RAP) crushing plant listed on S-1612-6 shall not exceed 95,590 lb-PM₁₀/year. [District Rule 2201]
24. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]
25. Fuel gas sulfur content shall not exceed 5 gr S/100 scf. [District Rules 2201 and 4320]
26. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
27. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]
29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
32. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
33. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
34. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
35. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
36. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
37. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
38. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
39. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
40. This portable crumb rubber plant shall be operated at one location for no more than 6 consecutive months and shall meet all the requirements for a temporary tank, per Rule 4623. [District Rules 2201 and 4623, 4.2.2]
41. Reaction tank shall only store, place, or hold asphalt-rubber mixture (an organic liquid) unless such tank is equipped with a VOC control system identified in Rule 4623, Table 1. [District Rules 2201 and 4623, 5.1, Table 1]
42. The reaction tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to blue smoke vapor condenser. [District Rules 2201 and 4623]
43. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
44. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623]
45. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
46. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
47. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

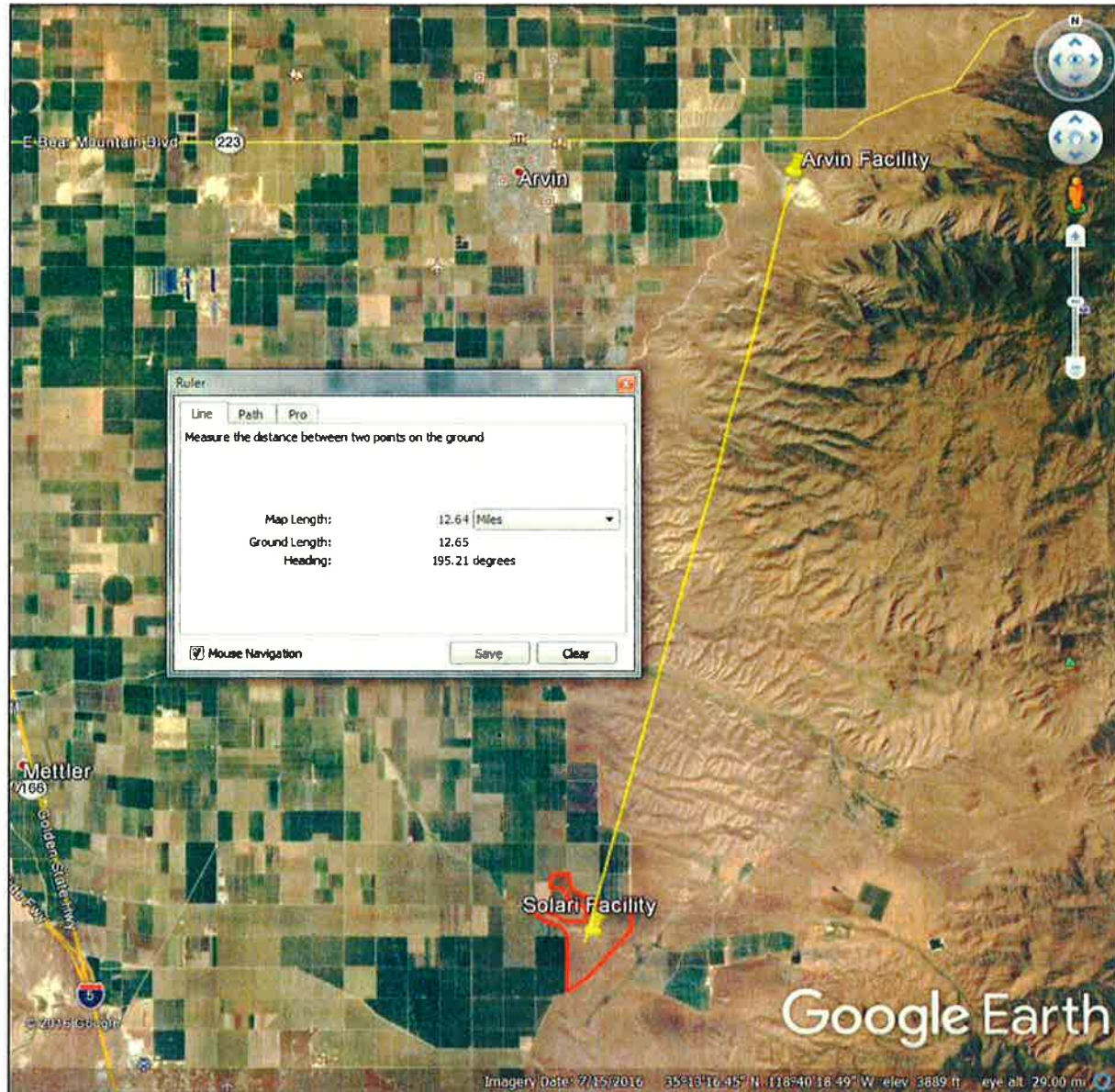
48. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limit. [District Rule 2201]
49. The permittee shall maintain records of each location where the portable crumb rubber blending operation operates, including dates and duration of residency at each location, and shall update those records each time the crumb rubber blending operation is moved. [District Rules 2201 and 4623]
50. The permittee shall maintain on an annual basis the heat input (in MMBtu) and quantity of natural gas combusted (in cubic feet) and LPG/propane (in gallons) for the process heater at each site it operates. [District Rules 2201 and 4320]
51. Records of daily and annual backup fuel consumption consisting of the date the process heater operated on LPG/propane as backup fuel and the amount of time the process heater was operated, in hours, on LPG/propane as backup fuel shall be maintained. [District Rules 2201, 4306 and 4320]
52. Permittee shall maintain records on a daily basis of extender oil tank throughput (in gallons), daily reaction tank throughput (in gallons), temporary tank capacity and duration of time that the temporary tank is used. [District Rules 1070, 2201 and 4623]
53. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320 and 4623]

These terms and conditions are part of the Facility-wide Permit to Operate.

APPENDIX C

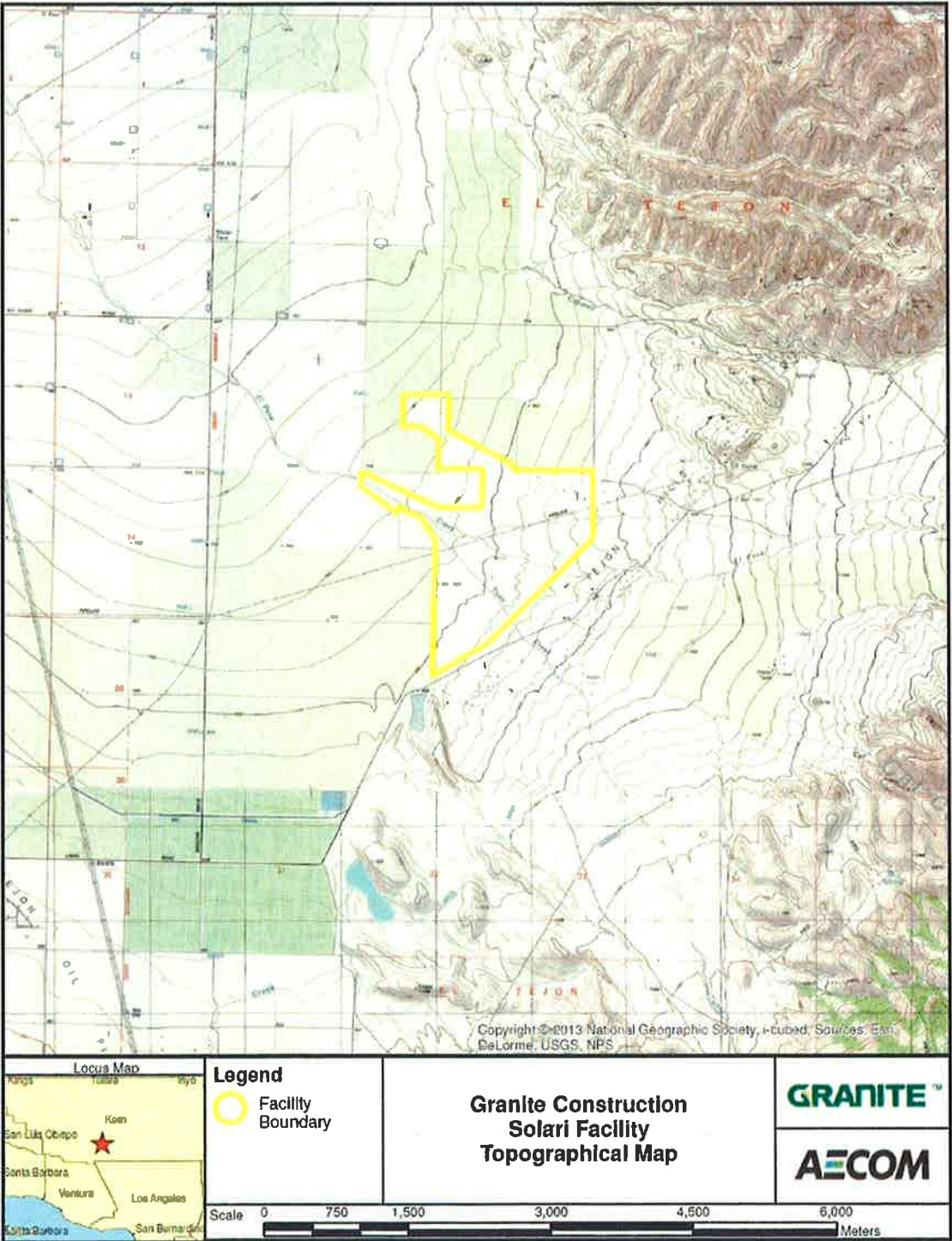
Location Map

Attachment C



[illegible]

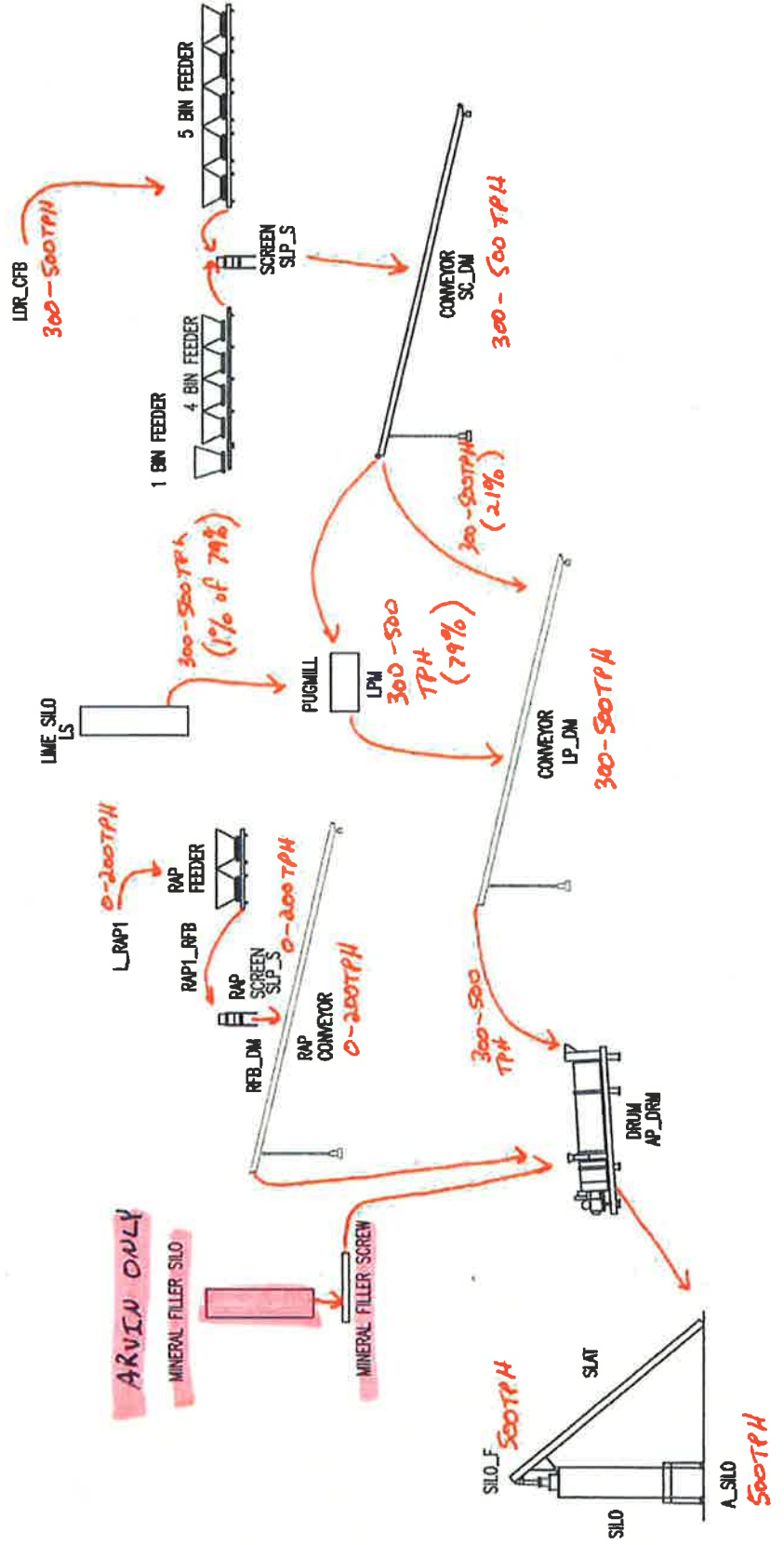
Figure 1-2: Topographical Map of the Future Solari Plant

