San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

APR 28 2010

Mark Trask
Granite Construction Company
2716 Granite Court
Fresno, CA 93706

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1100454

Dear Mr. Trask:

Enclosed for your review and comment is the District's analysis of Granite Construction Company's application for an Authority to Construct for the installation of a temporary asphalt drum mix plant to support a nearby road construction project, at 44999 Road 200 in O'Neals.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Thom Maslowski of Permit Services at (559) 230-5906.

Sincerely,

David Warner
Director of Permit Services

DW:TM

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

APR 28 2010

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1100454

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Granite Construction Company's application for an Authority to Construct for the installation of a temporary asphalt drum mix plant to support a nearby road construction project, at 44999 Road 200 in O'Neals.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Thom Maslowski of Permit Services at (559) 230-5906.

Sincerely,

David Warner
Director of Permit Services

DW:TM

Enclosure

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

Fresno Bee
Fresno Bee

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Granite Construction Company for the installation of a temporary asphalt drum mix plant to support a nearby road construction project, at 44999 Road 200 in O'Neals.

The analysis of the regulatory basis for this proposed action, Project #C-1100454, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
Asphaltic Concrete Manufacturing Facility

Facility Name:	Granite Construction Company	Date:	March 6, 2010
Mailing Address:	2716 Granite Court	Engineer:	Thom Maslowski
	Fresno, CA 93706	Lead Engineer:	Joven Refuerzo
Contact Person:	Mark Trask		
Telephone:	(916)855-8832		
Application #(s):	C-7940-1-0		
Project #:	1100454		
Deemed Complete:	March 5, 2010		

I. Proposal

Granite Construction Company is requesting an Authority to Construct (ATC) for the installation of a propane fired hot mix asphaltic concrete drum mix plant and associated equipment. The ATC authorizes a new emission unit with a potential to emit greater than 100 pounds per day so a public notice is required prior to issuance.

II. Applicable Rules

Rule 2020	Exemptions (12/19/02)
Rule 2201	New and Modified Stationary Source Review (09/21/06)
Rule 4001	NSPS, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities (04/14/99)
Rule 4101	Visible Emissions (amended (02/17/05)
Rule 4102	Nuisance (amended 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 4309	Dryers, Dehydrators and ovens (12/15/05)
Rule 4641	Cutback, Slow Cure, Emulsified Asphalt, Paving and Maintenance Operations (12/17/92)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 41700	California Health and Safety Code

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 facility is located at 44999 Road 200, O'Neals. The equipment is located within 1,000 feet of the outer boundary of any K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is applicable to this project.

IV. Process Description (please refer to the process flow diagram in **Attachment II).**

The asphalt plant produces asphaltic concrete which is a mixture of well-graded, high quality aggregate and liquid asphalt oil.

Hot mix asphalt (HMA) is made by sizing aggregate, drying it, and mixing it with a proportioned amount of heated asphalt oil such that the aggregate particles are uniformly coated with asphalt. The propose plant is a continuous, parallel flow, natural gas fired drum mix plant.

Aggregate, later sometimes in conjunction with ground up recycled asphaltic concrete, from existing stockpiles is loaded into feed bins using front-end loaders. The material is metered from the bins onto a feed belt, through a grizzly, and onto a belt that transports the aggregate to the rotary dryer drum. Heated asphalt oil is pumped from a permit exempt heated storage tank and is proportioned into the rotary mixing drum onto the hot aggregate. Finished asphaltic concrete is conveyed through an enclosed conveyor to a surge silo used for truck load-out. The finished asphalt conveyor, the silo, and the truck load-out are all ventilated to the mixing drum burner to control "blue smoke" emissions off the finished asphaltic concrete.

This drum mix facility uses a parallel flow design for burner gases and aggregate flow. Aggregate is introduced at the burner end of the drum and asphalt oil and fines collected in the fabric collector are introduced about one-half way down the drum. A blower ventilating the finished asphaltic concrete conveyor, silos, and truck load-out discharges into the drum burner air inlet.

VOC and PM10 emissions are generated from aggregate handling, aggregate drying, mixing, storage, and loadout operations. The 135 MM Btu/hr low-NOx burners utilizes LPG. The burner generates NOx, VOC, CO, SOx and PM10 emissions. A baghouse will be used to control PM10 emissions from the HMA mixing drum. The fines from the baghouse will be fed back into the process (mixed in drum mixer with asphaltic concrete mix).

V. Equipment Listing

C-7940-1-0: HOT MIX ASPHALTIC CONCRETE DRUM MIX PLANT INCLUDING; SIX AGGREGATE FEED BINS, GRIZZLY SEPARATOR, CONVEYORS, 135 MMBTU/HR HOT MIX DRUM DRYER WITH A GENCOR UL 135 LOW NOX BURNER SERVED BY A GENCOR ULTRA CFT 182 FABRIC COLLECTOR, 3 FINES RECYCLING SCREW CONVEYORS, ASPHALTIC CONCRETE CONVEYORS

C-7940-2-0: 3 ASPHALTIC CONCRETE SILOS AND UNDER-SILO TRUCK LOAD OUTS VENTILATED TO DRUM BURNER AND A PERMIT EXEMPT OIL HEATER (LPG, 2 MMBTU/HR OR LESS)

VI. Emission Control Technology Evaluation

Emissions from the asphalt drum will be controlled using a fabric collector with a PM10 control efficiency of 99%. The finished asphaltic concrete conveyor, finished AC silos and under-silo truck load-outs will all be ventilated to the asphalt drum burner to control "blue smoke" (PM10 and VOC's).

VII. General Calculations

A. Assumptions

- Process weight rate: 3,200tons/day, 100,000 tons/yr (80% aggregate and 20% RAP)
- Hours of operation: 8 hr/day and 320 hr/yr, Maximum fuel consumption of 1,080 MMBtu/day and 43,200 MMBtu/yr
- Emissions from the asphaltic concrete manufacturing operation consist of emissions from the dryer drum mixer which are vented through the fabric collector, PM10 emissions from aggregate and RAP handling and feeding equipment, and PM10 and VOC ("blue smoke") emissions from the finished asphaltic concrete conveyor, the three silos, and under-silo truck loadout. PM10 feed and handling emissions occur during truck unloading, stockpiling, retrieval from storage, transfer of aggregate into the five feed bins, the grizzly separator, and 2 conveyor transfer points (with water spray). PM10 emissions from the RAP operation occur at truck unloading, stockpiling, retrieval from storage, transfer into one fed bin, and 2 conveyor transfer points (with water spray).
- PM10 and VOC control efficiency for silo filling and loadout: 90%
- Silo temperature: 325 deg F
- Storage pile emissions based on 3% moisture and 15 mph wind speed
- Screening emissions factor was used to evaluate emissions from grizzly
- 77% of RAP material passes a #4 Sieve (Attachment VII)
- 50.4% of Aggregate passes a #4 Sieve (Attachment VII)

B. Emission Factors

Post-project emissions factors are used to calculate SSPE2 and the PE2s.

LPG-Fired Asphaltic Drum Heater
NOx : 0.0094 lb/ton LPG-fired dryer –Per applicant
SO_2: 0.0034 lb/ton AP-42 Table 11.1-7 (03/04)
PM10: 0.0059 lb/ton – Per Applicant
CO: 0.059 lb/MMBtu- Per Applicant
VOC: 0.032 lb/ton AP-42 Table 11.1-8 (3/04)

Silo Filling (AP-42 Table 11.1-14 **Attachment III)**
PM10: 0.000586 lb/ton $(0.000332 + 0.00105(0.5)\, e^{((0.0251)(325+460)-20.43)})$
VOC: 0.01219 lb/ton $(0.0504(0.5)\, e^{((0.0251)(325+460)-20.43)})$
CO: 0.00118 lb/ton $(0.00488(0.5)\, e^{((0.0251)(325+460)-20.43)})$

Silo Load-out (AP-42 Table 11.1-14 **Attachment III**)
PM10: 0.00052 lb/ton $(0.000181 + 0.00141(0.5)\, e^{((0.0251)(325+460)-20.43)})$
VOC: 0.004159 lb/ton $(0.0172(0.5)\, e^{((0.0251)(325+460)-20.43)})$
CO: 0.001349 lb/ton $(0.00558(0.5)\, e^{((0.0251)(325+460)-20.43)})$

Storage pile emissions (AP-42 p 13.2.4-3, 1/95)
PM10: $E = 0.35\ (0.0032)(2/3)^{1.4}(15/5)^{1.3}$
= 0.00265 lb/ton (Base)
= 0.00134 lb/ton (Aggregate – Applying Sieve #4)
= 0.00204 lb/ton (RAP – Applying Sieve #4)

Feed Handling Operations (AP-42 Section 11.19.2-2 1/95):
Screening with water spray – 0.00084 lb/ton
Conveyor transfer point with water spray – 0.000048 lb/ton
Truck unloading – conveyor crushed stone 0.0001 lb/ton

C. Calculations

1. Pre-Project Potential to Emit (PE1)

This is a new facility so PE1 = 0

2. Post Project Potential to Emit (PE2)

The PE2s for the asphalt drum and heater are listed in the table below:

C-7940-1-0

Asphalt Drum Burner Emissions

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	0.0094 lb/ton x 3,200 tons/day = 30.1	0.0094 lb/ton x 100,000 tons/yr = 940
SO_X	0.0034 lb/ton x 3,200 tons/day = 10.9	0.0034 lb/ton x 100,000 tons/yr = 340
PM_{10}	0.0059 lb/ton x 3,200 tons/day = 18.9	0.0059 lb/ton x 1000,000 tons/yr = 590
CO	0.059 lb/ton x 3,200 tons/day = 188.9	0.059 lb/ton x 100,000 tons/yr =5,900
VOC	0.032 lb/ton x 3,200 tons/day = 102.4	0.032 lb/ton x 100,000 tons/yr = 3,200

Feed Handling (PM10 Emissions Only)

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
Grizzly	0.00084 lb/ton x 3,200 tons/day x 0.8 = 2.2 lb/day	0.00084 lb/ton x 100,000 tons/yr x 0.8 = 67 lb/yr
2 Conveyor transfer points	2 x 0.000048 lb/ton x 3,200 tons/day x 0.8 = 0.2 lb/day	2 x 0.000048 lb/ton x 100,000 tons/yr x 0.8 = 8 lb/yr
Truck unloading	0.0001 lb/ton x 3,200 tons/day x 0.8 = 0.3 lb/day	0.0001 lb/ton x 100,000 tons/yr x 0.8 = 8 lb/yr
Storage Piles	0.00134 lb/ton x 3,200 tons/day x 0.8 = 3.4 lb/day	0.00134 lb/ton x 100,000 tons/yr x 0.8 = 107 lb/yr
Total PM10	6.1	190

RAP Handling (PM10 Emissions Only)

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
2 Conveyor transfer points	2 x 0.000048 lb/ton x 3,200 tons/day x 0.2 = 0.1 lb/day	2 x 0.000048 lb/ton x 100,000 tons/yr x 0.2 = 2 lb/yr
Truck unloading	0.0001 lb/ton x 3,200 tons/day x 0.2 = 0.1 lb/day	0.0001 lb/ton x 100,000 tons/yr x 0.2 = 2 lb/day
Storage Piles	0.00204 lb/ton x 3,200 tons/day x 0.2 = 1.3 lb/day	0.00204 lb/ton x 100,000 tons/yr x 0.2 = 71 lb/day
Total PM10	1.5	41

Total Emissions C-7940-1-0

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	30.1	990
SO_X	10.9	340
PM_{10}	26.5	821
CO	188.9	5,900
VOC	102.4	3,200

C-7940-2-0

Silo Filling and Loadout Emissions

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
PM_{10}	(0.000586 + 0.00052 lb/ton) x 3,200 tons/day x 0.1 = 0.4	(0.000586 + 0.00052 lb/ton) x 100,000 tons/yr x 0.1 = 111
CO	(0.00118 + 0.001349 lbs/ton) x 3,200 tons/day = 8.1	(0.00118 + 0.001349 lb/ton) x 100,000 tons/yr = 253
VOC	(0.01219 + 0.004159) x 3,200 tons/day x 0.1 = 5.2	(0.01219 + 0.004159) x 100,000 tons/yr x 0.1 = 163

Total Project Emissions

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	30.1	990
SO_X	10.9	340
PM_{10}	26.9	932
CO	197.0	6,153
VOC	107.6	3,363

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (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 that have occurred at the source, and which have not been used on-site.