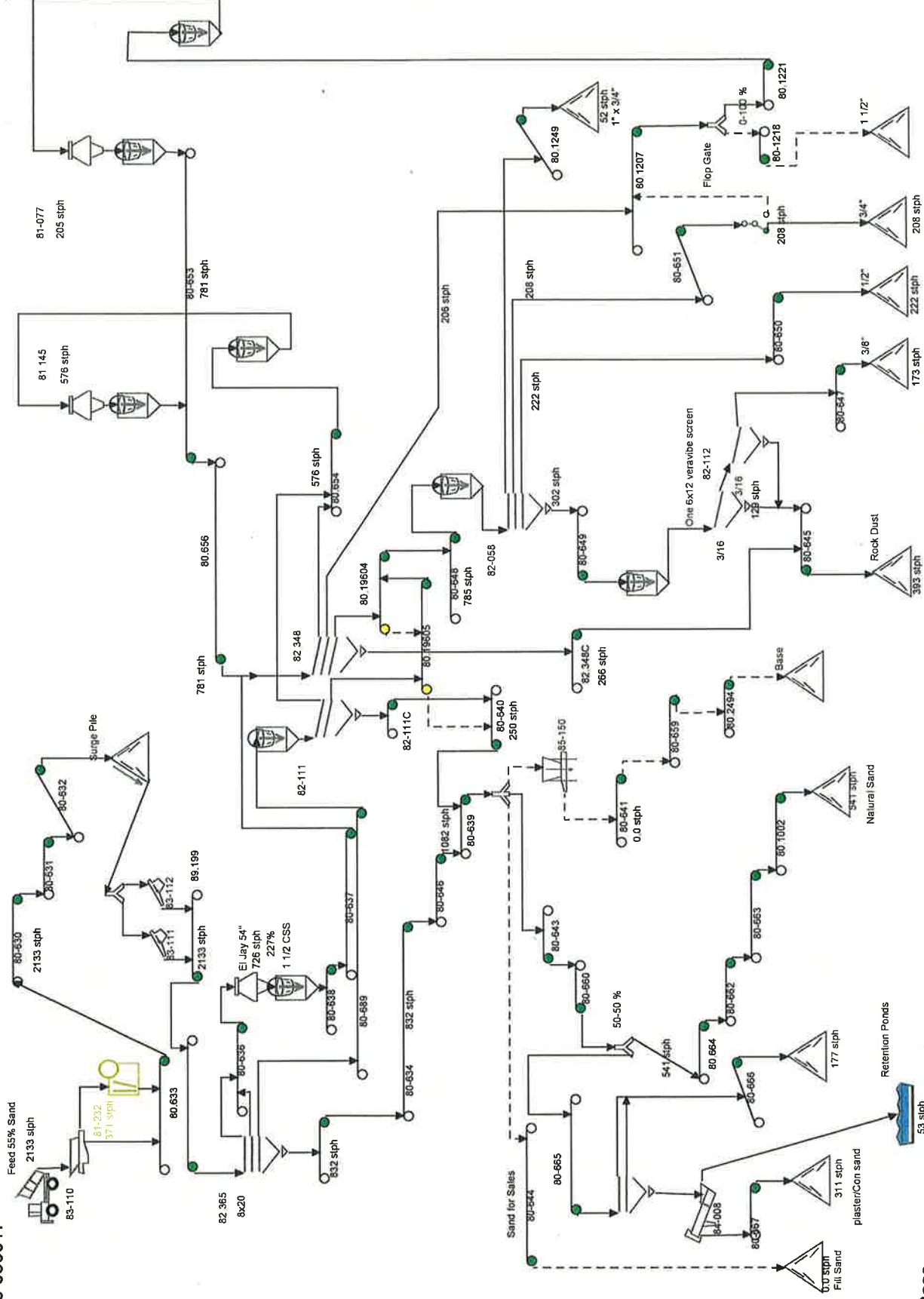


APPENDIX D

Process Flow Diagrams

ASPHALT PLANT FLOW DIAGRAM





Mode: *Base

Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.

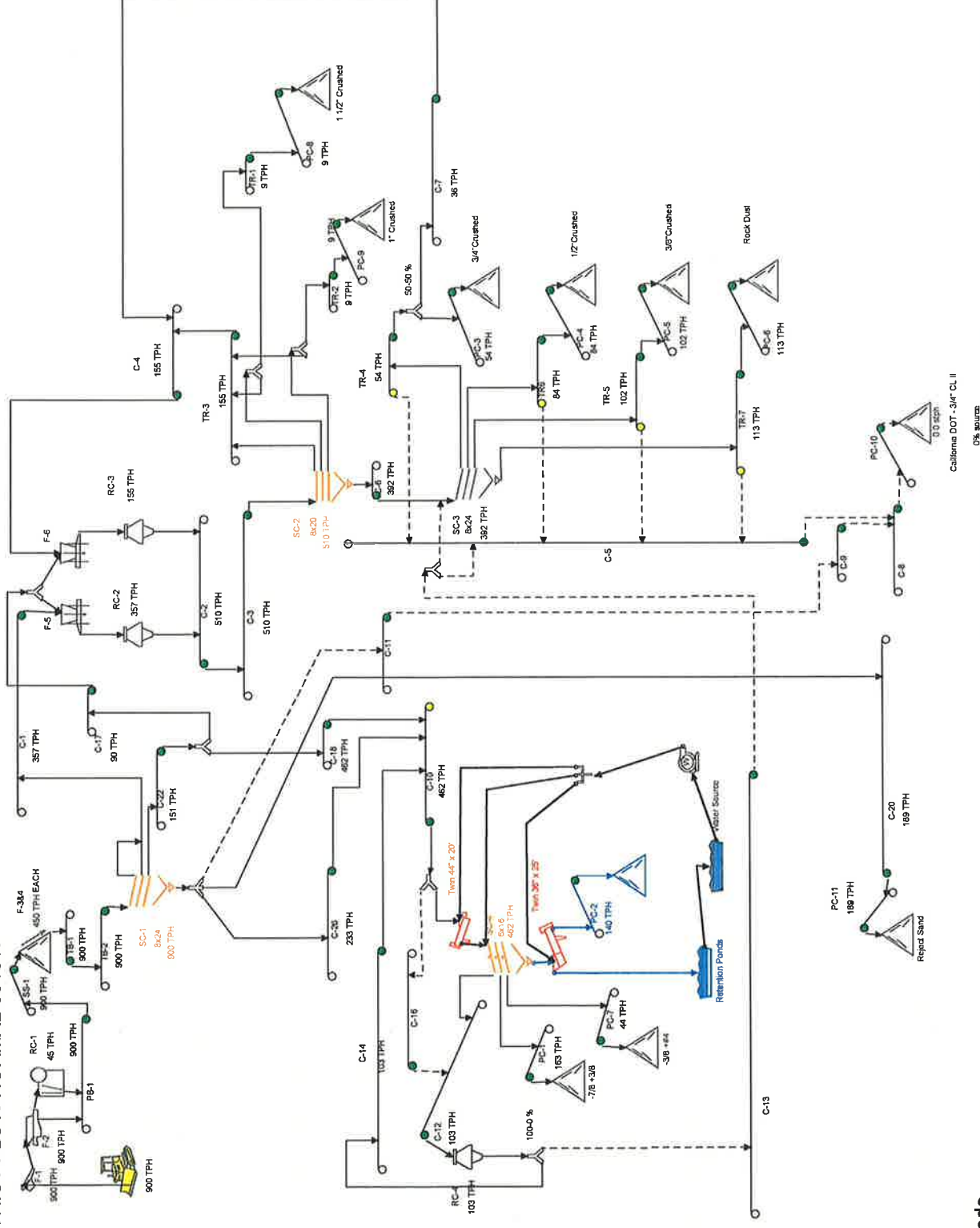
Granite Construction-Bakersfield Branch

arvin2015 061815.agz

Tim Findley

Arvin Aggregate

Project #: 42148 Revision #: 154976 Date: March/14/2017



Mode: Normal Mode

Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.

All calculations performed by AggFlow. <http://www.AggFlow.com>

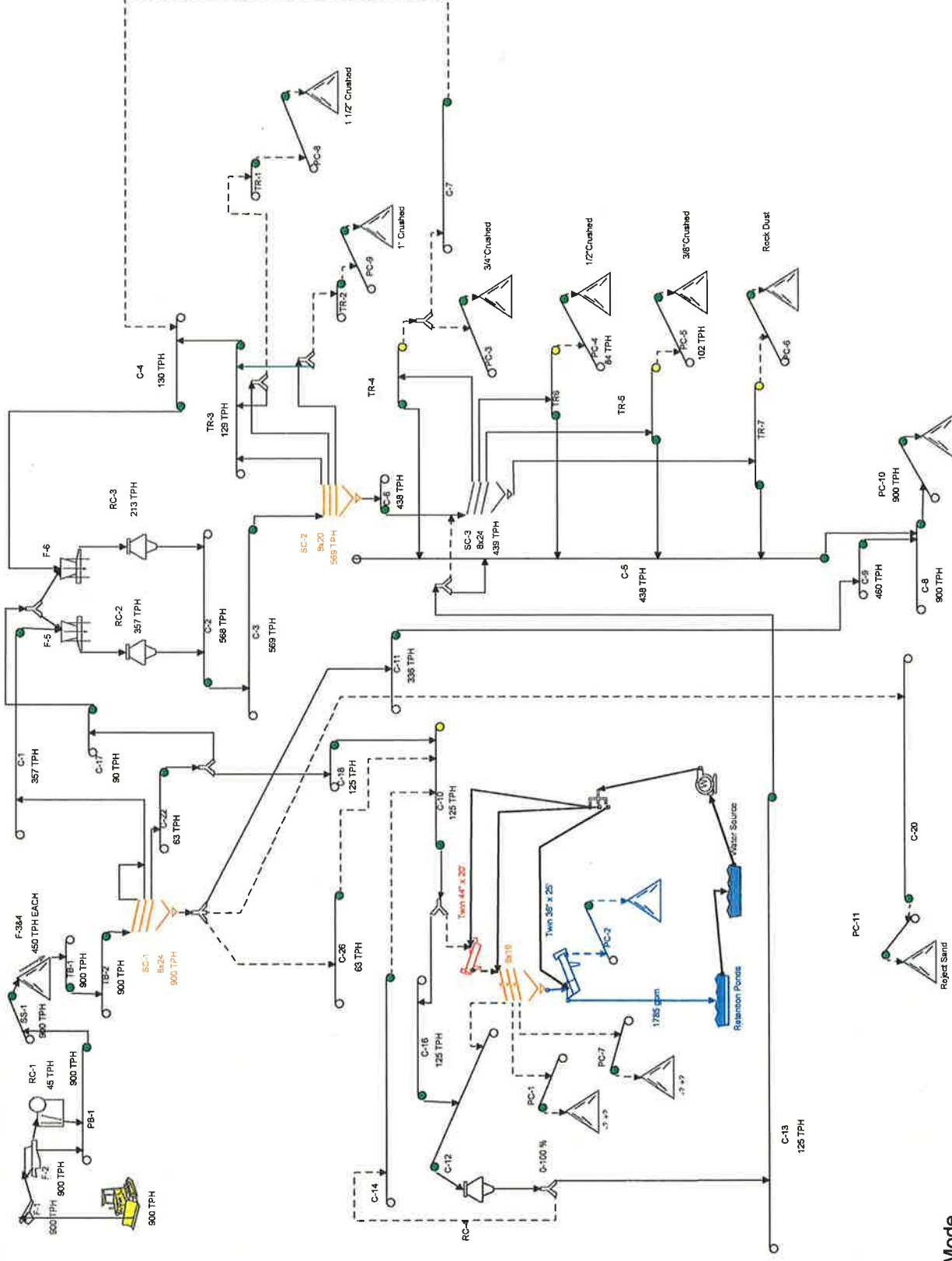
Solari

SOLARI AIR DISTRICT FLOW

Tim Findley

Page #1

Project #: 42155 Revision #: 155670 Date: March/13/2017



Mode: Base Mode

Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.