Since this is a new facility SSPE1=0 for all pollutants.

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

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) 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 Em

issions Reductions that have occurred at the source, and which have not been used on-site.

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
C-7940-1-0	990	340	821	6,153	3,200
C-7940-2-0	0	0	111	253	163
Post Project SSPE (SSPE2)	990	340	932	5,900	3,363

5. Major Source Determination

Pursuant to Section 3.25 of District Rule 2201, a major source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.25.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which

have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Major Source Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Pre-Project SSPE (SSPE1)	0	0	0	0	0
Post Project SSPE (SSPE2)	990	340	932	6,153	3,363
Major Source Threshold	50,000	140,000	140,000	200,000	50,000
Major Source?	No	No	No	No	No

As seen in the table above, the facility is an existing Major Source but is losing major source status as a result of the project.

6. Baseline Emissions (BE)

BE = Pre-project Potential to Emit 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 Section 3.23

Since this a new facility BE = 0 for all pollutants.

7. Major Modification

A Major Modification occurs if the Post-Project Stationary Source Potential to Emit (SSPE2) exceeds the Major Source Thresholds (as defined in Rule 2201) and the Increase in Permitted Emissions (CIPE), is equal to or greater than one or more of the major modification threshold values. The post-project SSPE2 is below the major source threshold, therefore no major modification occurs.

8. Federal Major Modification

As shown above, this project does not constitute a Major Modification. Therefore, in accordance with District Rule 2201, Section 3.17, this project does not constitute a Federal Major Modification and no further discussion is required.

9. 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 Attachment X.

VIII. Compliance

Rule 2020 Exemptions

The asphaltic oil storage tanks are exempt as they store non-air-blown asphalt with 0.9042 specific gravity or higher (25° API or lower) as measured by test method API 2547 or ATM D-1298-80.

The asphaltic oil heater is permit exempt as it is fired on LPG meeting the specifications of Section 6.1.1.

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 for the following*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in a Major Modification.

*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

C-7940-1-0 & '-2-0

Daily Emissions (lb/day)			
Asphalt Drum Burner	PE2 (lb/day)	BACT Triggered (PE2> 2 lb/day)	BACT Guideline
NO_X	30.1	Yes	6.3.1
SO_X	10.9	Yes	6.3.1
PM_{10}	18.9	Yes	6.3.1
CO	188.9	No	6.3.1
VOC	102.4	Yes	6.3.1
Silo Filling /Loadout			
PM10	0.4	No	
CO	8.1	No	6.3.1
VOC	5.2	Yes	6.3.1
Feed Handling			
Grizzly PM10	2.2	Yes	6.1.1
Conveyor Transfer Point PM10	0.2	No	
Truck Unloading PM10	0.3	No	
Storage Pile PM10	3.4	Yes	6.1.1
RAP Handling			
Conveyor Transfer Point PM10	0.0	No	
Truck Unloading PM10	0.1	No	
Storage Pile PM10	1.3	No	6.1.1

As indicated in the above table BACT is triggered for the following emissions units: asphalt drum heater (NOx, VOCs, PM10, and SOx), silo filling/loadout (VOC), feed handling storage pile (PM10). Note that BACT is not triggered for CO since the facility SSPE2 is less than 200,000 lb/yr.

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

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

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. Major Modification

As discussed in Section VII.C.7 above, this project does not constitute a Major Modification; therefore BACT is not triggered for Major Modification purposes.

2. BACT Guideline

BACT Guidelines 6.1.1 and 6.3.1 apply to Asphaltic Concrete – Drum Mix Plant, ≥2,000 ton/day or ≥ 75.6 MMBtu/hr burner and Aggregate Crushing, Screening, and Storage Operation - > 5,850 tons/day. Please see **Attachment IV**.

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 for the Asphaltic Concrete – Drum Mix Plant (see **Attachment V**), the BACT requirements are as follows:

NO_X: 0.088 lb/MMBtu low-NOx burner and either natural gas or LPG as the primary fuel (Achieved-in Practice),

VOC: Natural gas or LPG as a primary fuel; enclosed hot mix silos and loadout operation vented to the rotary-dryer burner (Achieved-in-Practice)

Enclosed hot mix silos and load-out operation vented to an afterburner (Technologically feasible)

SO_X: PUC quality natural gas or LPG as primary fuel.

PM_{10}: 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 mix 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.

Applicant has proposed to combust natural gas only with a NOx emissions factor of 0.0492 lb/MMBtu and vent the rotary drum to a baghouse. The conveyors and hot mix storage silos will be enclosed and vent to the asphalt drum burner for control of blue smoke emissions. Venting to the asphalt drum burner followed by a baghouse is considered to be equivalent in PM10 control efficiency to venting to oil mix collectors and/or an ESP for control of PM10 emissions. Therefore, BACT has been satisfied.

For the feed handling operations, BACT Guideline 6.1.1 includes only one alternative:

PM10: Screens served by fabric filter baghouse, all other emission points less than 5% opacity utilizing water spray with chemical additive (Achieved-in-Practice).

Applicant will install water sprays for control of PM10 emissions from drop points, grizzly, and storage piles. Therefore, BACT has been satisfied.

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 or Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Post Project SSPE (SSPE2)	990	340	932	6,153	3,363
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	No	No	No	No	No

2. Quantity of Offsets Required

As seen above, the SSPE2 is not greater than the offset thresholds for any pollutant but as seen in section F below the project does not pass the Ambient Air Quality Analysis for PM10 emissions therefore the facility has proposed to offset all PM10 emissions for this project..

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for PM10 is calculated as follows:

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit 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)

The facility is proposing to install a new emissions unit; therefore Baseline Emissions are equal to zero. Also, there is only one emissions unit associated with this project and there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) = ([PE2 – BE] + ICCE) x DOR

PE2 (NO_X) = 932 lb/year
BE (NO_X) = 0 lb/year
ICCE = 0 lb/year

Assuming an offset ratio of 1.5:1, the amount of PM10 ERCs that need to be withdrawn is:

Offsets Required (lb/year) = ([932 – 0] + 0) x 1.5
= 932 x 1.5
= 1,398 lb PM10/year

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
0	0	0	1,398

The applicant has stated that the facility plans to use ERC certificate C-1056-4 to offset the increases in PM10 emissions associated with this project. The above certificate has available quarterly NO_X credits as follows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #C	6,374	0	0	10,615

As seen above, the facility has sufficient credits to fully offset the quarterly NO_X emissions increases associated with this project.

Proposed Rule 2201 (offset) Conditions:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: fourth quarter – 1,398 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201]

- ERC Certificate Number C-1056-4 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

C. Public Notification

1. Applicability

Public noticing is required for:
a. Any new Major Source, which is a new facility that is also a Major Source,
b. Major Modifications,
c. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
d. Any project which results in the offset thresholds being surpassed, and/or
e. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Source

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. Major Modification

As demonstrated in VII.C.7, this project does not constitute a Major Modification; therefore, public noticing for Major Modification purposes is not required.

c. PE > 100 lb/day

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

C-7940-1-0

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO_X	30.1	100 lb/day	No
SO_X	10.9	100 lb/day	No
PM_{10}	26.5	100 lb/day	No
CO	188.9	100 lb/day	Yes
VOC	102.4	100 lb/day	Yes

C-7940-2-0

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO_X	0	100 lb/day	No
SO_X	0	100 lb/day	No
PM_{10}	0.4	100 lb/day	No
CO	8.1	100 lb/day	No
VOC	0.1	100 lb/day	No

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

d. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	0	990	20,000 lb/year	No
SO_X	0	340	54,750 lb/year	No
PM_{10}	0	932	29,200 lb/year	No
CO	0	6,153	200,000 lb/year	No
VOC	0	3,363	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.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post

Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. SSIPE = SSPE2 – SSPE1. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	990	0	990	20,000 lb/year	No
SO_x	340	0	340	20,000 lb/year	No
PM_{10}	932	0	932	20,000 lb/year	No
CO	6,153	0	6,153	20,000 lb/year	No
VOC	3,363	0	3,363	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes 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. 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 ATC for this equipment.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.17 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.17.1 and 3.17.2, 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. DELs are stated as emissions factors in lb/ton and maximum daily throughput (2,500 ton/day).

C-7940-1-0

- Emission rates from asphaltic drum operation served by baghouse shall not exceed any of the following limits: NOx (as NO2) - 0.0094 lb/ton; VOC - 0.032 lb/ton; CO – 0.059 lb/ton; PM10 - 0.023 lb/ton; or SOx (as SO2) - 0.0034 lb/ton. [District Rule 2201]

- Particulate emission rate from the granular feed handling operation shall not exceed 0.00368 lb PM10/ton of aggregate. [District Rule 2201] N

- Asphaltic concrete manufacturing operation shall not process more than 3,200 tons of aggregate per day nor 100,000 tons/yr. [District Rule 2201] N

- Annual propane consumption of asphalt drum burner shall not exceed 43,200 MMBtu. [District Rule 2201] N

- Particulate emission rate from the RAP handling operation shall not exceed 0.00284 lb PM10/ton of aggregate. [District Rule 2201] N

C-7940-2-0

- Asphaltic concrete manufacturing operation shall not process more than 3,200 tons of aggregate per day nor 100,000 tons/yr. [District Rule 2201] N

- Emission rates from silo filling and offloading shall not exceed any of the following limits: VOC - 0.001635 lb/ton; CO – 0.00253 lb/ton; or PM10 - 0.00011 lb/ton. [District Rule 2201]

E. Compliance Assurance

The following measures shall be taken to ensure continued compliance with District Rules.

1. Source Testing

Pursuant to District Policy APR 1705 (Source Testing Frequency), initial source testing for NOx and PM_{10} emissions shall be required for asphaltic concrete plants. The applicant is also proposing a CO emission rate to comply with the requirements of District Rule 4309 (Dryers, Dehydrators, and Ovens). Therefore, initial source testing for NOx, CO, and PM_{10} emissions will be required for the proposed new asphaltic concrete plant. Permit conditions will be included in the Authority to Construct permit to specify the following test methods:

NOx Emission Rate:	EPA Method 7E or CARB Method 100
CO Emission Rate:	EPA Method 10 or CARB Method 100
Stack Gas Oxygen:	EPA Method 3 or 3A, or CARB Method 100
Stack Gas Velocity:	EPA Method 2
Stack Gas Moisture Content:	EPA Method 4
PM_{10} Emission Rate:	EPA Method 201 and 202, or EPA Method 201A and 202, or CARB Method 501 and 5

Also, in lieu of performing a source test for PM_{10}, the applicant is allowed the option to use the results of the total particulate test to show compliance with the PM_{10} emissions limit provided the results include both the filterable and condensable (back half) particulates, and that all particulate matter is assumed to be PM_{10}.

The proposed HMA facility is subject to the requirements of the Code of Federal Regulations, Chapter 40 (40 CFR), Part 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities). Therefore, source testing as required by 40 CFR, Part 60, Subpart I is required. Pursuant to the referenced Subpart I, the below listed test

methods will be required. Permit conditions will be included in the Authority to Construct permit to specify the following test methods:

Particulate Matter Concentration:	EPA Method 5
Opacity:	EPA Method 9

2. Monitoring

The rotary drum dryer/mixer will be subject to the monitoring requirements of District Rule 4309 (Dryers, Dehydrators, and Ovens). Monitoring requirements, in accordance with District Rules 4309, will be discussed in Section VIII, District Rules 4309, of this evaluation.

3. Record Keeping

The following recordkeeping requirements will be placed on the Authority to Construct permit and Permit to Operate.

- A daily log shall be maintained and shall include the following:
  (a). Total quantity of aggregate used (in tons);
  (b). Total quantity of reclaimed asphalt pavement (RAP) used (in tons);
  (c). Total quantity of asphaltic concrete produced (in tons);
  (d). Total quantity of fuel consumed by the rotary drum dryer;
  (e). Total quantity of asphaltic concrete transferred into the storage silos.
  (f). Total quantity of asphaltic concrete loaded into trucks.
  [District Rules 1070 & 2201]

- The permittee shall maintain a record of the cumulative annual amount of asphaltic concrete produced, transferred into the storage silos, and loaded into trucks. The cumulative total shall be updated monthly. [District Rules 1070 & 2201]

- The permittee shall maintain a record of the cumulative annual heat input to the rotary drum dryer/mixer. The cumulative total shall be updated monthly. The heat input can be determined by multiplying the amount of natural gas fuel burned by a heating value of 1,000 Btu/scf. [District Rules 1070 & 2201]

- All records shall be retained with the equipment for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070 and 2201]

4. Reporting

There are no reporting requirements for the proposed new HMA plant.

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) 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 Technical Services Division of the SJVAPCD conducted the required analysis. Refer to Attachment IX 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 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 PM_{10}. The increase in the ambient PM_{10} concentration due to the proposed equipment is shown on the table titled Calculated Contribution. The levels of significance, from 40 CFR Part 51.165 (b)(2), are shown on the table titled Significance Levels.

Significance Levels					
Pollutant	Significance Levels ($\mu g/m^3$) - 40 CFR Part 51.165 (b)(2)				
	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
PM_{10}	1.0	5	N/A	N/A	N/A

Calculated Contribution					
Pollutant	Calculated Contributions ($\mu g/m^3$)				
	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
PM_{10}	16.9	136.5	N/A	N/A	N/A

As shown, the calculated contribution of PM_{10} will exceed the EPA significance level therefore the facility will offset all PM10 emissions from this project.

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.

Rule 4001 New Source Performance Standards

According to §60.90(b) of *40 CFR 60 Subpart I-Standards of Performance for Hot Mix Asphalt Facilities,* the requirements of this subpart apply to any hot mix asphalt facility that commences construction or modification after June 11, 1973. The applicant is proposing to install a new hot mix asphalt facility. Therefore, the proposed new facility is subject to this subpart.

According to §60.92 (Standards for Particulate Matter), the particulate matter concentration shall not exceed 0.04 gr/dscf and the visible emissions shall be less than 20 percent opacity.

According to §60.93 (Test Methods and Procedures), the owner or operator shall determine compliance with the above standards utilizing EPA Method 5 for particulate matter concentration and EPA Method 9 for opacity.

Permit conditions will be included in the Authority to Construct permit and Permit to Operate to ensure compliance with the above standards, test methods, and procedures. Therefore, compliance with District Rule 4001 requirements is expected.

Rule 4101 Visible Emissions

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 or darker than Ringelmann 1 or equivalent to 20% opacity. Opacity is expected to be less than 20% provided that all of the equipment is maintained and operated properly.

The PM emissions from the rotary drum drier/mixer will be controlled with a baghouse. Pursuant to District Policy SSP 1005, the visible emissions from a baghouse shall be limited by permit conditions to not equal or exceed 5% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. If the equipment is properly maintained this condition should not be exceeded. Conditions will be placed on the Authority to Construct permit and Permit to Operate to ensure compliance with the visible emission requirements.

Rule 4102 Nuisance

Section 4.0 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 or equal to one. According to the Technical Services Memo for this project (Attachment IX), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy 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.

Asphalt Drum Heater C-7940-1-0

PM Conc. (gr/scf) = (PM emission rate) x (7,000 gr/lb) / (Air flow rate) x (60 min/hr) x (24 hr/day)

PM_{10} emission rate = 0.023 lb/ton x 2,500 tons/day
= 57.5 lb/day

Exhaust Gas Flow = 135 MMBtu/hr x 8710 dscf/MMBtu* x 24 hr/day
= 28,220,400 dscf/day

*F factor for natural gas (0% excess air)

PM Conc. (gr/scf) = [(57.5 lb/day) * (7,000 gr/lb)] ÷ 28,220,400 ft^3/day
PM Conc. = 0.02 gr/scf

From the Silos (ATC Permit C-7940-2-0):

Max. Quantity of PM: 0.4 lb-PM/day
Max. Operating Hours: 8 hr/day (480 min/day)
Air Flow Rate: 32,000 cfm

PM Concentration = (0.4 lb-PM/day × 7,000 grains/lb.) ÷ (32,000 cfm × 480 min/day)
= 0.0002 grains/scf

Compliance is expected.

Rule 4202 – Particulate Matter Emission Rate

Rule 4202 establishes PM emission limits as a function of process weight rate in tons/hr.

Maximum Allowable Emission Rate:

$E_{Max} = 17.31\ P^{0.16}$ (P > 30 tons per hour)

Where: E = Emissions in pounds per hour
P = Process weight rate in tons per hour – 2,500 tons/day/24 hr/day = 104 tons/hr

Assuming all permitted PM10 = TSP (for conservative calculation):

$E_{Max} = 17.31\ (104)^{0.16} = 36.39$ lb-PM/hr

C-7940-1-0

E_{actual} (lbs/hr) = 63.7 lbs of PM/day ÷ 24 hrs/day
= **2.6 lb-PM/hr**

C-7940-2-0

E_{actual} (lbs/hr) = 0.4 lbs of PM/day ÷ 24 hrs/day
= **0.0 lb-PM/hr**

Since the proposed PM Emission rates of 2.6 and 0.0 lb/hr are less than the allowable maximum emission rate of 36.4 lb/hr, the proposed operation is expected to operate in compliance with this rule.

Therefore, continued compliance with the requirements of this rule is expected.

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for NOx (as NO2), SOx (as SO2), and total combustion air contaminant emissions from fuel burning equipment (defined as total PM in Rule 1020). As shown in the table below, based on the PE2 and assuming all PM is PM10, these maximum emissions rates will be met.

District Rule 4301	NOx (lb/hr)	SOx (lb/hr)	Total PM
C-7940-1-0	2.2	0.4	3.4
C-7940-1-0	0	0	0.4
Rule 4301 Limit (lb/hr)	140	200	10

This rule also limits combustion contaminants to ≤ 0.1 gr/scf. As mentioned earlier in the discussion of Rule 4201 both units are expected to be in compliance the 0.1 gr/scf limit.

Therefore, compliance with this rule is expected.

Rule 4309 Dryers, Dehydrators, and Ovens

The purpose of this rule is to limit emissions of oxides of nitrogen (NOx) and carbon monoxide (CO) 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 million British thermal units per hour (5.0 MMBtu/hr) or greater. Since the dryer being modified in this project has a heat input rating greater than 5.0 MMBtu, this dryer is subject to the requirements of this rule.

Section 5.0 states that all ppmv limits specified in this section are referenced at dry stack gas conditions and adjusted using an oxygen correction factor of 19% by volume.

Section 5.1 requires dehydrators to be fired exclusively on PUC quality natural gas except during a PUC quality natural gas curtailment. The proposed unit is a dryer rather than a dehydrator, so this section does not apply.

Section 5.2 requires that except for 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				
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 being modified in this project is an asphalt dryer with a maximum heat input of 135 MMBtu/hr; therefore it is subject to the requirements of the Other processes not described above category listed in the table above.

For the unit:

- the proposed NO_x emission factor is 4.3 ppmvd @ 19% O_2 (0.0492 lb/MMBtu), and
- the proposed CO emission factor is 42 ppmvd @ 19% O_2 (0.2924 lb/MMBtu).

Therefore, compliance with this section is expected.

A permit condition listing the emissions limits will be listed on the permit as shown in the DEL section above.

Section 5.3 provides for a limited exemption from the emission limitations of Section 5.2 during well defined and permitted startup and shut down 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 or 5.4.1.2.

Section 5.4.1.1 states the first technique as the installation and maintenance of an APCO-approved CEMS for NO_X, and oxygen that meets the following requirements.

- 40 CFR Part 51, and
- 40 CFR Parts 60.7 and 60.13 (except subsection h), and
- 40 CFR Part 60 Appendix B (Performance Specifications), and
- 40 CFR Part 60 Appendix F (Quality Assurance Procedures), and

- The applicable provisions of District Rule 1080 (Stack Monitoring).
- The APCO shall only approve CEMS that meets the requirements of Sections 5.4.1.1.1 through 5.4.1.1.5 of this rule.

Section 5.4.1.2 states the second technique as the installation and maintenance of an alternate emissions monitoring method that meets the requirements of Sections 5.4.1.2.1 through 5.4.1.2.3 of this rule.

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 NOx 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.

Since the operation of the unit subject to this rule are very similar to the operation of the units subject to the requirements of District Rule 4306, *Boilers, Steam Generators, and Process Heaters – Phase 3,* the pre-approved alternate monitoring plans in District Policy SSP-1105 will be considered approved alternate monitoring plans for District Rule 4309 compliance.

In order to satisfy the requirements of District Rule 4309, the applicant has proposed to use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO_X, CO, and O_2 exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the permit in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

- 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]

- If either the NO_X or CO concentrations corrected to 19% O_2, 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 O_2 measurements, (2) the O_2 concentration in percent and the measured NO_X and CO concentrations corrected to 19% O_2, (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 will be added to the permit to assure 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 will be added to the permit to assure compliance with this section.

- 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 will be added to the permit to assure 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 6.2 specifies the acceptable test methods for monitoring or compliance determinations. The following conditions will be included on the ATC to ensure compliance:

- {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 7/21/08 and a new initial test will not be required; therefore, the following condition will be added to the permit to assure compliance with this section.

- Source testing to measure NOx and CO emissions from this unit when fired on LPG shall be conducted 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 will be added to the permit to assure compliance with this section.

- {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]

- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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 NOx and CO shall be reported in ppmv, corrected to dry stack conditions and adjusted using the oxygen correction factor. The following condition will be added to the permit to assure compliance with this section:

- {3722} 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]

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 permit condition will be listed on the permit as follows:

- 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]

Section 7.1 describes the general compliance schedule, as summarized in the following table, while Section 7.2 defines the compliance schedule benchmarks of "Authority to Construct" and "Full Compliance". Section 7.3 specifies that the operator of an asphalt/concrete unit subject to the rule must submit an ATC application by December 1, 2008, and demonstrate full compliance by December 1, 2009. The proposed unit is an asphalt dryer subject to the rule, and Granite Construction has complied with the application deadline.

Compliance Schedule:

Units to be in Compliance at a Stationary Source	Authority to Construct	Full Compliance
Group 1: 50% or more of the total number of units subject to this rule on [rule adoption date]	January 1, 2007	December 1, 2007
Group 2: 100% of the total number of units subject to this rule on rule adoption date]	January 1, 2008	December 1, 2008

Section 7.4 specifies that a dehydrator subject to the rule must be in full compliance by July 1, 2006. The proposed unit is not a dehydrator, so this section does not apply.

Rule 4641 Cutback, Slow Cure, Emulsified Asphalt, Paving and Maintenance Operations

According to the applicant, the proposed asphaltic manufacturing facility will not be utilizing or producing cutback, slow cure, or emulsified asphaltic concrete products as defined in Sections 3.2, 3.4, 3.10, and 5.1 of this rule. Therefore, compliance with this rule is expected. The following condition will be included in their permits to enforce the requirements of this rule.

- Neither cutback, slow cure, nor emulsified asphaltic concrete products (as defined in District Rule 4641, Sections 3.2, 3.4, 3.10, and 5.1) shall be utilized or produced at this facility. [District Rule 4641]

Rule 4801 Sulfur Compounds (12/17/92)

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 SO_2, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

Volume $SO_2 = \frac{n\,RT}{P}$

With:

N = moles SO_2
T (Standard Temperature) = 60°F = 520°R
P (Standard Pressure) = 14.7 psi
R (Universal Gas Constant) = $\frac{10.73\,psi \cdot ft^3}{lb \cdot mol \cdot °R}$

The emission factor for the asphalt drum operation can be converted to lb/MMBtu as follows:

(0.0034 lb SOx/ton)(3,200 tons/24 hr)/135 MMBtu/hr = 0.00337 lb/MMBtu

$$\frac{0.00337\,lb-SOx}{MMBtu} \times \frac{MMBtu}{8{,}578\,dscf} \times \frac{1\,lb \cdot mol}{64\,lb} \times \frac{10.73\,psi \cdot ft^3}{lb \cdot mol \cdot °R} \times \frac{520°R}{14.7\,psi} \times \frac{1{,}000{,}000 \cdot parts}{million} = 2.3\frac{parts}{million}$$

$$SulfurConcentration = 2.3\frac{parts}{million} < 2{,}000 \text{ ppmv (or 0.2\%)}$$

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is located within 1,000 feet of the following school:

School Name: Minarets High School
Address: 45077 Road 200
O'Neals, CA 93645

Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is required. Prior to the issuance of the ATC for this equipment, notices will be provided to the parents/guardians of all students of the affected school, and will be sent to all residents within 1,000 ft of the site.