All calculations performed by AggFlow. <http://www.AggFlow.com>

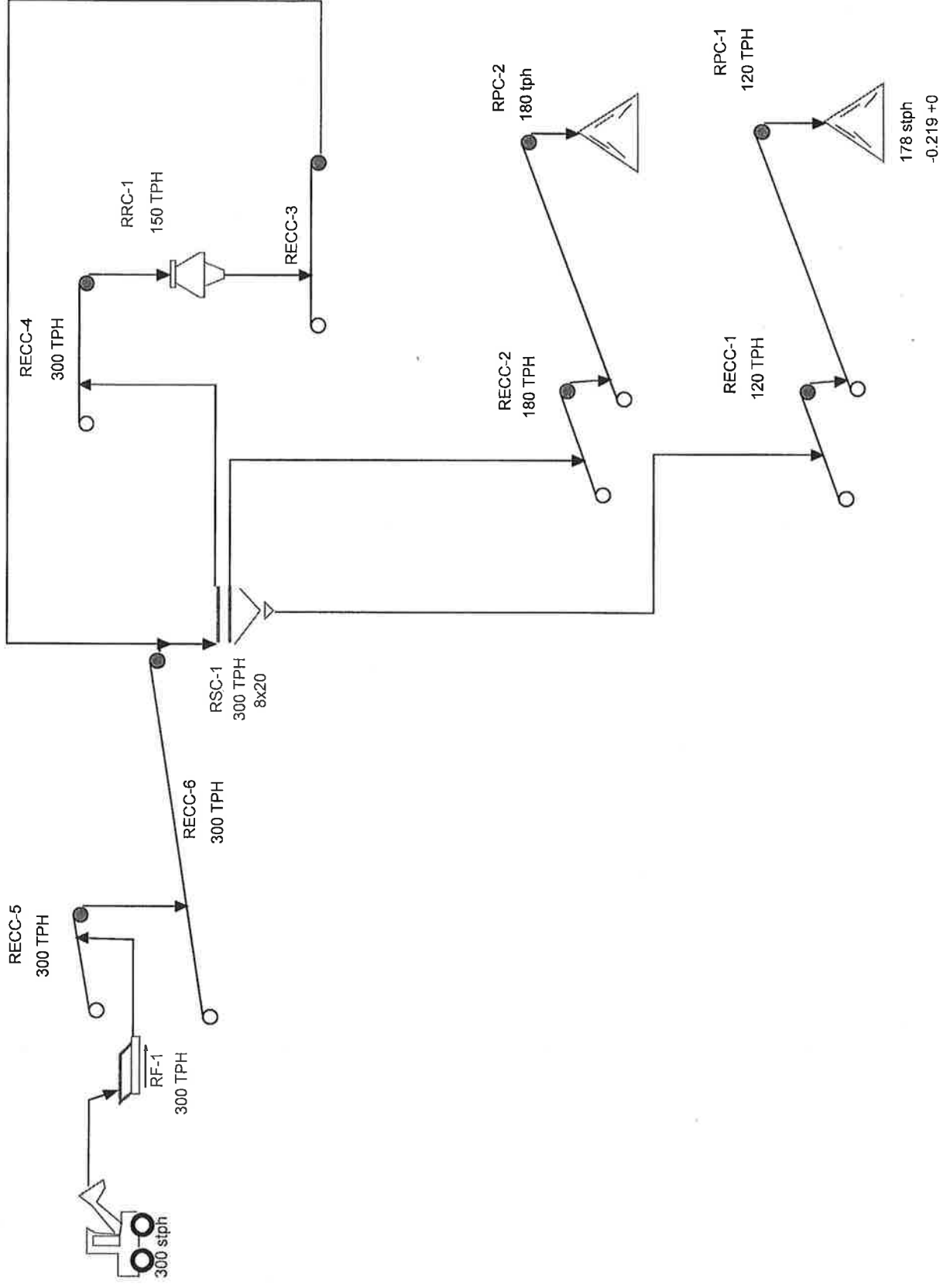
Solari

SOLARI AIR DISTRICT FLOW

Tim Findley

Page #1

Project #: 42155 Revision #: 155668 Date: March/13/2017



Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.

All calculations performed by AggFlow. <http://www.AggFlow.com>

Granite Construction Company

Solari RAP Plant

Tim Findley

Project #: 39247 Revision #: 155684 Date: March/13/2017

APPENDIX E

Post-Project Emission Calculations

Post-Project Emissions (S-9380-1 Dryer):

	LPG lb/MMBtu	Natural gas lb/MMBtu	Fuel use MMBtu/day	LPG		Natural Gas		Worst Case	
				PE2 (lb/day)	PE2 *** (lb/yr)	PE2 (lb/day)	PE2 *** (lb/yr)	PE2 (lb/day)	PE2 *** (lb/yr)
NOx	0.0484	0.0484	1075.7	52.1	15,879	52.1	15,879	52.1	15,879
SOx	0.0164	0.00285	1075.7	17.6	5,381	3.1	935	17.6	5,381
PM10	0.000066	0.000076	1075.7	0.1	22	0.1	25	0.1	25
CO	0.288	0.288	1075.7	309.8	94,489	309.8	94,489	309.8	94,489
VOC	0.006	0.006	1075.7	6.5	1,969	6.5	1,969	6.5	1,969

***: Based on 305 day/yr (1075.7 MMBtu/day x 305 day/yr = 328,088.5 MMBtu/yr = 328 billion Btu/yr)

	AP-42: Conveyor Transfer "++++"	0.000011	1500	1000	18,000	12,000	0.20	0.13	5,490,000	3,660,000	60	40	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	1500	1000	18,000	12,000	0.20	0.13	5,490,000	3,660,000	60	40	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	1500	1000	18,000	12,000	0.59	0.40	5,490,000	3,660,000	181	121	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	1500	1000	18,000	12,000	0.20	0.13	5,490,000	3,660,000	60	40	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	1500	1000	18,000	12,000	0.20	0.13	5,490,000	3,660,000	60	40	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	595.5	397	7,146	4,764	0.08	0.05	2,179,530	1,453,020	24	16	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	595.5	397	7,146	4,764	0.08	0.05	2,179,530	1,453,020	24	16	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	850.5	632	10,206	7,584	0.11	0.08	3,112,830	2,313,120	34	25	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	0	511	-	6,132	-	0.20	-	1,870,260	-	62	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	0	373	-	4,478	-	0.05	-	1,365,180	-	15	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	150	100	1,800	1,200	0.02	0.01	549,000	366,000	6	4	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	769.5	139	9,234	1,668	0.10	0.02	2,816,370	508,740	31	6	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	252	70	3,024	840	0.03	0.01	922,320	256,200	10	3	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	388.5	70	4,662	840	0.05	0.01	1,421,910	256,200	16	3	Conveyor
	AP-42: Screening "++"	0.000087	1500	1000	18,000	12,000	1.57	1.04	5,490,000	3,660,000	478	318	Screen
	AP-42: Tertiary Crushing "++"	0.000024	595.5	397	7,146	4,764	0.17	0.11	2,179,530	1,453,020	52	35	Tertiary Cr.
	AP-42: Tertiary Crushing "++"	0.000024	258	237	3,096	2,844	0.07	0.07	944,280	867,420	23	21	Tertiary Cr.
JR PE2	AP-42: Conveyor Transfer "++++"	0.000011	850.5	632	10,206	7,584	0.11	0.08	3,112,830	2,313,120	34	25	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	0	487	-	5,844	-	0.06	-	1,782,420	-	20	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	654	487	7,848	5,844	0.09	0.06	2,393,640	1,782,420	26	20	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	258.75	144	3,105	1,728	0.10	0.06	219,600	527,040	31	17	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	15	0	180	-	0.00	-	54,900	-	1	-	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	15	0	180	-	0.00	-	54,900	-	1	-	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	258.75	144	3,105	1,728	0.03	0.02	947,025	527,040	10	6	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	90	60	1,080	720	0.01	0.01	329,400	219,600	4	2	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	169.5	113	2,034	1,356	0.02	0.01	620,370	413,580	7	5	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	139.5	93	1,674	1,116	0.02	0.01	510,570	340,380	6	4	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	187.5	125	2,250	1,500	0.02	0.02	686,250	457,500	8	5	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	90	0	1,080	-	0.04	-	329,400	-	11	-	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	169.5	0	2,034	-	0.07	-	620,370	-	20	-	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	139.5	0	1,674	-	0.06	-	510,570	-	17	-	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	187.5	0	2,250	-	0.07	-	686,250	-	23	-	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	15	0	180	-	0.01	-	54,900	-	2	-	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000033	15	0	180	-	0.01	-	54,900	-	2	-	Conveyor
	AP-42: Screening "++"	0.000087	890.5	632	10,206	7,584	0.89	0.66	3,112,830	2,313,120	271	201	Screen
	AP-42: Conveyor Transfer "++++"	0.000011	652.5	488	7,830	5,856	0.68	0.51	2,388,150	1,786,080	208	155	Screen
	AP-42: Conveyor Transfer "++++"	0.000011	769.5	139	9,234	1,668	0.10	0.02	2,816,370	508,740	31	6	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000011	315	0	3,780	-	0.04	-	1,152,900	-	13	-	Conveyor
	AP-42: Conveyor Transfer "++++"	0.000022	315	1000	-	12,000	-	0.13	-	3,660,000	-	40	Conveyor
	AP-42: Tertiary Crushing	0.000054	75	50	900	600	0.49	0.32	1,152,900	-	25	-	Conveyor
	AP-42: Truck Unloading	0.000016	1500	1000	18,000	12,000	0.29	0.19	274,500	183,000	148	99	Conveyor
	AP-42: Truck Unloading	0.000016	595.5	397	7,146	4,764	0.11	0.08	5,490,000	3,660,000	88	59	Conveyor
	AP-42: Truck Unloading	0.000016	258	237	3,096	2,844	0.05	0.05	5,490,000	3,660,000	88	59	Conveyor
	AP-42: Truck Unloading	0.000016	750	500	9,000	6,000	0.14	0.10	2,179,530	1,453,020	35	23	Conveyor
	AP-42: Truck Unloading	0.000016	750	500	9,000	6,000	0.14	0.10	944,280	867,420	15	14	Conveyor
	Wet Process No Emissions	0	769.5	0	9,234	-	-	-	2,745,000	1,830,000	44	29	Conveyor
	Wet Process No Emissions	0	171	0	2,052	-	-	-	2,745,000	1,830,000	44	29	Conveyor
	Wet Process No Emissions	0	171	0	2,052	-	-	-	2,816,370	-	-	-	Conveyor
	Wet Process No Emissions	0	0	139	-	-	-	-	625,860	-	-	-	Conveyor
	Wet Process No Emissions	0	171	0	2,052	-	-	-	625,860	-	-	-	Conveyor
	Wet Process No Emissions	0	0	139	-	-	-	-	625,860	-	-	-	Conveyor
	Wet Process No Emissions	0	0	139	-	-	-	-	625,860	-	-	-	Conveyor
	Wet Process No Emissions	0	271.5	0	3,258	-	-	-	625,860	-	-	-	Conveyor
	Wet Process No Emissions	0	234	0	2,808	-	-	-	993,690	-	-	-	Conveyor
	Wet Process No Emissions	0	73.5	0	882	-	-	-	856,440	-	-	-	Conveyor
	Wet Process No Emissions	0	73.5	0	882	-	-	-	269,010	-	-	-	Conveyor

Conveyor Transfer	0.000046	PE2	2,491	1,849	Total lb-PM10
Tertiary Crushing	0.00054				
Truck Unloading	0.000016				

9% control) = 0.000067 lb-PM10/ton, controlled (which is lower than the AP-42 0.00074 lb-PM10/ton
9% control) = 0.000024 lb-PM10/ton, controlled (which is lower than the AP-42 0.00054 lb-PM10/ton

rolled(1 - 97% control) = 0.000033 lb-PM10/ton, controlled (which is lower than the AP-42 0.000046 lb-PM10/ton

rolled(1 - 98% control) = 0.000022 lb-PM10/ton, controlled (which is lower than the AP-42 0.000046 lb-PM10/ton

ssant: 99% control
trolled(1 - 99% control) = 0.000011 lb-PM10/ton, controlled (which is lower than the AP-42 0.000046 lb-PM10/ton

Post-Project Emissions (S-9380-3):

RAP Plant: 16 hours/day, 305 days/year

Unit ID	Unit Description	Emission Factor Reference	Emission Factor (lb-PM10/ton)	Throughput (ton/hr)	Throughput (ton/day)	PE2 (lb-PM10/day)	Throughput (ton/yr)	PE2 (lb-PM10/yr)
RRC-1	RAP Crusher	AP-42: Tertiary Crushing	0.00054	150	2,400	1.30	732,000	395
RSC-1	RAP Screen	AP-42: Screening	0.00017	300	4,800	0.82	1,464,000	249
RF-1	RAP Feeder	AP-42: Truck Unloading	0.000016	300	4,800	0.08	1,464,000	23
RPC-1	RAP Stack 1	AP-42: Conveyor Transfer	0.000046	180	2,880	0.13	878,400	40
RPC-2	RAP Stack 2	AP-42: Conveyor Transfer	0.000046	120	1,920	0.09	585,600	27
RECC-1	RAP Conveyors	AP-42: Conveyor Transfer	0.000046	180	2,880	0.13	878,400	40
RECC-2	RAP Conveyors	AP-42: Conveyor Transfer	0.000046	120	1,920	0.09	585,600	27
RECC-3	RAP Conveyors	AP-42: Conveyor Transfer	0.000046	300	4,800	0.22	1,464,000	67
RECC-4	RAP Conveyors	AP-42: Conveyor Transfer	0.000046	300	4,800	0.22	1,464,000	67
RECC-5	RAP Conveyors	AP-42: Conveyor Transfer	0.000046	300	4,800	0.22	1,464,000	67
RECC-6	RAP Conveyors	AP-42: Conveyor Transfer	0.000046	300	4,800	0.22	1,464,000	67
					Total	3.51	Total	1,072

The RAP Screen shall be controlled by additional controls consisting of a Wet Suppression, Fogging System, and Partial Enclosures.

"4" Screening: (0.0087 lb-PM10/ton, uncontrolled)(1 - 98% control) = 0.00017 lb-PM10/ton, controlled (compared to the AP-42 value of 0.00074 lb-PM10/ton for wet suppression only).

Pre- and Post-Project Emissions (S-9380-4):

Daily Pre- and Post-Project Potential Emission from Process Heater ^{***}		
NOx	0.0	lb/day
SOx	0.0	lb/day
PM10	0.0	lb/day
CO	0.0	lb/day
VOC	0.0	lb/day

^{***} Combustion emissions associated with the operation's process heater are not assessed. The process heater emissions are assessed to and calculated with PEER S-6904-PEER-1.