The District has verified that there are no additional schools within ¼ mile of the emission source.

California Environmental Quality ACT (CEQA)

The California Environmental Quality Act (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 San Joaquin Valley Unified Air Pollution Control District (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.
- 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.

The County of Madera (County) is the public agency having principal responsibility for approving the Project. As such, the County served as the Lead Agency for the project. Consistent with CEQA Guidelines §15081, a Negative Declaration was prepared and certified by the County.

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 Negative Declaration prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project (CEQA Guidelines §15096). The District has considered the Negative Declaration certified by the County.

The District's engineering evaluation of the project (this document) demonstrates that compliance with District rules and permit conditions would reduce Stationary Source emissions from the project to levels below the District's significance thresholds for criteria pollutants. Thus, the District concludes that through a combination of project design elements and permit conditions, project specific stationary source emissions will be reduced to less than significant levels. The District has determined that no additional findings are required (CEQA Guidelines §15096(h)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period and school notice, issue Authorities to Construct C-7940-1-0 subject to the permit conditions on the attached draft Authorites to Construct in **Attachment IX**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-7940-1-0	3020-02-H	135,000 kBtu/hr	$1030.00
C-7940-2-0	3020-01-C	53 bhp	$197.00

Attachments

I: Source Test
II: Process Flow Diagram
III: AP-42 Table 11.1-14
IV: BACT Guidelines
V: Top BACT Analysis
VI: Health Risk Assessment
VII: Sieve Test
VIII: QNEC
IX: Draft ATC

ATTACHMENT I
Source Test

Table 1. Compliance Summary
Granite Construction
Bag house Exhaust

Parameter	Units	Average	Limit
NOx Concentration @ 19% O_2	ppm	3.56	4.3
NOx Emission Factor	lb/mmbtu	0.040	0.088
CO Concentration @ 19% O_2	ppm	38.7	42
CO Mass Flow Rate	lb/ton	0.069	0.13
PM_{10} Emission Factor	lb/ton	0.0059	0.023

Table 2. Detailed Summary of Results
Granite Construction
Bag house Exhaust

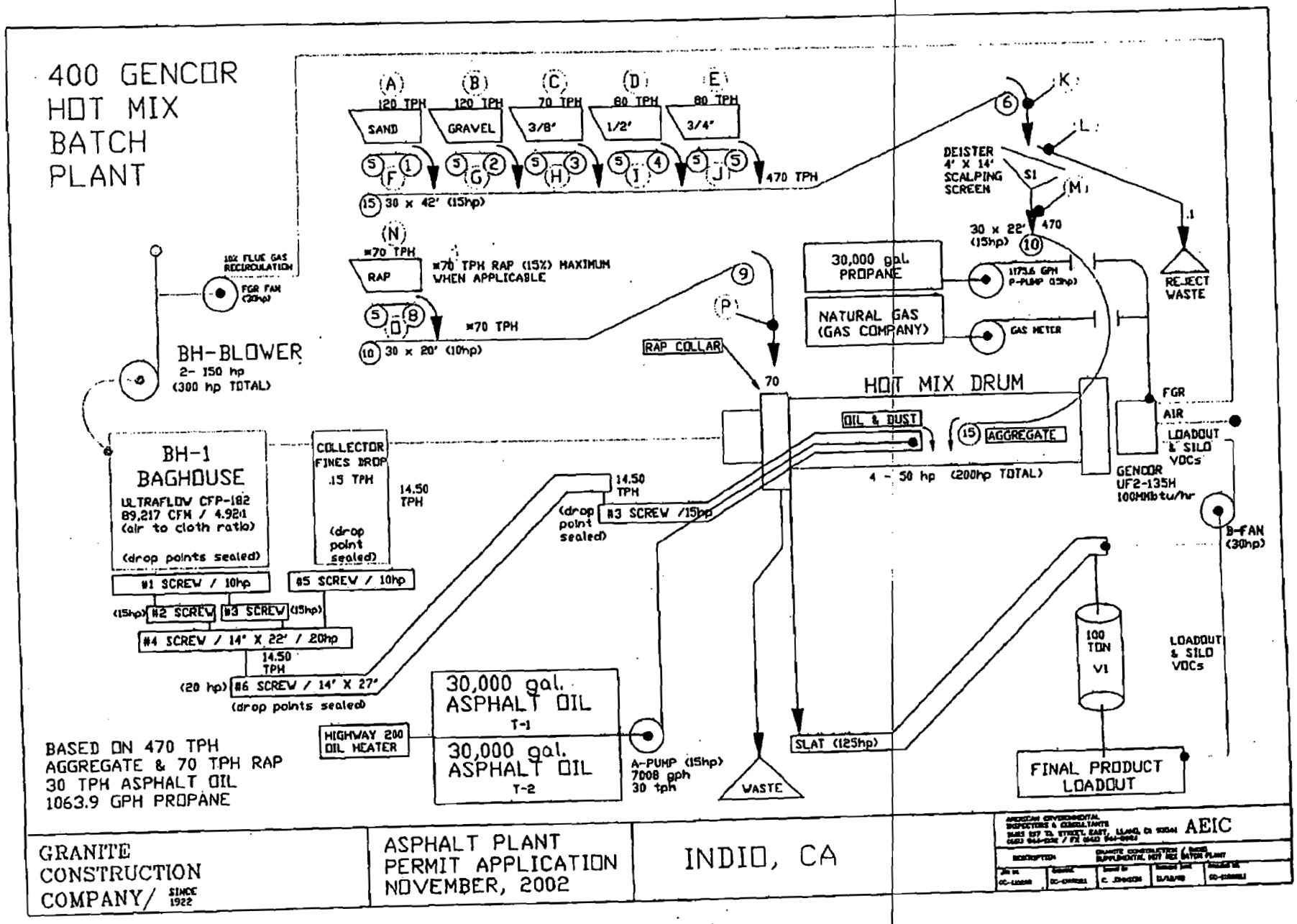
CEMS Results - NOx, CO, SO_2, O_2 and CO_2: CARB Method 100

Parameter	Units	Run-1	Run-2	Run-3	Average
NOx Concentration	ppm	18.0	16.3	17.2	17.2
NOx Concentration @ 3% O_2	ppm	33.9	31.3	33.4	32.9
NOx Concentration @ 15% O_2	ppm	11.2	10.3	11.0	10.8
NOx Concentration @ 19% O_2	**ppm**	**3.67**	**3.39**	**3.62**	**3.56**
NOx Mass Flow Rate	lb/hr	2.68	2.42	2.56	2.55
NOx Emission Factor	lb/ton	0.008	0.008	0.008	0.008
NOx Emission Factor	**lb/mmbtu**	**0.041**	**0.038**	**0.041**	**0.040**
CO Concentration	ppm	180	184	196	186
CO Concentration @ 3% O_2	ppm	337	353	380	357
CO Concentration @ 15% O_2	ppm	111	116	125	118
CO Concentration @ 19% O_2	**ppm**	**36.6**	**38.3**	**41.2**	**38.7**
CO Mass Flow Rate	lb/hr	16.3	16.6	17.7	16.9
CO Emission Factor	**lb/ton**	**0.051**	**0.052**	**0.058**	**0.054**
CO Emission Factor	lb/mmbtu	0.25	0.26	0.28	0.26
O_2 Level	%	11.4	11.6	11.7	11.6
CO_2 Level	%	16.1	16.3	16.2	16.2
Average Exhaust Rate	dscfm	20753	20753	20753	20753

PM_{10} Results - CARB Method 5

Parameter	Units	Run-1	Run-2	Run-3	Average
PM_{10} Loading	grains/dscf	0.0102	0.0098	0.0116	0.0105
Exhaust Rate	dscfm	21078	21613	19567	20753
PM_{10} Mass Emission Rate	lb/hr	1.84	1.81	1.94	1.86
Production Rate	tph	319	319	308	315
PM_{10} Emission Factor	**lb/ton**	**0.0058**	**0.0057**	**0.0063**	**0.0059**

ATTACHMENT II
Process Flow Diagram


400 GENCOR
HOT MIX
BATCH
PLANT
(A) 120 TPH SAND
(B) 120 TPH GRAVEL
(C) 70 TPH 3/8"
(D) 80 TPH 1/2"
(E) 80 TPH 3/4"
(F) (G) (H) (I) (J)
470 TPH
15 30 x 42' (15hp)
(N) ±70 TPH RAP
±70 TPH RAP (15%) MAXIMUM WHEN APPLICABLE
(O) ±70 TPH
10 30 x 20' (10hp)
10% FLUE GAS RECIRCULATION
FGR FAN (20hp)
BH-BLOWER
2- 150 hp
(300 hp TOTAL)
BH-1
BAGHOUSE
ULTRAFLOW CFP-182
89,217 CFM / 4.92:1
(air to cloth ratio)
(drop points sealed)
COLLECTOR FINES DROP
.15 TPH
(drop point sealed)
14.50 TPH
#1 SCREW / 10hp
#5 SCREW / 10hp
(15hp) #2 SCREW
#3 SCREW (15hp)
#4 SCREW / 14' X 22' / 20hp
14.50 TPH
(20 hp) #6 SCREW / 14' X 27'
(drop points sealed)
14.50 TPH
(drop point sealed)
#3 SCREW /15hp
RAP COLLAR
70
HOT MIX DRUM
OIL & DUST
15 AGGREGATE
4 - 50 hp (200hp TOTAL)
DEISTER 4' X 14' SCALPING SCREEN
S1
6 K
L
M
30 x 22' (15hp) 10
470
1
REJECT WASTE
30,000 gal. PROPANE
1173.6 GPH P-PUMP (15hp)
NATURAL GAS (GAS COMPANY)
GAS METER
FGR
AIR
LOADOUT & SILO VOCs
GENCOR UF2-135H 100MMbtu/hr
B-FAN (30hp)
100 TON VI
LOADOUT & SILO VOCs
HIGHWAY 200 OIL HEATER
30,000 gal. ASPHALT OIL T-1
30,000 gal. ASPHALT OIL T-2
A-PUMP (15hp) 7008 gph 30 tph
WASTE
SLAT (125hp)
FINAL PRODUCT LOADOUT
BASED ON 470 TPH
AGGREGATE & 70 TPH RAP
30 TPH ASPHALT OIL
1063.9 GPH PROPANE
GRANITE CONSTRUCTION COMPANY/ SINCE 1922
ASPHALT PLANT
PERMIT APPLICATION
NOVEMBER, 2002
INDIO, CA
AEIC

ATTACHMENT III
AP-42 Table 11.1-14

Table 11.1-14. PREDICTIVE EMISSION FACTOR EQUATIONS FOR LOAD-OUT AND SILO FILLING OPERATIONS[a]

EMISSION FACTOR RATING: C

Source	Pollutant	Equation
Drum mix or batch mix plant load-out (SCC 3-05-002-14)	Total PM[b]	$EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T + 460) - 20.43)}$
	Organic PM[c]	$EF = 0.00141(-V)e^{((0.0251)(T + 460) - 20.43)}$
	TOC[d]	$EF = 0.0172(-V)e^{((0.0251)(T + 460) - 20.43)}$
	CO	$EF = 0.00558(-V)e^{((0.0251)(T + 460) - 20.43)}$
Silo filling (SCC 3-05-002-13)	Total PM[b]	$EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T + 460) - 20.43)}$
	Organic PM[c]	$EF = 0.00105(-V)e^{((0.0251)(T + 460) - 20.43)}$
	TOC[d]	$EF = 0.0504(-V)e^{((0.0251)(T + 460) - 20.43)}$
	CO	$EF = 0.00488(-V)e^{((0.0251)(T + 460) - 20.43)}$

[a] Emission factor units are lb/ton of HMA produced. SCC = Source Classification Code. To convert from lb/ton to kg/Mg, multiply by 0.5. EF = emission factor; V = 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. T = HMA mix temperature in °F. Site-specific temperature data should be used, whenever possible; otherwise a default temperature of 325°F can be used. Reference 1, Tables 4-27 through 4-31, 4-34 through 4-36, and 4-38 through 4-41.