Pre- and Post-Project Potential Emission from Mixing and Reaction Tank			
	Mixing Tank (lb/day)	Reaction Tank (lb/day)	Total (lb/day)
VOC	0.3	0.2	0.5

Throughput: 65,000 gal/day

Annual Pre- and Post-Project Potential Emission from Process Heater ^{***}		
NOx	0	lb/yr
SOx	0	lb/yr
PM10	0	lb/yr
CO	0	lb/yr
VOC	0	lb/yr

^{***} Combustion emissions associated with the operation's process heater are not assessed. The process heater emissions are assessed to and calculated with PEER S-6904-PEER-1.

Pre- and Post-Project Potential Emission from Mixing and Reaction Tank ^{**}			
	Mixing Tank (lb/yr)	Reaction Tank (lb/yr)	Total (lb/yr)
VOC	25.2	16.8	42

Throughput: 5,460,000 gal/yr

^{**} Annual rate is calculated based on ratio of annual to daily throughputs.

Pre- and Post-Project Potential Emissions		
	PE, lb/day	PE, lb/yr
NOx	0.0	0
SOx	0.0	0
PM10	0.0	0
CO	0.0	0
VOC	0.5	42

Pre- and Post-Project Emissions (S-9380-5):

Daily Pre- and Post-Project Potential Emission from Process Heater						
NOx	0.011	lb/MMBtu x	124.8	MMBtu/day =	1.4	lb/day
SOx	0.016	lb/MMBtu x	124.8	MMBtu/day =	2.0	lb/day
PM10	0.0076	lb/MMBtu x	124.8	MMBtu/day =	0.9	lb/day
CO	0.037	lb/MMBtu x	124.8	MMBtu/day =	4.6	lb/day
VOC	0.0055	lb/MMBtu x	124.8	MMBtu/day =	0.7	lb/day

Pre- and Post-Project Potential Emission from Mixing and Reaction Tank (Current Permit)			
	Mixing Tank (lb/day)	Reaction Tank (lb/day)	Total (lb/day)
VOC	0.3	0.2	0.5

Throughput: 65,000 gal/day

Annual Pre- and Post-Project Potential Emission from Process Heater						
NOx	0.011	lb/MMBtu x	10,483	MMBtu/yr =	115	lb/yr
SOx	0.016	lb/MMBtu x	10,483	MMBtu/yr =	168	lb/yr
PM10	0.0076	lb/MMBtu x	10,483	MMBtu/yr =	80	lb/yr
CO	0.037	lb/MMBtu x	10,483	MMBtu/yr =	388	lb/yr
VOC	0.0055	lb/MMBtu x	10,483	MMBtu/yr =	58	lb/yr

Pre- and Post-Project Potential Emission from Mixing and Reaction Tank **			
	Mixing Tank (lb/yr)	Reaction Tank (lb/yr)	Total (lb/yr)
VOC	25.2	16.8	42

Throughput: 5,460,000 gal/yr

** Annual rate is calculated based on ratio of annual to daily throughputs.

Pre- and Post-Project Potential Emissions		
	PE, lb/day	PE, lb/yr
NOx	1.4	115
SOx	2.0	168
PM10	0.9	80
CO	4.6	388
VOC	1.2	100

Post-Project Emissions (PE2) (S-9380-6):

	Emission Factor (lb-PM10/acre/day)	Maximum area (acre)	Control (%)	Daily PE2 (lb-PM10/day)	Annual PE2 (lb-PM10/yr)
Storage piles	5.27	1.5	90%	0.79	289
	Emission Factor (lb-PM10/ton-material)	Maximum Throughput (ton/day)	Maximum Throughput (ton/yr)	PE2 (lb-PM10/day)	PE2 (lb-PM10/yr)
Truck loading	0.000016	20000	2,500,000	0.32	40
			Total:	1.11	329

APPENDIX F

Control Efficiency Documentation



NATIONAL ENVIRONMENTAL SERVICE COMPANY

March 4, 2017

Tim Findley
Plant Engineer
Granit Construction Company
3005 James Road
Bakersfield, CA 93308

Re: Solari Project, Proposal No. 2733

Dear Tim,

NESCO warrants to the purchaser that, with proper use and subject to the conditions described below, the high pressure wet suppression system that we have specified for the Solari plant project will meet or exceed Visible Emission (VE) Standards for Nonmetallic Mineral Processing Plants specified by the San Joaquin Valley Unified Air Pollution Control District (SJUAPCD) by reducing visible emissions to no greater than 0% opacity from any transfer point on any belt conveyor or from any other emission source in the aggregate processing plant.

In addition, NESCO warrants to the purchase that the DustPro Model 405 high pressure wet suppression system is equipped with a pump capable of adding up to 1.55% moisture to the 863 ton per hour process flow.

Owing to the diversity of particulate emission standards and regulations, manufacturer cannot and does not warrant that the equipment will meet or exceed any other particulate emission standard, unless by previous arrangement.

The warranty is strictly conditioned upon the following:

1. Any compliance test shall be conducted by certified personnel.
2. All costs of any testing will be paid by the purchaser.
3. The warranty applies only to equipment installed by NESCO or under our supervision. Any equipment installed by customer, dealer, or agent must be inspected and certified by NESCO for warranty to apply.
4. In no event will this warranty cover any test more than one year after date of delivery.

Thank you. Please contact me if you have any questions or require any other information.

Sincerely,

Mark Kestner
President

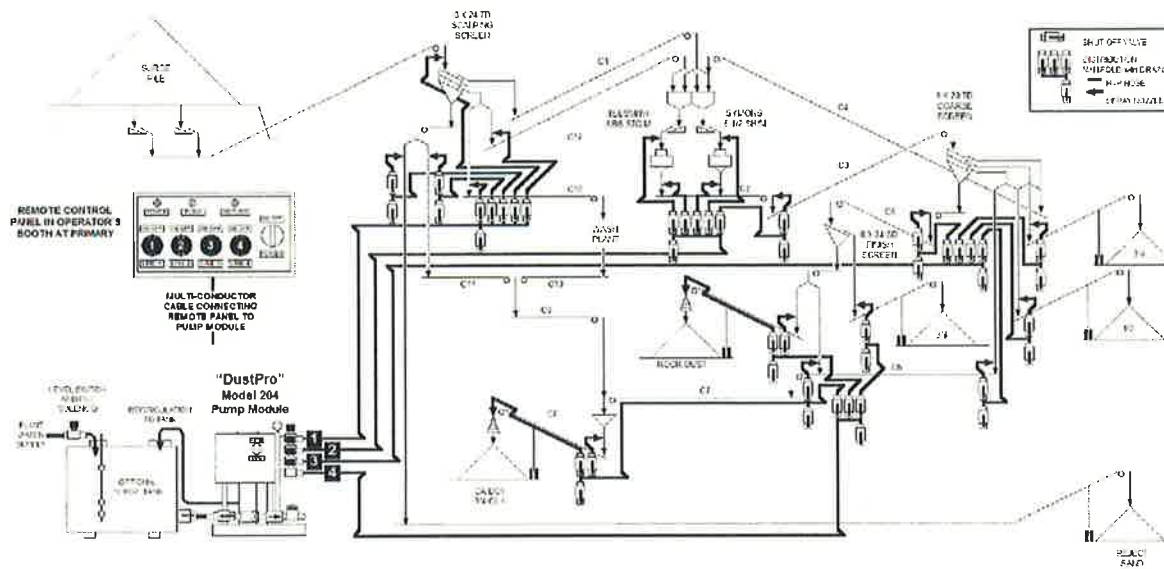


Figure 1: Schematic Diagram of Process Flow Showing Proposed Spray System



High pressure spray systems can control dust from crushers without increasing wear or impeding process flow. Spray nozzles at crushers are designed to control dust by suppressing airborne dust and adding a small amount of moisture to prevent emissions downstream.

Use a narrow angle flat spray nozzle targeted directly at the crushing zone. This is very important for impact crushers because of their short residence times.

Nozzles at crusher discharges should be located in front of a dust curtain that protects the nozzle from "blowback" that can deposit on the spray bar and plug it. This also allows operators to see the nozzle and whether it is spraying properly.



Figure 2a: High Pressure Spray with NESCO Comments

Figure 2b: System Configured to Various Geometry

Attachment D: NESCO DustPro Model 405 High Pressure Wet Suppression /Water Fogging System

This document is a validation in support of NESCO's DustPro Model 405 High Pressure Wet Suppression /Water Fogging System which Granite Construction (Granite) proposes to install for the proposed Solari project. This supports Granite's proposal that the Water Fogging System will achieve a 3-5% emissions control for PM/PM10 better than that of AP-42's top range of 95%. Granite will discuss the following here – the difference between the Water Fogging System and AP-42 emissions control and monitoring standards, the DustPro manufacturer's emissions control specifications, along with SJVAPCD reference compliance guidelines for Crushed Stone Processing and Pulverized Mineral Processing (AP-42, Section 11.19.2).

AP-42 allows for water spray as a particulate matter control for aggregate processes; however, the standard emissions control focuses on moisture content. While this is an accurate determination for PM/PM10 emissions control, it needs to be noted that water spray technology has advanced beyond just being a surface wetting application. NESCO, the manufacturer of the DustPro High Pressure Wet Suppression /Water Fogging System, certifies that the system controls PM/PM10 by "adding a moisture to prevent dust emissions from downstream unit operations," as well as by "suppressing airborne dust particles with fine water droplets that cause them to settle." The Water Fogging System accomplishes PM/PM10 suppression by creating a highly atomized mist that is able to adhere to particulates and effectively suppress it.

This mist creates additional opportunities for more efficient and effective application since some material cannot have moisture content beyond 1.5%. Figure 1 provides a diagram of locations where the fogging system is applied. Note that in areas where additional moisture should not be applied, the water fogging system becomes useful as it does not add to the overall moisture/saturation level, yet it is still able to effectively suppress PM/PM10. An example of this is at the cone crushers which have circular openings. These devices produce a significant amount of PM/PM10 and require additional controls. Too much moisture will create an operations problem as well as a safety hazard. Figure 2 displays how the fogging system is applied. The mist will not increase the overall moisture content significantly (Figure 2a); however, it still effectively suppresses PM/PM10. In addition, the sprays can be designed to surround the circular opening of the crushers (Figure 2b) for additional efficiently focused emissions control.

AP-42 recognizes that "wet suppression has a carryover effect downstream of the point of application of water." The document also states that high moisture is considered "more than about 1.5% by weight" and that operations operating at these levels "do not generate appreciable particulate emissions" (AP-42 Sec 11.19). The Water Fogging System is designed to ensure a 1.55% moisture content. In addition, the manufacturer has provided an emissions guarantee of 0% opacity along with an applied moisture content of 1.55% (*Attachment E*). Per SJVAPCD guidance document SSP-1605 Control District allows for AP-42 emissions control verification via moisture content and opacity equivalence, provided that the visible emissions do not exceed 5% opacity and the moisture content of the aggregate is at least 1.5% (*Attachment F*). With the

DustPro's high pressure spray system along with the ability to customize the spray nozzle configurations, Granite anticipates achieving an overall control efficiency of 98-99.9% (i.e., 3-5% higher than standard AP-42 emissions controls). The NESCO DustPro User manual is included as *Attachment G*.

APPENDIX G

BACT Guidelines

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.3.1*

Last Update: 05/21/2001

**Asphaltic Concrete - Drum Mix Plant, = or > 2,000 ton/day or
= or > 75.6 MMBtu/hr burner**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Natural gas or LPG as a primary fuel; and enclosed hot mix silos and loadout operation vented to the rotary-dryer burner.	Enclosed hot mix silos and loadout operation vented to an afterburner.	
SOx	PUC quality natural gas or LPG as a primary fuel.		
PM10	99% control efficiency (Rotary drum vents to fabric collector or Venturi scrubber with centrifugal separator) and enclosed conveyors; hot mix storage silos enclosed all vent to oil mist collectors; and natural gas or LPG as a primary fuel.	99% control efficiency (Rotary drum vents to fabric collector or Venturi scrubber with centrifugal separator) and enclosed drag slat conveyor; hot mix storage silos and truck loadout enclosed on two sides; all vent to blue smoke control comprised of electrostatic precipitator or filter pack; and natural gas or LPG as a primary fuel.	
NOx	0.088 lb/MMBtu Low-NOx burner and either natural gas or LPG as the primary fuel.		
CO	Natural gas or LPG as a primary fuel.		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

APPENDIX H

BACT Analysis

Top Down BACT Analysis for Asphalt Drum Dryer/Mixer (S-9380-1)

Pursuant to BACT the District BACT policy (APR-1305), the applicable BACT requirements at the time the application was deemed complete shall be applied.

BACT Guideline 6.3.1 applies to Asphaltic Concrete – Drum Mix Plant, = 2,000 ton/day or = or > 75.6 MMBtu/hr burner. The version of BACT Guideline 6.3.1 which is shown in Appendix G was in effect when this project was deemed complete. Guideline 6.3.1 was revised on 8/23/18, after the project had been deemed complete, so the version in Appendix G shall be applied to this project pursuant to the District BACT policy. In accordance with the District BACT policy, information from that guideline will be utilized without further analysis.