[b] Total PM, as measured by EPA Method 315 (EPA Method 5 plus the extractable organic particulate from the impingers). Total PM is assumed to be predominantly PM-2.5 since emissions consist of condensed vapors.

[c] Extractable organic PM, as measured by EPA Method 315 (methylene chloride extract of EPA Method 5 particulate plus methylene chloride extract of impinger particulate).

[d] TOC as propane, as measured with an EPA Method 25A sampling train or equivalent sampling train.

ATTACHMENT IV
BACT Guidelines

Per » B A C T » Bact Guideline.asp?category Level1=6&category Level2=1&category Level3=1&last Update=1 » 27 :

Back Details Page

Best Available Control Technology (BACT) Guideline 6.1.1
Last Update: 1/27/1994

Aggregate Crushing, Screening & Storage Operation - = or > 5,850 tons/day

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Screens served by fabric filter baghouse, all other emission points less than 5% opacity utilizing water spray with chemical additive		

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 s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried 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 - Permit Specific BACT Determinations on Details Page.

Per » B A C T » Bact Guideline.asp?category Level1=6&category Level2=3&category Level3=1&last Update=5 » 21 :

Back Details Page

Best Available Control Technology (BACT) Guideline 6.3.1
Last Update: 5/21/2001

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

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	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.		
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.	
SOx	PUC quality natural gas or LPG as a 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.	Enclosed hot mix silos and loadout operation vented to an afterburner.	

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 s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried 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 - Permit Specific BACT Determinations on Details Page.

ATTACHMENT V
Top BACT Analysis

Please refer to BACT Guideline 6.3.1 Asphaltic Concrete – Drum Mix Plant, ≥ 2000 ton/day or ≥ 75.6 MMBtu/hr burner

BACT Analysis for NO_x Emissions:

Oxides of nitrogen (NO_x) are generated from the high temperature combustion of natural gas fuel in the asphalt drum burner.

Step 1 - Identify All Possible NO_x Control Technologies

0.088 lb/MMBtu low-NOx burner and either natural gas or LPG as the primary fuel (Achieved-in Practice),

Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options identified above.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

0.088 lb/MMBtu low-NOx burner and either natural gas or LPG as the primary fuel (Achieved-in Practice),

Step 4 - Cost Effectiveness Analysis

A cost effective analysis must be performed for all control options in the list from Step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

The only control technology alternative in the ranking list from Step 3 has been achieved in practice. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

Step 5 - Select BACT

0.088 lb/MMBtu low-NOx burner and either natural gas or LPG as the primary fuel (Achieved-in Practice).

Applicant has proposed a NOx emissions factor 0.0492 lb NOx/MMBtu which satisfies the BACT requirement.

BACT Analysis for SO_x Emissions:

Oxides of sulfur (SO_x) emissions occur from the combustion of the sulfur which is present in the natural gas.

Step 1 - Identify All Possible Control Technologies

PUC quality natural gas or LPG as primary fuel.

Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options identified above.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

PUC quality natural gas or LPG as primary fuel.

Step 4 - Cost Effectiveness Analysis

A cost effective analysis must be performed for all control options in the list from Step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

The only control technology alternative in the ranking list from Step 3 has been achieved in practice. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for SO_x emissions for this unit is the use of PUC quality natural gas or LPG as primary fuel.

BACT Analysis for PM_{10} Emissions:

Particulate matter (PM_{10}) emissions occur from the various aggregate and asphalt handling operations at the facility.

Step 1 - Identify All Possible Control Technologies

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 mix 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)

Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options identified above.

Step 3 - Rank Remaining Control Technologies 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. (Technologicaly feasible)

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 mix collectors; and natural gas or LPG as a primary fuel. (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed both achieved in practice and technologically feasible alternatives. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

Step 5 - Select BACT

Applicant has proposed to combust natural gas only and vent the rotary drum to a baghouse. The conveyors and hot mix storage silos will be enclosed and vent to the asphalt drum burner for control of blue smoke emissions. Venting to the asphalt drum burner followed by a baghouse is considered to be equivalent in PM10 control efficiency to venting to oil mix collectors and/or an ESP or filter pack for control of PM10 emissions. Therefore, BACT has been satisfied.

BACT Analysis for VOC Emissions:

Volatile organic compounds (VOC) are emitted from the various asphalt handling operations at the facility.

Step 1 - Identify All Possible Control Technologies

Natural gas or LPG as a primary fuel; and enclosed hot mix silos and load-out operation vented to rotary drum burner (Achieved-in-Practice)

Enclosed hot mix silos and load-out operation vented to afterburner (Technologically feasible).

Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options identified above.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Enclosed hot mix silos and load-out operation vented to afterburner (Technologically feasible).

2. Natural gas or LPG as a primary fuel; and enclosed hot mix silos and load-out operation vented to rotary drum burner (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed both achieved in practice and technologically feasible. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

Step 5 – Select BACT

Applicant has proposed to combust natural gas only and vent enclosed hot mix silos and load-out operation to the Gencor rotary drum burner. Therefore, BACT has been satisfied.

ATTACHMENT VI
Health Risk Assessment

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Thom Maslowski – Permit Services
From:	Leland Villalvazo – Technical Services
Date:	3-31-10
Facility Name:	Granite Construction Company
Location:	44999 Road 200
Application #(s):	C-7940-1-0
Project #:	C-1100454

A. RMR SUMMARY

RMR Summary				
Categories	**Type of Unit (Unit 1-0)**		**Project Totals**	**Facility Totals**
Prioritization Score	47.4		47.4	47.4
Acute Hazard Index	0.05		0.05	0.05
Chronic Hazard Index	0.17		0.17	0.17
Maximum Individual Cancer Risk (10^{-6})	0.89		0.89	0.89
T-BACT Required?	**No**			
Special Permit Conditions?	**No**			

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 1-0

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on June 17, 2004, to perform an Ambient Air Quality Analysis and a Risk Management Review for a Detroit Diesel Model 8V-92TA diesel-fired emergency IC engine rated at 568 bhp and powering an electrical generator.

II. Analysis

Technical Services performed modeling for criteria pollutants CO, NOx, SOx and PM_{10}; as well as a RMR. The emission rates used for criteria pollutant modeling were provided by the processing engineer.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass**	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[1]	Pass[1]

*Results were taken from the attached PSD spreadsheet.
**Has been evaluated to determine compliance with the new federal 1 hour standard (100ppb or 188ug/m^3)
[1]Facility will offsite emissions down to zero.

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the wire-drawing machine is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit conditions 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.

Attachments:

A. RMR request from the project engineer
B. Toxic emissions summary
C. Prioritization score

AAQA for Granite Construction (C7940-1)
All Values are in ug/m^3

	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
BAGHOUSE	2.407E+01	1.830E-02	2.101E+02	6.899E+01	1.162E+01	7.235E+00	1.968E+00	8.824E-03	2.462E-01	2.516E-04
FEED	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.195E+02	1.467E+00
PAREA1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.679E+01	2.177E-01
Background	9.374E+01	2.104E+01	2.680E+03	1.748E+03	1.598E+02	1.332E+02	7.193E+01	2.664E+01	8.100E+01	4.000E+01
Facility Totals	1.178E+02	2.106E+01	2.890E+03	1.816E+03	1.715E+02	1.404E+02	7.390E+01	2.665E+01	2.175E+02	4.169E+01
AAQS	338	56	23000	10000	655	1300	105	80	50	30
	Pass	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Fail**	**Fail**

EPA's Significance Level (ug/m^3)

NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
0.0	**1.0**	**2000.0**	**500.0**	**0.0**	**25.0**	**5.0**	**1.0**	**5.0**	**1.0**

117.8 is below the new federal 1 Hour standard of 188 ug/m³

AAQA Emission (g/sec)

Device	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
BAGHOUSE	4.74E-01	1.35E-02	3.10E+00	3.10E+00	1.72E-01	1.72E-01	1.72E-01	4.89E-03	3.04E-01	1.01E-02
FEED	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.04E-02	2.73E-03
PAREA1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-03	5.90E-04

ATTACHMENT VII
Sieve Test

CALMAT CO. (DBA VULCAN MATERIALS COMPANY)
11099 N. Friant Rd, Fresno
Facility ID# C-1945

12/30/09

Pre-Project PTO 1945

	M (%)	EF lbs/ac/day	Acres	PM10 lbs/day
Main Surge Stockpile	3%	0.4	1	0.4
Sand Stockpile	3%	0.4	1	0.4
State Sand Stockpile	4%	0.1	1	0.1
Wet Concrete Sand Stockpile	4%	0.1	1	0.1
1 1/2 " Gravel Stockpile	2%	1.3	1	1.3
1" Gravel Stockpile	2%	1.3	1	1.3
3/8" Gravel Stockpile	3%	0.4	1	0.4
3/4" Crushed Stockpile	2%	1.3	1	1.3
1/2" Crushed Stockpile	2%	1.3	1	1.3
3/8" Crushed Stockpile	3%	0.4	1	0.4
Rock Dust Stockpile	3%	1.3	1	1.3
Total Stockpiles			**11**	**8.3**

Post-Project Proposed Revised Rock Stockpiles

	M (%)	ASTM Specs % Passing #4[1]	Ave % Passing #4[1]	Proposed Revised EF[3] lbs/ac/da	Acres	PM10 lbs/day
Main Surge Stockpile	3%			0.4	2	0.8
Sand Stockpile	3%			0.4	2	0.8
State Sand Stockpile	4%			0.1	2	0.2
Wet Concrete Sand Stockpile	4%			0.1	6	0.6
1 1/2 " Gravel Stockpile	0.5%	0-7[2]	1.0	0.0910	2	0.2
1" Gravel Stockpile	0.5%	0-16	4.0	0.2080	6	1.2
3/8" Gravel Stockpile	0.5%	0-25	12.0	0.1000	2	0.2
3/4" Crushed Stockpile	0.5%	0-5	1.0	0.0650	2	0.1
1/2" Crushed Stockpile	0.5%	0-15	2.0	0.1950	2	0.4
3/8" Crushed Stockpile	0.5%	20-40	28.0	0.1600	2	0.3
Rock Dust Stockpile	1%			1.3	1.85	2.4
Total Stockpiles					**29.85**	**7.3**

BACT Determination

Post PM10 lbs/day	Pre PM10 lbs/day	AIPE[4]	BACT[5] Required?
0.8	0.4	0.4	**No**
0.8	0.4	0.4	**No**
0.2	0.1	0.1	**No**
0.6	0.1	0.5	**No**
0.2	1.3	-1.1	**No**
1.2	1.3	-0.1	**No**
0.2	0.4	-0.2	**No**
0.1	1.3	-1.2	**No**
0.4	1.3	-0.9	**No**
0.3	0.4	-0.1	**No**
2.4	1.3	1.1	**No**

[1] Sieve size 4.75mm

[2] Max passing 3/8"

[3] ASTM maximum % passing #4 x EF of 1.3 lbs/ac/da (previous EF for rock stockpiles)

[4] Adjusted Increase in Permitted Emissions

[5] BACT triggered at increase of 2 lbs/day

Vulcan Materials Company Western Division

F A C S I M I L E

Vulcan Materials Company

Central California
Regional Laboratory
Technical Services
11599 Old Friant Road
Fresno, CA 93730
Phone: (559) 434-2714
Fax: (559) 434-8300

To: Eagle Peak Rock and Paving

ATTN: Tony

Fax: (775) 553-9047

Project #: 34641

Reference: Glacier Point Road

Faxed by: Anthony Myers

Date: 17-Sep-09 # Pages: 4

Comments:

Vulcan
Materials Company

September 17, 2009

Eagle Peak Rock and Paving

ATTN: Tony

FAX#: (775) 553-9047

PROJECT: Glacier Point Road

To Whom It May Concern:

This letter certifies the Vulcan Materials will furnish asphalt paving materials for the above- referenced project that complies with the FHWA Standard Specifications, Special Contract Requirements, and AASHTO test methods using the Hveem method. 1/2" Class B Grading E gradation aggregate. Our Mix Design #34641-1 and # 34641-2 (Fresno) are attached for this project.

Sincerely,

Anthony Myers
Technical Services

cc: Fresno

NOTE TO THE CONTRACTOR: Vulcan Materials Company will not be responsible if the contractor or his representative, at the time of delivery, orders a mix other than those covered in the above certification.