1. BACT Analysis for NO_x Emissions for Asphalt Drum Dryer/Mixer S-9380-1:

a. Step 1 - Identify all control technologies

BACT Guideline 6.3.1 identifies only the following option:

- 0.088 lb/MMBtu Low-NO_x burner and either natural gas or LPG as the primary fuel [Achieved in Practice]

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1. 0.088 lb/MMBtu Low-NO_x burner and either natural gas or LPG as the primary fuel

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the use of a Low-NO_x burner achieving 0.0484 lb-NO_x/MMBtu and the used of either natural gas or LPG. Since the applicant proposes the highest ranking remaining option, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for NO_x will be the use of a Low-NO_x burner achieving 0.0484 lb-NO_x/MMBtu and the used of either natural gas or LPG. The applicant's proposal meets these requirements, so BACT is satisfied for NO_x.

2. BACT Analysis for SOx Emissions for Asphalt Drum Dryer/Mixer S-9380-1:

a. Step 1 - Identify all control technologies

BACT Guideline 6.3.1 identifies only the following option:

- PUC quality natural gas or LPG as a primary fuel [Achieved in Practice]

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1. PUC quality natural gas or LPG as primary fuel

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the use of a PUC quality natural gas or LPG. Since the applicant proposes the highest ranking remaining option, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for SOx will be the use of PUC quality natural gas or LPG. The applicant's proposal meets these requirements, so BACT is satisfied for SOx.

3. BACT Analysis for VOC Emissions for Asphalt Drum Dryer/Mixer S-9380-1:

a. Step 1 - Identify all control technologies

BACT Guideline 6.3.1 identifies only the following option:

- Natural gas or LPG as a primary fuel; and enclosed hot mix silos and loadout operation vented to the rotary dryer burner [Achieved in Practice]
- Enclosed hot mix silos and loadout operation vented to an afterburner [Technologically Feasible]

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1. Enclosed hot mix silos and loadout operation vented to an afterburner
2. Natural gas or LPG as a primary fuel; and enclosed hot mix silos and loadout operation vented to the rotary dryer burner

d. Step 4 - Cost Effectiveness Analysis

Below is the cost effectiveness analysis for option 1 above, venting the hot mix silos and loadout operations to an afterburner. The VOC emissions from these operations would be controlled with thermal/catalytic incineration.

Design Parameters for booth control technologies:

Exhaust Gas Flow Rate (Q): 1,300 cfm (current permit)

Thermal/Catalytic Incineration:

98% total control efficiency using a VOC capture and control system with thermal/catalytic incineration and 100% VOC capture.

A. Emission Reduction:

According to APR-1305 (BACT Policy) and Revised BACT Cost Effectiveness Thresholds, the cost effectiveness (annual cost per ton of pollutant reduced) for a given technologically feasible control option is equal to the annual cost divided by the calculated emission reduction.

Annual costs are equal to annualized cost of utilizing technologically feasible BACT controls on an emission unit that already meets District standard emissions. Annual costs

do not include costs necessary to meet District standard emissions. Emission reduction used in cost effectiveness analyses are calculated as follows:

$$\text{Emission Reduction} = \text{District Standard Emissions} - \text{Emissions (w/ technologically feasible BACT)} \\ (\text{ton/year})$$

For existing emission units, District standard emissions are equal to the emissions level allowed by the current PTO. Since this is an existing emission unit, the PE1 identified in Section VII (General Calculations) represents the District standard emissions. PE1 for VOC for the material processing is calculated as 2,972 lb-VOC/yr.

Emissions from the use of the Technological Feasible BACT, which is enclosed hot mix silos and loadout operation vented to an afterburner, would result in VOC emissions of 1,494 lb-VOC/yr ¹⁸.

Therefore, the emission reduction from the afterburner would be 1,478 lb-VOC/year (0.74 ton-VOC/yr).

B. Annual Natural Gas Cost:

It will be shown that the cost of the natural gas alone will be adequate to cause these technologies to be not cost effective per District BACT policy.

This estimate does not include the capital cost of purchasing the oxidizer unit, installation, or any additional operational and maintenance costs. The increase in temperature of the contaminated air stream required by a catalytic incineration system is less than for a thermal incineration. Therefore, by demonstrating that the cost of the natural gas required by a catalytic incinerator would cause such a system to not be cost effective will also be sufficient to show that a thermal oxidation system would not be cost effective either.

The cost of natural gas for this operation is calculated based on an operating schedule of 24 hr/day and 305 hr/year (439,200 min/year). A heat exchanger efficiency of 50% is assumed.

$$\text{Natural Gas Usage} = \text{Flow Rate} \times \text{Cp}_{\text{Air}} \times \Delta T \times \text{HEF}$$

Where: Flow Rate = Air flow through the incinerator (1,300 cfm)
Cp_{Air} = specific heat of air is 0.194 Btu/scf - °F
ΔT = increase in the temperature of the contaminated air stream required for catalytic oxidation to occur (It will be assumed that the air stream would increase in temperature from 77°F to 600°F.)
HEF = heat exchanger factor (0.5, assumed)

¹⁸ Emissions with Technologically Feasible BACT are (0.00779 lb-VOC from asphalt silo filling + 0.02282 lb-VOC from asphalt silo loadout) x (2,440,000 ton/yr) x (1 - 0.98 control) = 1,494 lb-VOC/yr.

$$\begin{aligned}\text{Natural Gas Usage} &= 1,300 \text{ cfm} \times 0.194 \text{ Btu/scf} \times (600^\circ\text{F} - 77^\circ\text{F}) \times 0.5 \\ &\times 439,200 \text{ min/year} \times \text{MMBtu}/10^6 \text{ Btu} \\ &= 28,965 \text{ MMBtu/year}\end{aligned}$$

$$\begin{aligned}\text{Natural Gas Cost} &= 28,965 \text{ MMBtu/year} \times \$7.63/\text{MMBtu}^{(19)} \\ &= \mathbf{\$221,003}\end{aligned}$$

C. Cost Effectiveness of a Catalytic Incinerator with 100% Capture:

$$\begin{aligned}\text{Cost Effectiveness} &= \text{Natural Gas Cost (\$/year)} \div \text{Emission Reduction (ton-VOC/year)} \\ &= \$221,003/\text{year} \div 0.74 \text{ ton-VOC/year} \\ &= \mathbf{\$298,653/\text{ton-VOC}}\end{aligned}$$

The cost of natural gas to operate a catalytic incinerator is \$298,653/ton, which is greater than the District's VOC cost-effectiveness threshold of \$17,500/ton. Therefore, this VOC control option is not cost effective and is being removed from consideration for this project.

e. Step 5 - Select BACT

BACT for VOC will be the of the Achieved in Practice technology, which the use of natural gas or LPG as primary fuel and enclosed hot mix silos and loadout operation vented to the rotary dryer burner. The asphalt drum dryer is fired on natural gas or LPG, and the hot mix silos and loadout operations are vented to the dryer burner. Therefore, the applicant's proposal satisfies BACT for VOC emissions.

¹⁹ The natural gas price used is on the latest Commercial Price for California (October 2018) from U.S. Energy Information Administration (https://www.eia.gov/dnav/ng/ng_pri_sum_dcu_SCA_m.htm), which is \$7.63 per 1,000 ft³. Based on a heating value of 1,000 Btu/ft³, this value is equivalent to \$7.63/MMBtu.

4. T-BACT Analysis for PM10 Emissions for Asphalt Drum Dryer/Mixer S-9380-1:

a. Step 1 - Identify all control technologies

BACT is not triggered for the asphalt drum dryer/mixer, but T-BACT needs to be satisfied for this unit pursuant to the Health Risk Assessment.

BACT Guideline 6.3.1 identifies the following PM10 control technologies for this operation:

- 99% control efficiency (Rotary drum vents to fabric collector or Venturi scrubber with centrifugal separator) and enclosed conveyors; hot mix storage silos enclosed all vent to oil mist collectors; and natural gas or LPG as a primary fuel [Achieved in Practice]
- 99% control efficiency (Rotary drum vents to fabric collector or Venturi scrubber with centrifugal separator) and enclosed drag slat conveyor; hot mix storage silos and truck loadout enclosed on two sides; all vent to blue smoke control comprised of electrostatic precipitator or filter pack; and natural gas or LPG as a primary fuel [Technologically Feasible]

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1. 99% control efficiency (Rotary drum vents to fabric collector or Venturi scrubber with centrifugal separator) and enclosed drag slat conveyor; hot mix storage silos and truck loadout enclosed on two sides; all vent to blue smoke control comprised of electrostatic precipitator or filter pack; and natural gas or LPG as a primary fuel
2. 99% control efficiency (Rotary drum vents to fabric collector or Venturi scrubber with centrifugal separator) and enclosed conveyors; hot mix storage silos enclosed all vent to oil mist collectors; and natural gas or LPG as a primary fuel

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the highest ranked option, 99% control efficiency (rotary drum vents to fabric collector or Venturi scrubber with centrifugal separator) and enclosed drag slat conveyor; hot mix storage silos and truck loadout enclosed on two sides; all vent to blue smoke control comprised of electrostatic precipitator or filter pack; and natural gas or LPG as a primary fuel. Since the applicant proposes the highest ranking remaining option, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for PM10 will be 99% control efficiency (rotary drum vents to fabric collector or Venturi scrubber with centrifugal separator) and enclosed drag slat conveyor; hot mix storage silos and truck loadout enclosed on two sides; all vent to blue smoke control comprised of electrostatic precipitator or filter pack; and natural gas or LPG as a primary fuel. The applicant's proposal meets these requirements, so T-BACT is satisfied for PM10.

APPENDIX I
Health Risk Assessment/Ambient Air Quality Analysis Results

San Joaquin Valley Air Pollution Control District

Risk Management Review

To: Homero Ramirez – Permit Services

From: Leland Villalvazo – Technical Services

Date: May 7, 2017

Facility Name: Granite Construction Company

Location: 12 miles south of Arvin (Sec 17, 20, 21, 29 T11N/R18W)

Application #(s): S-1612-1-20, -2-2, -3-18, -5-3, -6-2, -8-1, -9-1, and C-590-14-2, -15-2

Project #: S1151730

A. RMR SUMMARY

RMR Summary						
Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required?	Special Permit Requirements?
Unit 1-20	>10	0.75	0.083	3.59	Yes	No
Unit 2-2		0.00	0.00	0.00	No	No
Unit 3-18		0.0008	0.19	0.085	No	No
Unit 5-3		0.00	0.00	0.00	No	No
Unit 6-2		0.00006	0.006	0.016	No	No
Unit 8-1		0.00001	0.006	0.006	No	No
Unit 9-1		0.00001	0.00001	0.19	No	No
Unit 10-1						
Unit 11-1		0.00003	0.06	0.01	No	No
Project Totals		0.73	0.34	3.90		
Facility Totals		0.73	0.34	3.90		

Proposed Permit Requirements

To ensure that human health risks will not exceed District allowable levels; the following shall be included as requirements for:

Unit # 1-22

T-BACT is required for this unit because of emissions of toxic which are both VOC/PM-10.

B. RMR REPORT

I. Project Description

Granite Construction Company requests ATCs to relocate all of its permit units at its hot mix asphalt and construction aggregate materials facility S-1612 from its current location (which

is on Highway 223 about 3 miles east of Arvin) to the proposed "Solari" facility (which is 12 miles south of Arvin). The same facility number (S-1612) will be retained for the new location. The applicant also proposes to increase the asphalt concrete production rate for asphalt concrete plant S-1612-1 from 5,391 to 9,600 tons/day, but the annual production rate will not change. Finally, PUC natural gas firing provisions will be added to permits units S-1612-1 and -2, which are currently authorized to fire on LPG/propane only.

Technical Services received a request to perform an Ambient Air Quality Analysis and a Risk Management Review for the proposed relocation and day increase of the above noted project.

II. Analysis

Toxic emissions for this proposed project were calculated using several District approved emissions factors associated with the sources, see appendix for more details, and input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2007-2011 from Arvin to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Point Source Parameters						
Unit #	Source Name	Ems Rate (g/s)	Release Ht (m)	Temp (K)	Velocity (m/s)	Diameter (m)
1	AP_DRUM	1	18.3	469.3	12.2	1.8
8	LIMESILO	1	14.63	0	0.3	0.203
1	SILO_F	1	22.9	422	0.3	0.3

Area Source Parameters							
Unit #	Source Name	Emission Rate (g/s /sq Area)	Release Ht (m)	Initial X (m)	Initial Y (m)	Angle	Initial Z
3	AGG_PRIM	0.0004081633	6.096	70	35	0	1.524
3	PIT	0.0043055642	7.62	15.24	15.24	0	3.048

Area Circle Source Parameters						
Unit #	Source Name	Emission Rate (g/s /sq Area)	Radius (m)	Release Ht (m)	# Vertices	Initial Z (m)
3	AGG_PRIM	0.0004081633	6.096	70	35	0

Area Circle Source Parameters						
Unit #	Source Name	Emission Rate (g/s /sq Area)	Radius (m)	Release Ht (m)	# Vertices	Initial Z (m)
3	PIT	0.0043055642	7.62	15.24	15.24	0

Area Polygon Source Parameters					
Unit #	Source Name	Emission Rate (g/s /sq Area)	Release Ht (m)	# Vertices	Initial Z (m)
3	CLII	0.0003310497	6.096	10	1.524
6	RAPPLANT	0.0019293603	4.877	9	1.5
3	SEC_AGG	0.0001206231	6.096	14	1.524
11	STOCKPLE	0.00018037	3.048	12	0.83
3	SURGE	0.0008754504	6.096	11	1.524

Openpit Source Parameters							
Unit #	Source Name	Emission Rate (g/s /sq Area)	Release Ht (m)	Initial X (m)	Initial Y (m)	Pit Volume	Angle
3	AGG_PRIM	0.0004081633	6.096	70	35	0	1.524
3	PIT	0.0043055642	7.62	15.24	15.24	0	3.048

[illegible]

Volume Source Parameters					
Unit #	Source Name	Ems Rate (g/s)	Release Ht (m)	Initial Y (m)	Initial Z (m)
1	LDR_SLP	0.0555555556	3	1.4	2.79
1	LDR_SLP	0.0555555556	3	1.4	2.79
1	LDR_SLP	0.0555555556	3	1.4	2.79
1	LDR_SLP	0.0555555556	3	1.4	2.79
1	LDR_SLP	0.0555555556	3	1.4	2.79
1	LDR_SLP	0.0555555556	3	1.4	2.79
1	LDR_SLP	0.0555555556	3	1.4	2.79
8	LP_DM	1	4.394	0.212	1.418
8	LPM	1	4.394	0.212	1.418
3	PC11	1	3.048	0.21	0.7
3	PR_SCRN	1	6	2.163	2.791
6	RAP1_RFB	1	6.1	0.21	0.7
6	RAPSCRN	1	6	0.465	2.791
6	RFB_DM	1	6.1	0.21	0.7
6	RSC1	1	6.096	1.3	0.7
1	SC_DM	1	6	0.814	2.791

The following emissions throughputs were used to estimate toxic emissions from each device:

Device Throughput							
Unit #	Model Group	Name	Modeled Source Type	Origin of PM	Hourly Throughput	Yearly Throughput	Unit
1	AP_DRUM	Asphalt plant drum mix dryer (natural gas)	Point	HMA/baghouse	44.82	371,117	MMBTU
1	SILO_F	Asphalt Silo Filling	Point	HMA/baghouse	333.33	2,760,000	Tons
1	A_SILO	Asphalt Silo Loadout	Volume	HMA/baghouse	333.33	2,760,000	Tons
1	LDR_SLP	Loader Transfer to Cold Feed Bins	Line Volume	Aggregate2	500.00	2,760,000	Tons
1	SLP_S	Scalping Screening	Volume	Aggregate	500.00	2,760,000	Tons
1	SC_DM	Screen Conveyor transfer to Lime Pugmill	Volume	Aggregate	500.00	2,760,000	Tons
6	L_RAP1	Loader transfer to RAP Feeder Bins	Volume	Aggregate	300.00	1,656,000	Tons
6	RAP1_RFB	RAP Feeder Bins discharge to Rap Feeder conveyor Belt	Volume	RAP3	0.00	0	Tons
6	RFB_DM	RAP Feeder Conveyor Belt transfer to Drum Mixer	Volume	RAP	0.00	0	Tons

Device Throughput

Unit #	Model Group	Name	Modeled Source Type	Origin of PM	Hourly Throughput	Yearly Throughput	Unit
6	RAPSCRN	RAP Scalping Screen	Volume	RAP	0.00	0	Tons
3	SURGE	Conveyor transfer to surge stacker	Area	Aggregate	1500.00	6,210,000	Tons
3	SURGE	Surge Stacker transfer to main surge pile	Area	Aggregate	1500.00	6,210,000	Tons
3	SURGE	Tunnel Belt 1 from Surge Pile	Area	Aggregate	1500.00	6,210,000	Tons
3	AGG_PRIM	Tunnel Belt 2 from Tunnel Belt 1 to Primary Screen	Area	Aggregate	1500.00	6,210,000	Tons
3	AGG_PRIM	Primary screen to cone belt	Area	Aggregate	595.50	2,465,370	Tons
3	AGG_PRIM	Cone Collector Belt	Area	Aggregate	948.00	3,924,720	Tons
3	AGG_PRIM	CL II Base Collector Belt to CL II Base Carry Belt	Area	Aggregate	766.50	3,173,310	Tons
3	AGG_PRIM	Primary Screens Sand Collector Belt to Sand to Base Belt via tri-verter	Area	Aggregate	559.50	2,316,330	Tons
3	AGG_PRIM	Primary screen to secondary cone belt	Area	Aggregate	150.00	621,000	Tons
3	AGG_PRIM	Primary screen to wash plant carry belt	Area	Aggregate	769.50	3,185,730	Tons
3	AGG_PRIM	Primary Screen coarse material collector belt	Area	Aggregate	252.00	1,043,280	Tons
3	AGG_PRIM	Primary Screen sand collector belt to wash	Area	Aggregate	1500.00	1,608,390	Tons
3	PR_SCRN	Primary Screen	Volume	Aggregate	1500.00	2,465,370	Tons
3	CONES	Cone Crusher 1	Volume	Aggregate	595.50	2,465,370	Tons
3	CONES	Cone Crusher 2	Volume	Aggregate	355.50	1,471,770	Tons
3	SEC_AGG	Secondary screen feed belt	Area	Aggregate	948.00	3,924,720	Tons
3	SEC_AGG	Finish screen to CL II carry belt	Area	Aggregate	730.50	3,024,270	Tons
3	SEC_AGG	Secondary screens bottom deck collector belt to finish screen	Area	Aggregate	730.50	3,024,270	Tons
3	SEC_AGG	Finish screens Bottom collector belt to cone	Area	Aggregate	60.00	248,400	Tons

Device Throughput

Unit #	Model Group	Name	Modeled Source Type	Origin of PM	Hourly Throughput	Yearly Throughput	Unit
		return belt via diverter					
3	SEC_AGG	Recirculation belt from secondary screen to cone	Area	Aggregate	258.75	1,071,225	Tons
3	AGG_PRIM	Extra conveyor #1	Area	Aggregate	1500.00	6,210,000	Tons
3	AGG_PRIM	Extra conveyor #2	Area	Aggregate	1500.00	6,210,000	Tons
3	SEC_AGG	1 1/2" trip belt	Area	Aggregate	15.00	62,100	Tons
3	SEC_AGG	1" trip belt	Area	Aggregate	15.00	62,100	Tons
3	SEC_AGG	Recirculation trip belt	Area	Aggregate	258.75	1,071,225	Tons
3	SEC_AGG	3/4" trip belt	Area	Aggregate	90.00	372,600	Tons
3	SEC_AGG	3/8" trip belt	Area	Aggregate	169.50	701,730	Tons
3	SEC_AGG	1/2" trip belt	Area	Aggregate	139.50	776,250	Tons
3	SEC_AGG	Rock dust shuttle belt to rock dust cone stockpile	Area	Aggregate	187.50	776,250	Tons
3	SEC_AGG	3/4" Stacker	Area	Aggregate	90.00	372,600	Tons
3	SEC_AGG	3/8" Stacker	Area	Aggregate	169.50	701,730	Tons
3	SEC_AGG	1/2" Stacker	Area	Aggregate	139.50	577,530	Tons
3	SEC_AGG	Rock Dust Stacker	Area	Aggregate	187.50	776,250	Tons
3	SEC_AGG	1 1/2" Stacker	Area	Aggregate	15.00	62,100	Tons
3	SEC_AGG	1" Stacker	Area	Aggregate	15.00	62,100	Tons
3	FNSCRN1	Finishing Screen 1	Volume	Aggregate	948.00	3,924,720	Tons
3	FNSCRN2	Finishing Screen 2	Volume	Aggregate	732.00	3,030,480	Tons
3	C10	Primary Screens Bottom Deck Collector Belt to Wash Plant 1x4 Surge Feed Belt via diverter	Volume	Aggregate	769.50	3,185,730	Tons
3	WASTE	Primary Screens Sand Collector Belt to Sand Stacker	Area	Aggregate	315.00	1,304,100	Tons
3	PC11	Waste Sand Stacker	Volume	Aggregate	315.00	1,304,100	Tons
3	CLII	CI II Base Carry Belt to CI II Base Stacker Belt	Area	Aggregate	1500.00	6,210,000	Tons
3	CLII	CI II Base Stacker Belt to 42433 Class II Base Cone Stockpile	Area	Aggregate	1500.00	6,210,000	Tons
3	PIT	Jaw Crusher in pit	Area	Aggregate	75.00	310,500	Tons

Device Throughput

Unit #	Model Group	Name	Modeled Source Type	Origin of PM	Hourly Throughput	Yearly Throughput	Unit
3	PIT	Jaw Feeder	Area	Aggregate	1500.00	6,210,000	Tons
3	PIT	Pit Feeder	Area	Aggregate	1500.00	6,210,000	Tons
3	PIT	Surge Feeder 1	Area	Aggregate	750.00	3,105,000	Tons
3	PIT	Surge Feeder 2	Area	Aggregate	750.00	3,105,000	Tons
3	AGG_PRIM	RC-2 Feeder	Area	Aggregate	595.50	2,465,370	Tons
3	AGG_PRIM	RC-3 Feeder	Area	Aggregate	355.50	1,471,770	Tons
8	LIMESILO	Lime Silo with Baghouse	Point	Lime	3.95	21,804	Tons
8	LPM	Lime Pugmill	Volume	Lime	395.00	2,180,400	Tons
8	LP_DM	Pugmill to Drum Conveyor	Volume	Lime	500.00	2,760,000	Tons
6	RAPPLANT	RAP Crusher	Area	RAP	150.00	828,000	Tons
6	RSC1	RAP Screen	Volume	RAP	300.00	1,656,000	Tons
6	RAPPLANT	RAP Feeder	Area	RAP	300.00	1,656,000	Tons
6	RAPPLANT	RAP Stacker-1	Area	RAP	180.00	993,600	Tons
6	RAPPLANT	RAP Stacker-2	Area	RAP	120.00	662,400	Tons
6	RAPPLANT	RAP Conveyors	Area	RAP	180.00	993,600	Tons
6	RAPPLANT	RAP Conveyors	Area	RAP	120.00	662,400	Tons
6	RAPPLANT	RAP Conveyors	Area	RAP	300.00	1,656,000	Tons
6	RAPPLANT	RAP Conveyors	Area	RAP	300.00	1,656,000	Tons
6	RAPPLANT	RAP Conveyors	Area	RAP	600.00	3,312,000	Tons
11	STOCKPLE	Wind Erosion from Four Storage Piles	Area	Aggregate			PM10
11	STOCKPLE	Truck Loading at Four Storage Piles	Area	Aggregate			PM10
10	Unit10	Process Heater	Point		5.20	10,483	MMBTU
10	Unit10A	Mixing and Reaction Tank	Point				VOC

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x, and PM10 with the emission rates below:

Criteria Pollutants Throughput									
Unit #	Model Grp	PM10 (Lbs.)		NOx(Lbs.)		CO (Lbs.)		SOx (Lbs.)	
		Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
1	AP_DRUM	0.00	0.00	2.17	17962.04	12.91	106881.55	0.13	1057.68
1	SILO_F	0.00	14.35			0.45	3726.00		

Criteria Pollutants Throughput									
Unit #	Model Grp	PM10 (Lbs.)		NOx(Lbs.)		CO (Lbs.)		SOx (Lbs.)	
		Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
1	A_SILO	0.00	16.28			0.39	3256.80		
1	LDR_SLP	0.01	44.16						
1	SLP_S	0.15	1214.40						
1	SC_DM	0.02	126.96						
6	L_RAP1	0.00	26.50						
6	RAP1_RFB	0.00	0.00						
6	RFB_DM	0.00	0.00						
6	RAPSCRN	0.00	0.00						
3	SURGE	0.07	285.66						
3	SURGE	0.07	285.66						
3	SURGE	0.07	285.66						
3	AGG_PRIM	0.07	285.66						
3	AGG_PRIM	0.03	113.41						
3	AGG_PRIM	0.04	180.54						
3	AGG_PRIM	0.04	145.97						
3	AGG_PRIM	0.03	106.55						
3	AGG_PRIM	0.01	28.57						
3	AGG_PRIM	0.04	146.54						
3	AGG_PRIM	0.01	47.99						
3	AGG_PRIM	0.66	73.99						
3	PR_SCRN	0.66	295.84						
3	CONES	0.07	295.84						
3	CONES	0.04	176.61						
3	SEC_AGG	0.04	180.54						
3	SEC_AGG	0.03	139.12						
3	SEC_AGG	0.03	139.12						
3	SEC_AGG	0.00	11.43						
3	SEC_AGG	0.01	49.28						
3	AGG_PRIM	0.07	285.66						
3	AGG_PRIM	0.07	285.66						
3	SEC_AGG	0.00	2.86						
3	SEC_AGG	0.00	2.86						
3	SEC_AGG	0.01	49.28						
3	SEC_AGG	0.00	17.14						
3	SEC_AGG	0.01	32.28						
3	SEC_AGG	0.01	35.71						
3	SEC_AGG	0.01	35.71						
3	SEC_AGG	0.00	17.14						
3	SEC_AGG	0.01	32.28						

Criteria Pollutants Throughput									
Unit #	Model Grp	PM10 (Lbs.)		NOx(Lbs.)		CO (Lbs.)		SOx (Lbs.)	
		Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
3	SEC_AGG	0.01	26.57						
3	SEC_AGG	0.01	35.71						
3	SEC_AGG	0.00	2.86						
3	SEC_AGG	0.00	2.86						
3	FNSCRN1	0.42	1726.88						
3	FNSCRN2	0.32	1333.41						
3	C10	0.04	146.54						
3	WASTE	0.01	59.99						
3	PC11	0.01	59.99						
3	CLII	0.07	285.66						
3	CLII	0.07	285.66						
3	PIT	0.04	167.67						
3	PIT	0.02	99.36						
3	PIT	0.02	99.36						
3	PIT	0.01	49.68						
3	PIT	0.01	49.68						
3	AGG_PRIM	0.01	39.45						
3	AGG_PRIM	0.01	23.55						
8	LIMESILO	0.00	7.41						
8	LPM	0.01	100.30						
8	LP_DM	0.02	126.96						
6	RAPPLANT	0.05	447.12						
6	RSC1	0.15	1225.44						
6	RAPPLANT	0.00	26.50						
6	RAPPLANT	0.01	45.71						
6	RAPPLANT	0.00	30.47						
6	RAPPLANT	0.01	45.71						
6	RAPPLANT	0.00	30.47						
6	RAPPLANT	0.01	76.18						
6	RAPPLANT	0.01	76.18						
6	RAPPLANT	0.02	152.35						
11	STOCKPLE	0.07	577.07						
11	STOCKPLE	0.05	115.00						
10	Unit10	0.04	79.67	0.06	164.50	0.19	775.74	0.08	167.73
10	Unit10A	0.00	42.00						

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results

	Background Site	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Turlock (2015)	Pass	X	Pass	X	X
NO _x	Turlock (2015)	Pass ¹	X	X	X	Pass
SO _x	Fresno – Garland (2015)	Pass	Pass	X	Pass	Pass
PM ₁₀	Turlock (2015)	X	X	X	Pass ²	Pass ²
PM _{2.5}	Turlock (2015)	X	X	X	Pass ³	Pass ³

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

³The court has vacated EPA's PM_{2.5} SILs. Until such time as new SIL values are approved, the District will use the corresponding PM₁₀ SILs for both PM₁₀ and PM_{2.5} analyses.