Vulcan Materials Company

Location:	Fresno Drum	Mix Design#:	34641-2
Customer:	Eagle Peak Rock and Paving	Mix Design Date:	9/17/2009
Attn:	Tony	Fax #:	(775) 553-9047

Project Line1: Glacier Point Road

Project Line2:

Type of Mix: 1/2" Class B Gading E - R20

Asphalt Grade: PG 64-28 Polymer Modified

AGG Type: A SMARA: 91-10-0024

20 % Recycle 380 LBS		0 % 3/4" 0 LBS		22 % 1/2" 418 LBS		33 % 3/8" 626 LBS		14 % Rock Dust 266 LBS		10 % Wash Sand 190 LBS		1 % Lime 19 LBS		Combined Passing	Operating Range		Sieve Size	
Pass	Use	Pass	Use	Pass	Use	Pass	Use	Pass	Use	Pass	Use	Pass	Use	Total	Min	Max	Eng	(SI)
100.0	20.0	100.0	0.0	100.0	22.0	100.0	33.0	100.0	14.0	100.0	10.0	100.0	1.0	100.0			2-1/2"	(50.0)
100.0	20.0	100.0	0.0	100.0	22.0	100.0	33.0	100.0	14.0	100.0	10.0	100.0	1.0	100.0			1-1/2"	(37.8)
100.0	20.0	100.0	0.0	100.0	22.0	100.0	33.0	100.0	14.0	100.0	10.0	100.0	1.0	100.0			1"	(25.0)
100.0	20.0	96.9	0.0	100.0	22.0	100.0	33.0	100.0	14.0	100.0	10.0	100.0	1.0	100.0	100	100	3/4"	(19.0)
97.0	19.4	20.1	0.0	94.0	20.7	100.0	33.0	100.0	14.0	100.0	10.0	100.0	1.0	98.1	97	100	1/2"	(12.5)
	18.2	6.8	0.0	34.0	7.5	97.0	32.0	100.0	14.0	100.0	10.0	100.0	1.0	82.7	78	88	3/8"	(9.5)
77.0	15.4	1.7	0.0	2.0	0.4	28.0	9.2	98.0	13.7	100.0	10.0	100.0	1.0	49.8	44	56	#4	(4.75)
67.0	13.4	0.0	0.0	2.0	0.4	4.0	1.3	81.0	11.3	91.0	9.1	100.0	1.0	36.6	31	43	#8	(2.36)
55.0	11.0	0.0	0.0	2.0	0.4	4.0	1.3	59.0	8.3	71.9	7.2	100.0	1.0	29.2			#16	(1.18)
46.0	9.2	0.0	0.0	1.0	0.2	3.0	1.0	40.0	5.6	42.0	4.2	100.0	1.0	21.2	17	25	#30	(0.60)
32.0	6.4	0.0	0.0	1.0	0.2	2.0	0.7	28.0	3.9	14.0	1.4	100.0	1.0	13.6	11	17	#50	(0.30)
22.0	4.4	0.0	0.0	1.0	0.2	2.0	0.7	22.0	3.1	4.0	0.4	100.0	1.0	9.8			#100	(0.15)
13.9	2.8	0.0	0.0	0.5	0.1	1.8	0.6	14.0	2.0	1.9	0.2	100.0	1.0	6.6	5	9	#200	(0.075)

RAP AC% 5.6%

KM of Combined Aggregate----1.10

SURFACE AREA: 30.3

Technical Services

	SELTEC	
	Percent	Mass
Lime	0.9	19
Wash Sand	9.5	190
Rock Dust	13.3	266
3/8"	31.3	626
1/2"	20.9	418
3/4"	0.0	0
Recycle	19.0	380
Asphalt	5.1	102
TOTAL	100.0	2,000

% Asphalt -Outside-	5.4	% + 100% AGG
% Asphalt -Inside-	5.1	% Plus
	94.9	% Aggreagate
Weight Per TON	102	LBS
Batch WT:	2000	LBS

Mix Design Notes:

12ClassBRAP

U.S. Department of Transportation
Federal Highway Administration
Federal Lands Highway

WORKSHEET FOR A HVEEM MIX DESIGN
AASHTO T 246

Project: CA PRA YOSE 15(1) GLACIER POINT ROAD
Date: AUGUST 5, 2009
Contractor: EAGLE PEAK ROCK & PAVING
Class & Grading of mixture: CLASS B GRADING E
Asphalt supplier: VALERO, BENICIA
Grade of asphalt: PG 64-28
Sources for: Aggregates: VULCAN MATERIALS
Mineral filler: HYDRATED LIME
Testing laboratory name: CGI TECHNICAL SEVICES,INC.
Phone: 530-244-6277
Testing performed by: JESSICA CAMPBELL
Testing reported by: PATRICK SMITH

☐ English ☑ Metric

SUMMARY OF THE PROPOSED JOB-MIX-FORMULA

1. Percent asphalt by mass of total mix[1], (P_b)	5.40	8. Specific gravity of binder (G_b)	1.012
2. Air voids (V_a)	4.0	9. Specific gravity of mineral filler	2.4
3. Voids in mineral aggregate (VMA)	13.3	10. Dust-to-Binder ratio (DP)	1.6
4. Maximum specific gravity (G_{mm})	2.431	11. Moisture susceptibility test results: [2]	AASHTO T 283
5. Recommended plant mixing temperature, °C (Attach Temperature Viscosity Curve)	154-160	a. Dry strength, kPa	968.3
		b. Wet strength, kPa	849.3
6. Effective specific gravity of aggregate (G_{se})	2.635	c. Index of retained strength, %	87.70
7. Stabilometer value	39		

Gradation Designation: E

GRADATION TARGET VALUES AND ALLOWABLE DEVIATIONS				SPECIFIC GRAVITY AND ABSORPTION			
Sieve Sizes	Job Mix Formula Target Value [3]	Target Value Specification Range %	Allowable Deviation[4] %		Fine Aggregate (AASHTO T 84)	Coarse Aggregate (AASHTO T 85)	Combined Aggregate
37.5 mm	100.0						
25 mm	100.0			Bulk SG (G_{sb})	2.515	2.582	2.548
19 mm	100.0	100	—				
12.5 mm	98.0	97-100	—	Bulk SSD SG	2.580	2.616	2.598
9.5 mm	83.0	*	5				
4.75 mm	50.0	*	6	Apparent SG (G_{sa})	2.689	2.672	2.680
2.36 mm	37.0	*	6				
600 µm	21.0	*	4	Absorption	2.60 %	1.30 %	1.95 %
300 µm	14.0	*	3				
75 µm	6.6	3-8	2				

[1] Establish asphalt cement content (percent by mass of mix) to the nearest 0.01 percent.
[2] See contract for moisture susceptibility test method: AASTHO T 165/T 167 or AASTHO T 283.
[3] Establish target values to the nearest 0.1 percent as a part of the job mix formula.
[4] Allowable deviations plus or minus from established target values.

WORKSHEET FOR A HVEEM MIX DESIGN (Continued)

Material Stockpile	Stockpile Description	Blend Ratio
A	1/2" Aggregate	22 %
B	3/8" Aggregate	33 %
C	Crusher Dust	14 %
D	Washed Sand	10 %
E	Recycled Asphalt Pavement((NO ROOM FOR LIME BIN, Add 1% to Blend Grading)	20 %
	Blend Ratio Total should equal 100% or 101% with Lime **Total**	99 %

Stockpile Gradation

Sieve Size	Stockpile A 22 %	Stockpile B 33 %	Stockpile C 14 %	Stockpile D 10 %	Stockpile E 20 %	Blended Stockpile Gradation	Job Mix Formula Target Values	Specification Limits
37.5 mm	100.0	100.0	100.0	100.0	100.0	99.0	100.0	
25 mm	100.0	100.0	100.0	0.0	100.0	89.0	100.0	
19 mm	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100
12.5 mm	94.0	100.0	100.0	100.0	97.0	97.1	98.0	97-100
9.5 mm	34.0	97.0	100.0	100.0	91.0	81.7	83.0	78.0 - 88.0
4.75 mm	2.0	28.0	98.0	100.0	77.0	48.8	50.0	44.0 - 56.0
2.36 mm	2.0	4.0	81.0	91.0	67.0	35.6	37.0	31.0 - 43.0
600 µm	1.0	3.0	40.0	42.0	46.0	20.2	21.0	17.0 - 25.0
300 µm	1.0	2.0	28.0	14.0	32.0	12.6	14.0	11.0 - 17.0
75 µm	0.5	1.8	14.0	1.9	13.9	5.6	6.6	4.6 - 8.6

Aggregate Properties

Property	Result	Specification	Property	Result	Specification
LA Abrasion, % - Grading C AASHTO T 96	27%	35 % Max	Fractured Faces, % - 1 Face ASTM D 5821	100	90 Min.
Sodium Sulfate Soundness, % AASHTO T 104	3.4%	12% Max	Sand Equivalent AASHTO T 176, Alt method #2, reference method	84	45 Min.
Durability index (Coarse) AASHTO T 210	NA	NA	Other: Fine Aggregate Angularity (Method A)	44	40 Min.
Durability index (Fine) AASHTO T 210	NA	NA	Other: Flat and Elongated Particles +3/8 1:5	1	10% Max

WORKSHEET FOR A HVEEM MIX DESIGN (Continued)

Trial Number	1			2			3		
% Asphalt by mass of total mix, (P_b)	4.90			5.40			5.90		
Effective Binder Content (P_{be})	3.65			4.16			4.67		
Specimen height, mm	63.10	63.40	63.00	62.80	62.50	62.30	62.00	62.40	62.10
Stabilometer value	45	43	44	39	40	38	36	35	37
Bulk specific gravity, (G_{mb})	2.304	2.309	2.312	2.329	2.334	2.337	2.349	2.357	2.339
Bulk unit mass, kg/m³	2297.3	2302.3	2305.3	2322.2	2327.2	2330.2	2342.2	2350.2	2332.2
Max. specific gravity, (G_{mm})	2.442			2.431			2.418		
Dust-to-Binder ratio, (DP)	1.8			1.6			1.4		
% Air voids, (V_a)	5.7	5.4	5.3	4.2	4.0	3.9	2.9	2.5	3.3
% Voids in mineral aggregate, (VMA)	14.0	13.8	13.7	13.5	13.3	13.2	13.3	13.0	13.6
Average Stabilometer value	44			39			36		
Average % Air voids, (V_a)	5.5			4.0			2.9		
Average % Voids in mineral aggregate, (VMA)	13.8			13.3			13.3		
Average Bulk Unit Mass	2301.6			2326.5			2341.5		

Trial Number	4			5			6		
% Asphalt by mass of total mix, (P_b)	6.40								
Effective Binder Content (P_{be})	5.17								
Specimen height, mm	61.80	62.00	61.90						
Stabilometer value	32	30	33						
Bulk specific gravity, (G_{mb})	2.362	2.369	2.370						
Bulk unit mass, kg/m³	2355.2	2362.1	2363.1						
Max. specific gravity, (G_{mm})	2.409								
Dust-to-Binder ratio, (DP)	1.3								
% Air voids, (V_a)	2.0	1.7	1.6						
% Voids in mineral aggregate, (VMA)	13.2	13.0	12.9						
Average Stabilometer value	32								
Average % Air voids, (V_a)	1.8								
Average Voids in mineral aggregate, (VMA)	13.0								
Average Bulk Unit Mass	2360.1								

Test Results for Each of the Individual Moisture Susceptibility Test Specimens

Percent asphalt binder: 5.40 ☐ AASHTO T 165/T 167 ☒ AASHTO T 283

Specimen Dia: ☐ 6 inch ☒ 4 inch

Antistrip, type, amount: 1.0 % Lime

Freeze cycle: ☒ Yes ☐ No

Sample I.D.		1A/2A	3A/4A	5A/6A				Average
Height mm	Dry	63.50	63.25	63.25				63.33
	Wet	63.50	63.25	63.25				63.33
Bulk Specific Gravity	Dry	2.263	2.245	2.251				2.253
	Wet	2.240	2.264	2.259				2.254
Air Voids	Dry	6.9	7.6	7.4				7.3
	Wet	7.8	6.8	7.1				7.2
Tensile Strength kPa	Dry	953.3	998.3	953.3				968.3
	Wet	731.5	914.7	901.8				849.3
Retained Strength, %								**87.70**

Vulcan Materials Company

Location:	Fresno Drum
Customer:	Eagle Peak Rock and Paving
Attn:	Tony
Mix Design#:	34641-1
Mix Design Date:	9/17/2009
Fax #:	(775) 553-9047
Project Line1:	Glacier Point Road
Project Line2:	
Type of Mix:	1/2" Class B Grading E
Asphalt Grade:	PG 64-28 Polymer Modified
AGG Type:	A
SMARA:	91-10-0024

0 % Recycle 0 LBS		0 % 3/4" 0 LBS		28 % 1/2" 530 LBS		30 % 3/8" 568 LBS		26 % Rock Dust 492 LBS		15 % Wash Sand 284 LBS		1 % Lime 18.9 LBS		Combined Passing	Operating Range		Sieve Size	
Pass	Use	Pass	Use	Pass	Use	Pass	Use	Pass	Use	Pass	Use	Pass	Use	Total	Min	Max	Eng	(SI)
100.0	0.0	100.0	0.0	100.0	28.0	100.0	30.0	100.0	26.0	100.0	15.0	100.0	1.0	100.0			2-1/2"	(50.0)
100.0	0.0	100.0	0.0	100.0	28.0	100.0	30.0	100.0	26.0	100.0	15.0	100.0	1.0	100.0			1-1/2"	(37.8)
100.0	0.0	100.0	0.0	100.0	28.0	100.0	30.0	100.0	26.0	100.0	15.0	100.0	1.0	100.0			1"	(25.0)
100.0	0.0	96.9	0.0	100.0	28.0	100.0	30.0	100.0	26.0	100.0	15.0	100.0	1.0	100.0	100	100	3/4"	(19.0)
94.0	0.0	20.1	0.0	94.0	26.3	100.0	30.0	100.0	26.0	100.0	15.0	100.0	1.0	98.3	97	100	1/2"	(12.5)
	0.0	6.8	0.0	34.0	9.5	97.0	29.1	100.0	26.0	100.0	15.0	100.0	1.0	80.6	78	88	3/8"	(9.5)
65.0	0.0	1.7	0.0	2.0	0.6	28.0	8.4	98.0	25.5	100.0	15.0	100.0	1.0	50.4	44	56	#4	(4.75)
51.0	0.0	0.0	0.0	2.0	0.6	4.0	1.2	81.0	21.1	91.0	13.7	100.0	1.0	37.5	31	43	#8	(2.36)
41.0	0.0	0.0	0.0	2.0	0.6	4.0	1.2	59.0	15.3	71.9	10.8	100.0	1.0	28.9			#16	(1.18)
30.0	0.0	0.0	0.0	1.0	0.3	3.0	0.9	40.0	10.4	42.0	6.3	100.0	1.0	18.9	17	25	#30	(0.60)
20.0	0.0	0.0	0.0	1.0	0.3	2.0	0.6	28.0	7.3	14.0	2.1	100.0	1.0	11.3	11	17	#50	(0.30)
13.0	0.0	0.0	0.0	1.0	0.3	2.0	0.6	22.0	5.7	4.0	0.6	100.0	1.0	8.2			#100	(0.15)
8.6	0.0	0.0	0.0	0.5	0.1	2.0	0.6	15.7	4.1	1.9	0.3	100.0	1.0	6.1	5	9	#200	(0.075)

RAP AC% 5.6%

KM of Combined Aggregate----1.10

SURFACE AREA: 27.5

Technical Services

	SELTEC	
	Percent	Mass
Lime	0.9	19
Wash Sand	14.2	284
Rock Dust	24.6	492
3/8"	28.4	568
1/2"	26.5	530
3/4"	0.0	0
Recycle	0.0	0
Asphalt	5.3	106
TOTAL	100.0	2,000

% Asphalt -Outside-	5.6	% + 100% AGG
% Asphalt -Inside-	5.3	% Plus
	94.7	% Aggreagate
Weight Per TON	106	LBS
Batch WT:	2000	LBS

Mix Design Notes:

12ClassB

U.S. Department of Transportation
Federal Highway Administration
Federal Lands Highway

WORKSHEET FOR A HVEEM MIX DESIGN
AASHTO T 246

Project: CA PRA YOSE 15(1) GLACIER POINT ROAD
Date: AUGUST 28, 2009
Contractor: EAGLE PEAK ROCK & PAVING
Class & Grading of mixture: CLASS B GRADING E
Asphalt supplier: VALERO, BENICIA
Grade of asphalt: PG 64-24
Sources for: Aggregates: VULCAN MATERIALS
Mineral filler: HYDRATED LIME
Testing laboratory name: CGI TECHNICAL SERVICES, INC
Phone: 530-244-6277
Testing performed by: JESSICA CAMPBELL
Testing reported by: JESSICA CAMPBELL

[ ] English [✓] Metric

SUMMARY OF THE PROPOSED JOB-MIX-FORMULA

1. Percent asphalt by mass of total mix[1], (P_b)	5.60	8. Specific gravity of binder (G_b)	1.012
2. Air voids (V_a)	4.0	9. Specific gravity of mineral filler	2.4
3. Voids in mineral aggregate (VMA)	14.4	10. Dust-to-Binder ratio (DP)	1.6
4. Maximum specific gravity (G_{mm})	2.404	11. Moisture susceptibility test results:[2]	AASHTO T 283
5. Recommended plant mixing temperature, °C (Altush Temperature Viscosity Curve)	154 - 160	a. Dry strength, kPa	968.3
		b. Wet strength, kPa	849.3
6. Effective specific gravity of aggregate (G_{se})	2.635	c. Index of retained strength, %	87.70
7. Stabilometer value	38		

Gradation Designation: E

GRADATION TARGET VALUES AND ALLOWABLE DEVIATIONS				SPECIFIC GRAVITY AND ABSORPTION			
Sieve Sizes	Job Mix Formula Target Value[3]	Target Value Specification Range %	Allowable Deviation[4] %		Fine Aggregate (AASHTO T 84)	Coarse Aggregate (AASHTO T 85)	Combined Aggregate
37.5 mm	100.0						
25 mm	100.0			Bulk SG (G_{sb})	2.515	2.582	2.548
19 mm	100.0	100					
12.5 mm	98.0	97-100	—	Bulk SSD SG	2.580	2.616	2.598
9.5 mm	83.0	*	5				
4.75 mm	50.0	*	6	Apparent SG (G_{sa})	2.689	2.672	2.680
2.36 mm	37.0	*	6				
600 µm	21.0	*	4	Absorption	2.60 %	1.30 %	1.95 %
300 µm	14.0	*	3				
75 µm	6.6	3-8	2				

[1] Establish asphalt cement content (percent by mass of mix) to the nearest 0.01 percent.
[2] See contract for moisture susceptibility test method: AASTHO T 165/T 167 or AASTHO T 283.
[3] Establish target values to the nearest 0.1 percent as a part of the job mix formula.
[4] Allowable deviations plus or minus from established target values.

WORKSHEET FOR A HVEEM MIX DESIGN (Continued)

Material Stockpile	Stockpile Description	Blend Ratio
A	1/2" Aggregate	28 %
B	3/8" Aggregate	30 %
C	Crusher Dust	26 %
D	Washed Sand	15 %
E	Lime	1 %
	Total	100 %

Stockpile Gradation

Sieve Size	Stockpile A 28 %	Stockpile B 30 %	Stockpile C 26 %	Stockpile D 15 %	Stockpile E 1 %	Blended Stockpile Gradation	Job Mix Formula Target Values	Specification Limits
37.5 mm	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
25 mm	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
19 mm	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100
12.5 mm	94.0	100.0	100.0	100.0	100.0	98.3	98.0	97-100
9.5 mm	34.0	97.0	100.0	100.0	100.0	80.6	83.0	78.0 - 88.0
4.75 mm	3.0	28.0	98.0	100.0	100.0	50.4	50.0	44.0 - 56.0
2.36 mm	2.0	4.0	81.0	91.0	100.0	37.5	37.0	31.0 - 43.0
600 µm	1.0	3.0	40.0	42.0	100.0	18.9	21.0	17.0 - 25.0
300 µm	1.0	2.0	28.0	14.0	100.0	11.3	14.0	11.0 - 17.0
75 µm	0.5	2.0	15.7	1.9	100.0	6.1	6.6	4.6 - 8.6

Aggregate Properties

Property	Result	Specification	Property	Result	Specification
LA Abrasion, % - Grading C AASHTO T 96	27%	35% Max	Fractured Faces, % - 1 Face ASTM D 5821	100	90 Min
Sodium Sulfate Soundness, % AASHTO T 104	3.4%	12% Max	Sand Equivalent AASHTO T 176, Alt method #2, reference method	84	45 Min
Durability index (Coarse) AASHTO T 210	NA	NA	Other: Fine Aggregate Angularity (Method A)	44	40 Min
Durability index (Fine) AASHTO T 210	NA	NA	Other: Flat and Elongated Particles +3/8 1:5	1	10% Max

WORKSHEET FOR A HVEEM MIX DESIGN (Continued)

[illegible]									
% Asphalt by mass of total mix, (P_a)	4.60			5.10			5.60		
Effective Binder Content (P_{be})	3.35			3.86			4.36		
Specimen height, mm	65.02	65.30	65.21	64.52	64.49	64.60	63.75	64.01	63.72
Stabilometer value	42	43	43	41	40	41	39	38	37
Bulk specific gravity, (G_{mb})	2.273	2.270	2.279	2.285	2.288	2.289	2.310	2.307	2.308
Bulk unit mass, kg/m³	2266.4	2263.4	2272.4	2278.4	2281.4	2282.4	2303.3	2300.3	2301.3
Max. specific gravity, (G_{mm})	2.446			2.420			2.404		
Dust-to-Binder ratio, (DP)	2.0			1.7			1.5		
% Air voids, (V_a)	7.1	7.2	6.8	5.9	5.8	5.8	3.9	4.0	4.0
% Voids in mineral aggregate, (VMA)	14.9	15.0	14.7	14.9	14.8	14.7	14.4	14.5	14.5
Average Stabilometer value	43			41			38		
Average % Air voids, (V_a)	7.0			5.8			4.0		
Average % Voids in mineral aggregate, (VMA)	14.9			14.8			14.5		
Average Bulk Unit Mass	2267.4			2280.7			2301.6		
[illegible]									
% Asphalt by mass of total mix, (P_a)	6.10								
Effective Binder Content (P_{be})	4.87								
Specimen height, mm	63.05	62.97	63.25						
Stabilometer value	34	35	33						
Bulk specific gravity, (G_{mb})	2.336	2.331	2.334						
Bulk unit mass, kg/m³	2329.2	2324.2	2327.2						
Max. specific gravity, (G_{mm})	2.398								
Dust-to-Binder ratio, (DP)	1.4								
% Air voids, (V_a)	2.6	2.8	2.7						
% Voids in mineral aggregate, (VMA)	13.9	14.1	14.0						
Average Stabilometer value	34								
Average % Air voids, (V_a)	2.7								
Average Voids in mineral aggregate, (VMA)	14.0								
Average Bulk Unit Mass	2326.9								

Test Results for Each of the Individual Moisture Susceptibility Test Specimens

Percent asphalt binder: 5.60 ☐ AASHTO T 165/T 167 ☒ AASHTO T 283

Specimen Dia: ☐ 6 inch ☒ 4 inch

Antistrip, type, amount: 1.0% Lime

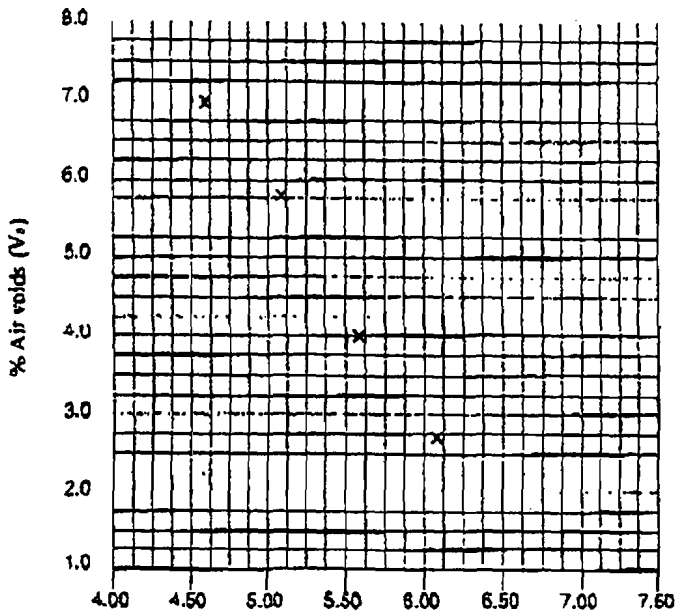
Freeze cycle: ☒ Yes ☐ No

Sample I.D.		1A/2A	3A/4A	4A/6A				Average
Height mm	Dry	63.50	63.25	63.25				63.33
	Wet	63.50	63.25	63.25				63.33
Bulk Specific Gravity	Dry	2.263	2.245	2.251				2.253
	Wet	2.240	2.264	2.259				2.254
Air Voids	Dry	6.9	7.6	7.4				7.3
	Wet	7.8	6.8	7.1				7.2
Tensile Strength kPa	Dry	953.3	998.3	953.3				968.3
	Wet	731.5	914.7	901.8				849.3
Retained Strength, %								[illegible]