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk associated with the project is greater than 1.0 in a million, but less than 20 in a million. **In accordance with the District's Risk Management Policy, the project is approved with Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit requirements listed on page 1 of this report must be included for this proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Prioritization score w/ toxic emissions summary
- D. Facility Summary

APPENDIX J
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

$QNEC = PE2 - PE1$, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.

PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.

PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$PE2_{\text{quarterly}} = PE2_{\text{annual}} \div 4 \text{ quarters/year}$$

$$PE1_{\text{quarterly}} = PE1_{\text{annual}} \div 4 \text{ quarters/year}$$

Quarterly NEC [QNEC] for S-9380-1-0			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	3,970	0	3,970
SO _x	1,345	0	1,345
PM ₁₀	132	0	132
CO	26,512	0	26,512
VOC	1,426	0	1,426

Quarterly NEC [QNEC] for S-9380-2-0			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	623	0	623
CO	0	0	0
VOC	0	0	0

Quarterly NEC [QNEC] for S-9380-3-0			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	268	0	268
CO	0	0	0
VOC	0	0	0

Quarterly NEC [QNEC] for S-9380-4-0			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	0	0	0
CO	0	0	0
VOC	11	0	11

Quarterly NEC [QNEC] for S-9380-5-0			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	29	0	29
SO _x	42	0	42
PM ₁₀	20	0	20
CO	97	0	97
VOC	25	0	25

Quarterly NEC [QNEC] for S-9380-6-0			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	0	0	0
SO _x	0	0	0
PM ₁₀	82	0	82
CO	0	0	0
VOC	0	0	0

APPENDIX K
Asphalt Oil and Extender Oil MSDSs



SAN JOAQUIN REFINING CO., INC.

3129 Standard St, PO Box 5576, Bakersfield, CA 93388, Tel 661 327 4257, Fax 661 327 3236, www.sjr.com

CERTIFICATE OF ANALYSIS

DATE: 5/3/18

PRODUCT NAME: RAFFEX 120-ACB
PRODUCT TYPE: AROMATIC PETROLEUM OIL
CAS NO.: 64742-11-6
SJR PRODUCT CODE: 3142
TANK NO.: 13001
LOT NO.: _____

CUSTOMER: _____
DESTINATION: _____
CUST. P.O. NO.: _____
CARRIER: _____
R/C (T/T) NO.: _____
SHIPMENT DATE: _____

TESTS	ASTM METHOD	SPECIFICATIONS			RESULTS
		MIN	TYP	MAX	
*API Gravity	D287	8.5	9.5	11.0	8.7
*Density, lb/gal @ 60F	D1250	8.270	8.358	8.418	
Viscosity, SUS @ 100F	D2161		12400		12,854
*Viscosity, SUS @ 210F	D2161	100	120	140	109.04
*Viscosity, cSt @ 100C	D445				21.34
*Flash Point, COC, F	D92	405	420		445
Pour Point, F	D97		60		
Color	D1500		D8.0		8+
Mixed Aniline Point, F	D611		98		
Sulfur, w%	D2622		1.12		
Clay-Gel Analysis, w%	D2007				
Asphaltenes			Nil	0.1	
Polar Compounds			21		
Aromatics		55	65		
Saturates			14	25	
Carbon-Type Analysis, %	D2140				
Ca			42		
Cn			36		
Cp			22		

San Joaquin Refining Co. Inc. hereby certifies that the above tests were performed in accordance with applicable ASTM test methods and that the product designated hereon complies with the specification requirements for the product indicated.

APPROVED BY: W. WOOD
Quality Control Department
SAN JOAQUIN REFINING CO., INC.

COA3142080821



SAFETY DATA SHEET

1. Identification

Product identifier Raffex 120

Other means of identification

Product Code 3130

Recommended use Extender oil for asphalt and rubber

Recommended restrictions Follow the manufacturer's instructions.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer: Tricor Refining, LLC.

Address: P.O. Box 5877
Bakersfield, CA 93388

24-hour Telephone Number: (661) 393-7110

CHEMTREC: 1-800-424-9300 (North America)
1-703-527-3887 (International)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Carcinogenicity Category 1B

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Not available.

Prevention Obtain special instructions before use. Wear protective gloves/protective clothing/eye protection/face protection. Do not handle until all safety precautions have been read and understood.

Response IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF exposed or concerned: Get medical advice/attention.

Storage Store in accordance with international regulations. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
EXTRACTS (PETROLEUM), HEAVY NAPHTHENIC DISTILLATE SOLVENT		64742-11-6	100

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures**Suitable extinguishing media**

Water fog. Foam. Dry chemical powder. Dry chemicals. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions

Cool containers exposed to heat with water spray and remove container, if no risk is involved.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas.

Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)****Components****Type****Value****Form**

EXTRACTS (PETROLEUM),
HEAVY NAPHTHENIC
DISTILLATE SOLVENT (CAS
64742-11-6)

PEL

5 mg/m³

Mist.

US. NIOSH: Pocket Guide to Chemical Hazards**Components****Type****Value****Form**

EXTRACTS (PETROLEUM),
HEAVY NAPHTHENIC
DISTILLATE SOLVENT (CAS
64742-11-6)

STEL

10 mg/m³

Mist.

TWA

5 mg/m³

Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Hand protection	Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	Not available.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Black liquid
Physical state	Liquid.
Form	Liquid.
Color	Black
Odor	Odorless to Mild.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	500 °F (260 °C)
Flash point	410.0 °F (210.0 °C) minimum
Evaporation rate	< 1
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0.1 mm Hg @ 100 deg F
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Nil
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	1

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
------------------	--

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.
Information on toxicological effects	
Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Contains a substance/a group of substances which may cause cancer. Contains polycyclic aromatic compounds (PACs). Prolonged and/or repeated skin contact with certain PACs has been shown to cause skin cancer. Prolonged and/or repeated exposures by inhalation of certain PACs may also cause cancer of the lung and of other sites of the body.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 No

Hazardous chemical

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US. Massachusetts RTK - Substance List

EXTRACTS (PETROLEUM), HEAVY NAPHTHENIC DISTILLATE SOLVENT (CAS 64742-11-6)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

EXTRACTS (PETROLEUM), HEAVY NAPHTHENIC DISTILLATE SOLVENT (CAS 64742-11-6)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-22-2015

Version # 01

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAN JOAQUIN REFINING CO., INC

CERTIFICATE OF ANALYSIS

LABORATORY REPORT- ASPHALT PRODUCTS

Performance Graded Asphalt Binder per CALTRANS Specification

PRODUCT: **PAVING ASPHALT PG 64-10**

PRODUCT: **2185**

AASHTO SPECIFICATION GRADE

PROPERTY	Test Method	PG 64-10	PG 64-10
ORIGINAL BINDER		SPEC	TEST
<u>Flash Point, Minimum C</u>	T-48	230	301
<u>VOC's, %</u>	ASTM D402	<0.5%v	0.0
<u>Solubility, Minimum %</u>	T-44	99	99.9
<u>Viscosity at 135 C,</u> <u>Maximum, Pa ' s</u>	T-316	3.0	0.258
<u>Dynamic Shear,</u> Test Temp. at 10 rad/s, C Minimum G*/sin(delta), kPa Phase Angle, δ (°)	T-315	64 1.00	64 1.441 89.5
RTFO Test Aged Binder			
<u>RTFO Test</u> Mass Loss, Maximum, %	T-240	1.00	-0.214
<u>Dynamic Shear,</u> Test Temp. at 10 rad/s, C Minimum G*/sin(delta), kPa Phase Angle, δ (°)	T-315	64 2.2	64 2.498 88.9
<u>Ductility at 25 C</u> Minimum, cm	T-51	75	150
<u>PAV Aging,</u> Temperature, C	R-28	100	100
RTFO Test and PAV Aged Binder			
<u>Dynamic Shear,</u> Test Temp. at 10 rad/s, C Maximum, G*/sin(delta), kPa Phase Angle, δ (°)	T-315	31 5000	31 4877 63.3
<u>Bending Beam, Creep Stiffness,</u> Test Temperature, C Maximum S-value, Mpa Minimum M-value	T-313	0 Max 300 Min 0.300	0 155 0.428

Tank No.: **20004** Carrier: _____ Quantity: (Gal) _____ (Tons) _____
 Batch No.: **190115** Truck No: _____ API Gravity @ 60F: **6.3** Specific Gravity @ 60 F: **1.0268**
 Buyer: _____ Loading Temp, F: _____ Shipment Date: _____

We hereby certify that the above determinations were performed in accordance with AASHTO, ASTM or other applicable test methods and that the product designated hereon conforms to the Caltrans specification for the product indicated: **PG 64-10**

DATE:

1/15/2019 TESTER:

Don Conner

Binder **SJR PG 64-10 Paving Asphalt**

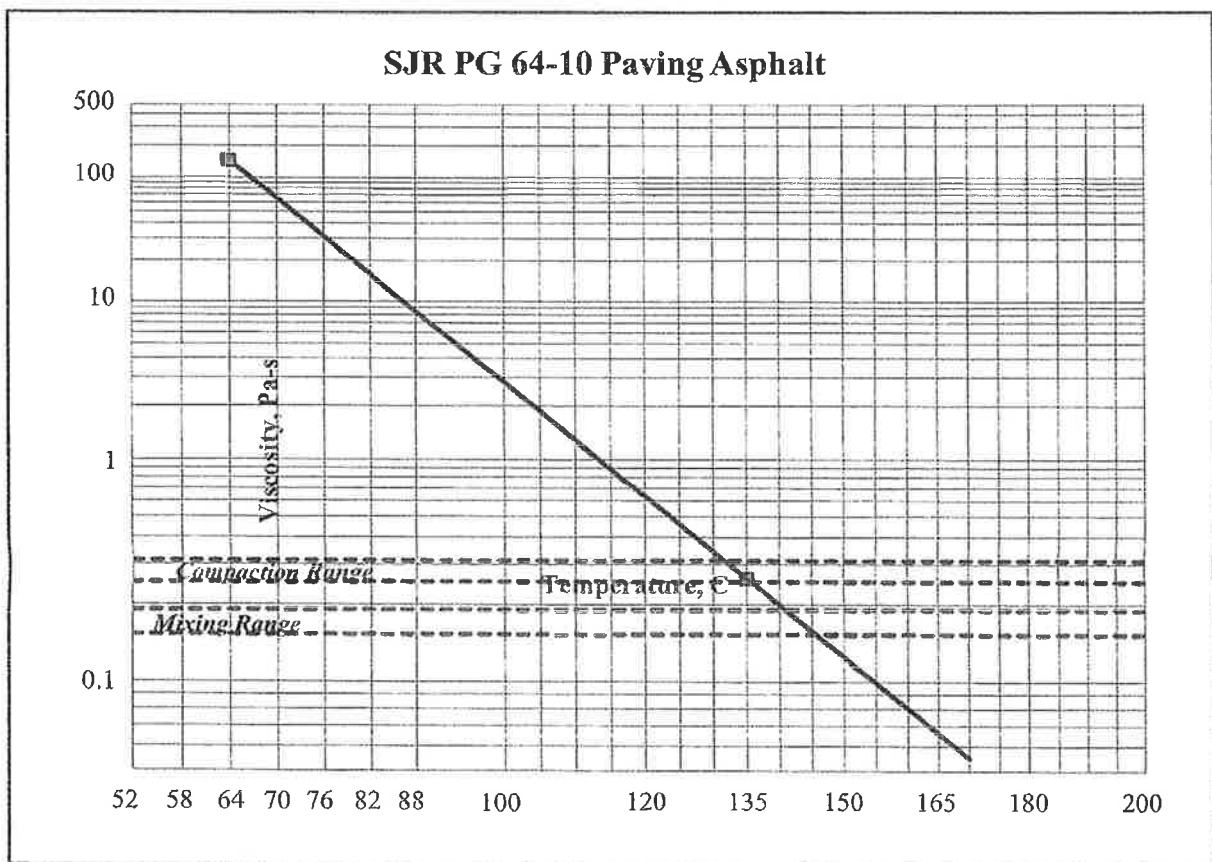
Temp (C)	Viscosity (cp)	Mixing Temperature Range, C	141 - 146
135	258	Compaction Temperature Range, C	132 - 136

Specific Gravity **1.0258**

DSR (Do not enter if using two RV measurements)

Temperature, C **64**

$G^*/\sin \delta$ (kPa) **1.441**



SAFETY DATA SHEET

FILE NUMBER: 2185

NAME OF PRODUCT **PAVING ASPHALT, PG 64-10**

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PAVING ASPHALT, PG 64-10
SYNONYMS: PETROLEUM ASPHALT
PRODUCT CODE: 2185
MANUFACTURER: SAN JOAQUIN REFINING CO., INC
DIVISION: BAKERSFIELD
ADDRESS: P.O. BOX 5576, BAKERSFIELD, CA., 93388
EMERGENCY PHONE: (661) 327-4257
RECOMMENDED USE: ROAD PAVING OR OTHER ASPHALT RELATED APPLICATIONS
RESTRICTIONS ON USE: NOT TO BE USED FOR PURPOSES OTHER THAN RECOMMENDED USE
PREPARED BY: SAN JOAQUIN REFINING CO., INC. HEALTH, SAFETY AND ENVIRONMENTAL DEPARTMENTS

SECTION 2: HAZARDS IDENTIFICATION

MATERIAL HAZARD EVALUATION

(Per OSHA Hazard Communication Standard [29 CFR 1910.1200])

Health Precautions: **WARNING:** Fumes from hot product may cause irritation to the skin, nose, throat and lungs. Hot asphalt may give off hydrogen sulfide (H₂S) gas. At elevated concentrations, H₂S acts as a systemic poison and causes unconsciousness and death by respiratory paralysis.

Safety Precautions: **WARNING:** Hot asphalt can cause burns. If burned by hot product, cool affected area immediately with cool water. Do not attempt to remove asphalt from skin. Seek medical attention immediately.

ROUTES OF ENTRY:	EYES: Yes	SKIN: Yes	INGESTION: Yes	INHALATION: Yes
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OSHA Hazard: irritant, carcinogen



Signal word: Warning
GHS Classification: 2



Signal word: Warning
GHS Classification: 2

Serious eye irritation = GHS Cat. 2
Suspected human carcinogen = GHS Cat. 2

HEALTH HAZARDS (ACUTE AND CHRONIC:

EYES: The cool semi-solid material is not expected to cause eye irritation. Thermal burns may result from contact with hot material. Some asphalts, when heated, may produce hydrogen sulfide gas (H₂S) (CAS No. 7783-06-4), which is a severe eye irritant. See Section 8 for exposure controls.

SKIN: The cool semi-solid material is not expected to cause skin irritation. Thermal burns may result from contact with hot material. NIOSH states that asphalt fumes or vapors can be absorbed through the skin.

INGESTION: This product may be harmful or fatal if swallowed. May cause dizziness, lack of coordination, headache, nausea and vomiting. Do not induce vomiting, call a physician.

INHALATION: Fumes from hot products may be unpleasant and may irritate the upper and lower respiratory tracts. Remove the person to fresh air if respiratory discomfort occurs. Some asphalts, when heated, may give off hydrogen sulfide gas (H₂S) (CAS No. 7783-06-4), which is a poison by inhalation and a severe irritant to the nose and throat. See Section 8 for exposure controls.

SIGNS AND SYMPTOMS OF EXPOSURE:

EYES: Burns, irritation, redness or blurred vision
SKIN: Burns, irritation, redness and inflammation
INGESTION: Dizziness, lack of coordination, headache, nausea or vomiting. Do not induce vomiting.
INHALATION: Asphalt fumes may cause nose and throat irritation, coughing, wheezing or shortness of breath, nausea, headaches, stomach pain, decreased appetite or fatigue.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Persons with preexisting skin or respiratory disorders may have their conditions aggravated by overexposure to this material.

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

CHEMICAL FAMILY: PETROLEUM ASPHALT

COMPONENT(S)	% BY WEIGHT
Petroleum Asphalt CAS No. 8052-42-4	>70
Heavy Naphthenic Distillate CAS No. 64741-53-3	<30
Heavy Naphthenic Extract CAS No. 64742-11-6 (Petroleum)	<30

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush eyes with water for a minimum of 15 minutes. Seek medical attention immediately.

SKIN: If hot material is splashed on the skin, immediately drench or immerse the area in water. If available, apply ice water, ice packs (avoid hypothermia) or a water gel blanket on the affected area. Do not try to remove the asphalt from the skin once it has cooled and do not use solvents or thinners to remove the asphalt from the skin. Seek medical attention immediately. Medical personnel can soften and remove the cooled asphalt from the skin by using petroleum jelly or mineral oil.

INGESTION: Do not induce vomiting. If ingested, seek medical attention.

INHALATION: If operating conditions create airborne concentrations that exceed the exposure standard, move the person to fresh air. Administer CPR if required. Provide oxygen if breathing is difficult. Seek medical attention immediately.

SECTION 5: FIREFIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, (% BY VOLUME) UPPER: No data available
LOWER: No data available

FLASH POINT: COC °F: 450° Minimum

EXTINGUISHING MEDIA: Foam, water fog, dry chemical, CO²

SPECIAL FIRE FIGHTING PROCEDURES: Do not enter confined fire space without proper protective equipment including self-contained breathing apparatus. See Hazardous Decomposition Products. Water or foam may cause frothing. Use of water on asphalt above 100° C (212° F) can cause product to expand with explosive force.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal combustion forms carbon dioxide and water vapor, and may produce oxides of sulfur and nitrogen. Incomplete combustion can produce carbon monoxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION: Wear safety glasses, rubber gloves, Tyvek type coveralls and rubber boots.

ACCIDENTAL RELEASE MEASURES: In case of spill, clean up using absorbent material such as earth or sand.

RCRA HAZARD CLASS: This product is not a characteristic hazardous waste under RCRA. No EPA waste numbers are applicable for this product's components.

SECTION 7: HANDLING AND STORAGE

PERSONAL PROTECTION: Wear safety glasses, rubber gloves, Tyvek type coveralls and rubber boots.

HANDLING AND STORAGE: Liquid asphalt is extremely hot. To avoid serious burns, always use the following precautions. Never expose bare skin. Wear a long sleeve cotton shirt, a full face shield, safety goggles and heavy duty gloves which extend up the arm past the shirt cuff. NIOSH and ACGIH recommend keeping asphalt temperatures as low as possible. NIOSH advises use of engineering controls and good work practices at all work sites to minimize worker exposure to asphalt fumes. Some asphalts, when heated, may give off hydrogen sulfide gas (H₂S). See Section 8 for exposure controls.

VENTILATION: Use adequate ventilation to keep the airborne concentrations of this material below the established exposure limits.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT(S)	CAL-OSHA PEL- TWA (8 HOUR)	ACGIH TLV-TWA (8 HOUR)	OTHER LIMITS RECOMMENDED
Petroleum Asphalt CAS No. 8052-42-4	5 mg/m ³	0.5 mg/m ³ (as the inhalable fraction)	NIOSH REL 5 mg/m ³ (15 Minute)
Heavy Naphthenic Distillate CAS No. 64741-53-3	5 mg/m ³	5 mg/m ³ (as oil mist)	None
Heavy Naphthenic Extract CAS No. 64742-11-6 (Petroleum)	5 mg/m ³	5 mg/m ³ (as oil mist)	None

RESPIRATORY PROTECTION: If operating conditions create airborne concentrations that exceed the exposure standard for asphalt fumes, the use of an approved NIOSH/OSHA respirator for organic vapors or air supplied breathing equipment is recommended.
Hydrogen Sulfide Exposure Limit:

ACGIH: (1PPM) TLV-TWA
(5PPM) TLV-STEL
CAL-OSHA: 10PPM / (14 mg/m³ of air) – PEL
15PPM / (21 mg/m³ of air) – STEL
50PPM - ceiling

EYE PROTECTION: Wear appropriate safety glasses, goggles or full face shield.

SKIN PROTECTION: Long sleeve cotton shirt and cotton pants are recommended. Wear appropriate gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Black, semi solid, or Liquid when hot	UPPER/LOWER FLAM/EXP LMT: NDA
ODOR:	Petroleum odor	VAPOR PRESSURE (mmHg): @ 100° F <1
ODOR THRESHHOLD:	NDA	VAPOR DENSITY (AIR = 1): >1
pH:	NDA	RELATIVE DENSITY: NDA
MELTING/FREEZING PT:	NDA	SOLUBILITY IN WATER: NIL
INITIAL BOILING POINT: @760° mmHg:	700° F	PART. COEF. N-OCT/H₂O ≥ 10
FLASH POINT: COC °F:	450° Minimum	AUTOIGNITION TEMP: NDA
EVAPORATION RATE (ETHYL ETHER = 1):	NA	DECOMPOSITION TEMP: NDA
FLAMMABILITY (solid, gas):	NDA	SPECIFIC GRAVITY (H₂O = 1): 1.01
PERCENT VOLATILE (% BY VOL.):	NA	

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS CONTRIBUTING TO INSTABILITY: None
INCOMPATIBILITY (MATERIAL TO AVOID): May react with strong oxidizers.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Normal combustion forms carbon dioxide and water vapor, and may produce oxides of sulfur and nitrogen. Incomplete combustion can produce carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

HEALTH EFFECTS: Mild eye and skin irritant. Possible respiratory irritant.

CARCINOGENICITY:

ACGIH, NTP, OSHA and IARC carcinogen lists were checked for those components with CAS Registry Numbers (8052-42-4), (64741-53-3) and (64742-11-6).

ACGIH: Asphalt fumes (coal tar-free) are designated as A4 – NOT CLASSIFIABLE AS A HUMAN CARCINOGEN.

IARC: Bitumens – during road paving the occupational exposures to bitumens and their emissions have been assigned a Group 2B ("possibly carcinogenic to humans") classification. Distillates (petroleum), heavy naphthenic unrefined or mildly refined baseoil and Extracts, (petroleum), heavy naphthenic distillate solvent are categorized by the International Agency for Research on Cancer as causing skin cancer in laboratory animals when the oil was repeatedly applied for most of the lifetime of the animal with no effort made to remove the oil between applications. Handling instructions and precautions outlined in this MSDS should be followed when handling this product.

NTP: Asphalt fumes are not listed as a known or reasonably anticipated human carcinogen.

OSHA: Asphalt fumes are not classified as carcinogens.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: Asphalt is not expected to cause acute or chronic toxicity to aquatic organisms due to the extremely low water solubility of this material.

PERSISTENCE & DEGRADABILITY: Although component hydrocarbons may undergo direct or indirect photo degradation, the physiochemical characteristics of asphalt under ambient conditions will not facilitate these reactions.

BIOACCUMULATIVE POTENTIAL: NDA

MOBILITY IN SOIL: NDA

OTHER ADVERSE EFFECTS: NDA

AQUATIC RELEASE: Advise authorities if product has entered or may enter watercourses or sewer drains.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE RESIDUES DESCRIPTION: This product is not a characteristic hazardous waste under RCRA. No EPA waste numbers are applicable for this product's components.

SAFE HANDLING INFORMATION: See Section 7 (Handling and Storage)

WASTE DISPOSAL METHOD: Observe Federal, State and Local regulations covering chemical waste spills.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:

PROPER SHIPPING NAME: ELEVATED TEMPERATURE LIQUID, N.O.S. (ASPHALT)

HAZARD CLASS:	9	PACKING GROUP:	III
ID NUMBER:	UN3257	REQUIRED LABEL(S):	CLASS 9

BASIC DESCRIPTION: UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S. (ASPHALT), 9, PGIII

AMBIENT TEMPERATURE MATERIAL (SOLID)

PROPER SHIPPING NAME: Not regulate by D.O.T.

HAZARD CLASS: None

ID NUMBER: None

D.O.T. SHIPPING LABEL: Not regulated by D.O.T.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TSCA (TOXIC SUBSTANCE CONTROL ACT) REGISTRY: Listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT):
Asphalt is not a hazardous substance under CERCLA.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

302/304 Asphalt is a hazardous chemical under 40 CFR Part 355. Asphalt is not listed as an extremely hazardous substance in 40 CFR Part 355, and is not known to contain an extremely hazardous substance in a concentration greater than one percent by weight.

311/312 HAZARD CATEGORIES:

Acute Health Hazard:	Yes
Chronic Health Hazard:	Yes
Fire Hazard:	No
Pressure Release Hazard:	No
Reactivity Hazard:	No

313 This product is not known to contain any components in concentrations above OSHA *de minimus* levels that are listed as toxic in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA.

WHMIS: Listed

OSHA: 29 CFR 1910.1200 (Hazard Communication) required

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65 (The Safe Drinking Water and Toxics Enforcement Act)



WARNING: This product can expose you to chemicals including toluene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Asphalt or asphalt fumes appear on one or more of the hazardous substances lists in the following states:

CA FL MA MN NJ PA WA

SECTION 16: OTHER INFORMATION

DATE REVISED: 12/22/17

SUPERCEDES: 8/24/15

The information provided in this Safety Data Sheet is believed to be accurate and reliable on and as of the date on this page. **However, this Safety Data Sheet is not a guarantee or warranty of any kind, express or implied. Any and all warranties of merchantability and/or fitness for a particular purpose are specifically disclaimed.** It is the user's responsibility to determine the conditions under which the product is used, including the selection of engineering controls, work practices and Personal Protective Equipment to minimize hazards.