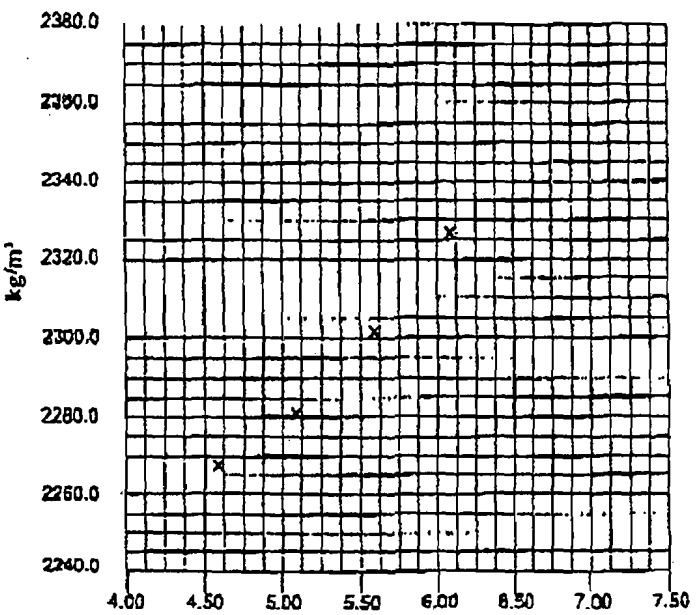
WORKSHEET FOR A HVEEM MIX DESIGN (Continued)

Design Curves for Proposed Job Mix Formula (JMF)

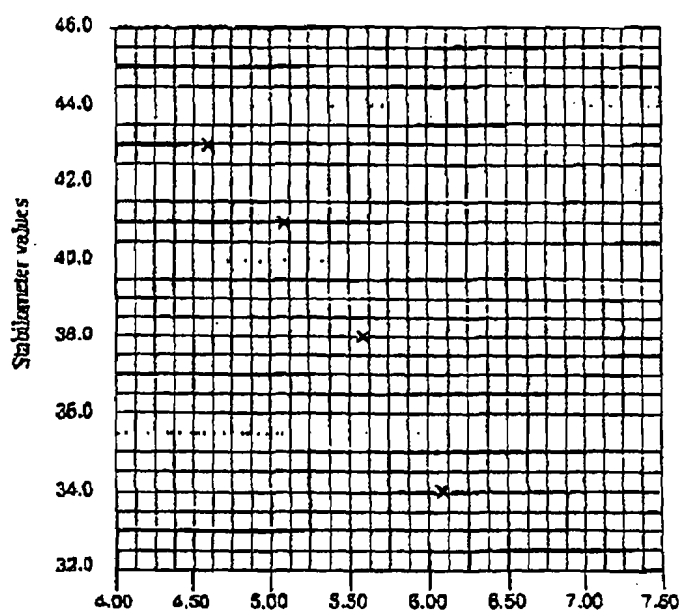
AIR VOIDS (V_a)



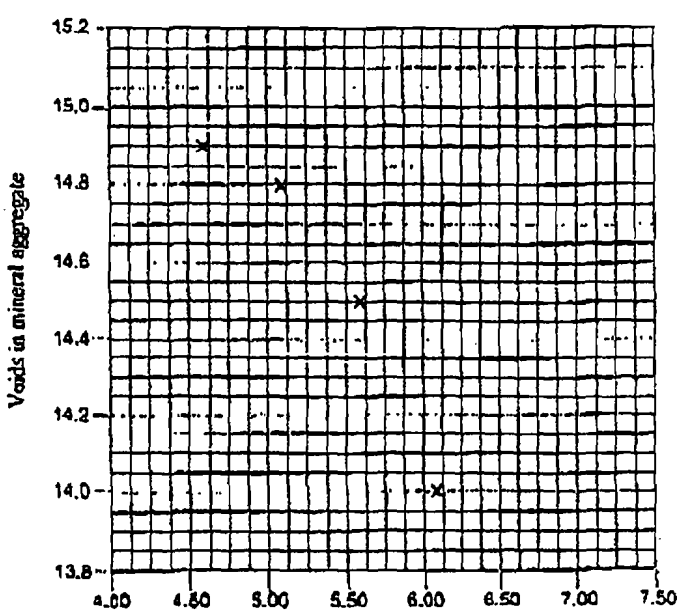
UNIT MASS



S-VALUE



VMA



ATTACHMENT VIII
QNEC

Quarterly Net Emissions Change (QNEC)

The QNEC is entered into PAS database and subsequently reported to CARB. For seasonal sources, or where the emissions differ quarter to quarter, then evaluate each pollutant for each quarter separately. The QNEC is calculated for each pollutant, for each unit, as the difference between the post-project quarterly potential to emit (PE2) and the pre-project quarterly potential to emit (PE1).

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:

C-7940-1-0

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 990 lb/year ÷ 4 qtr/year
= 248 lb PM_{10}/qtr

$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year
= 0 lb/year ÷ 4 qtr/year
= 0 lb PM_{10}/qtr

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	990	0	248
SO_X	340	0	85
PM_{10}	821	0	205
CO	5,900	0	1,475
VOC	3,200	0	800

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 932 lb/year ÷ 4 qtr/year
= 233 lb PM_{10}/qtr

$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year
= 0 lb/year ÷ 4 qtr/year
= 0 lb PM_{10}/qtr

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	111	0	28
CO	253	0	63
VOC	163	0	41

ATTACHMENT IX
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7940-1-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: GRANITE CONSTRUCTION COMPANY
MAILING ADDRESS: 2716 GRANITE COURT
FRESNO, CA 93706

LOCATION: 44999 ROAD 200
O'NEALS, CA 93645

EQUIPMENT DESCRIPTION:
HOT MIX ASPHALTIC CONCRETE DRUM MIX PLANT INCLUDING; SIX AGGREGATE FEED BINS, GRIZZLY SEPARATOR, CONVEYORS, 135 MMBTU/HR HOT MIX DRUM DRYER WITH A GENCOR UL 135 LOW NOX BURNER SERVED BY A GENCOR ULTRA CFT 182 FABRIC COLLECTOR, 3 FINES RECYCLING SCREW CONVEYORS, ASPHALTIC CONCRETE CONVEYORS

CONDITIONS

1. Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: fourth quarter - 1,398 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201]
2. ERC Certificate Number C-1056-4 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {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]
5. {24} All haul roads and other roadways traversed by mobile equipment and/or motor vehicles shall be adequately moistened with water at such a frequency as required to prevent visible emissions equal to or in excess of 20% opacity from such roads. [District NSR Rule]
6. {271} 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 NSR Rule]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
C-7940-1-0 : Apr 28 2010 11:30AM – MASLOWST : Joint Inspection NOT Required

7. Neither cutback, slow cure, or emulsified concrete products (as defined in District Rule 4641, Sections 3.2, 3.4, 3.10, and 5.1) shall be utilized or produced at this facility. [District Rule 4641]
8. The facility will only be operated 8 hours per day. [District Rule 2201]
9. Visible emissions from the baghouses serving the asphaltic concrete rotary drum dryer/mixer shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
10. Water sprays shall be used, as needed, at conveyor drop points and grizzly to prevent visible emissions in excess of 5% opacity for more than 3 minutes in any one hour. [District Rule 2201]
11. The baghouses shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201]
12. All stockpiled sand, gravel aggregate, rock and other materials shall be maintained adequately moist to prevent visible emissions in excess of 5% opacity for more than 3 minutes in any one hour. [District NSR Rule]
13. {3459} Replacement bags numbering at least 10% of the total number of bags in the largest baghouse, and for each type of bag, shall be maintained on the premises. [District Rule 2201]
14. {73} Material removed from the dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule]
15. {120} The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule]
16. This unit is subject to the requirements of 40 CFR Part 60, Subpart I: Standards of Performance for Asphalt Concrete Plants. [District Rule 4001 and 40 CFR §60.90]
17. Particulate matter emissions from the exhaust stack of the baghouse shall not exceed 0.04 grains/dscf. [District Rule 4001and 40 CFR §60.92(a)(1)]
18. The rotary drum dryer burner shall be fired only on LPG. [District Rule 2201]
19. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted by the rotary drum dryer/mixer burner shall be installed, utilized, and properly maintained. [District Rule 2201]
20. Drum dryer/mixer shall be equipped with product temperature indicator. [District Rule 2201]
21. Asphaltic concrete manufacturing operation shall not exceed 325 degrees F. [District Rule 2201]
22. Heat input to the rotary drum dryer/mixer burner shall not exceed 1,080 MMBtu in any one day and 43,200 MMBtu in any one calendar year. [District Rule 2201]
23. The quantity of aggregate processed shall not exceed 3,200 tons in any one day and 100,000 tons in any one calendar year. [District Rule 2201]
24. The quantity of reclaimed asphalt pavement (RAP) utilized shall not exceed 20% of total aggregate processed. [District Rule 2201]
25. Emission rates from asphaltic drum operation served by baghouse shall not exceed any of the following limits: NOx (as NO2) - 0.0094 lb/ton; VOC - 0.032 lb/ton; CO - 0.059 lb/ton; PM10 - 0.023 lb/ton; or SOx (as SO2) - 0.0034 lb/ton. [District Rule 2201]
26. Emission rates from silo filling and offloading shall not exceed any of the following limits: VOC - 0.001635 lb/ton; CO - 0.00253 lb/ton; or PM10 - 0.00011 lb/ton. [District Rule 2201]
27. Particulate emission rate from the granular feed handling operation shall not exceed 0.00368 lb PM10/ton of aggregate. [District Rule 2201]
28. Particulate emission rate from the RAP handling operation shall not exceed 0.00284 lb PM10/ton of aggregate. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

29. Source testing to demonstrate compliance with the particulate matter emissions concentration (grains/dscf) and particulate matter emission rate (lb/ton) from the exhaust stack of the baghouse shall be conducted within 60 equipment operating days of initial startup. An equipment operating day is any day in which the drum dryer/mixer is operated where material is introduced into the drum dryer/mixer or processed by the drum dryer/mixer, or where fuel is combusted in the drum dryer. [District Rule 4001 and 40 CFR §60.8(a)]

30. Compliance with the requirements of 40 CFR Part 60, Subpart I shall be verified by the test methods given in the Subpart. [District Rule 4001 and 40 CFR §60.93]

31. Source testing to determine the particulate matter concentration from the baghouse as required by 40 CFR Part 60, Subpart I: Standards of Performance for Asphalt Concrete Plants shall be conducted using EPA method 5. [District Rule 4001 and 40 CFR §60.93(b)(1)]

32. Source testing to determine opacity as required by 40 CFR Part 60, Subpart I: Standards of Performance for Asphalt Concrete Plants shall be conducted using EPA method 9. [District Rule 4001 and 40 CFR §60.93(b)(2)]

33. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 equipment operating days of initial startup and at lease once every 24 months thereafter. An equipment operating day is any day in which the drum dryer/mixer is operated where material is introduced into the drum dryer/mixer or processed by the drum dryer/mixer, or where fuel is combusted in the drum dryer. [District Rules 2201 & 4309]

34. {3722} 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]

35. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

36. Source testing to measure NOx and CO emissions from the asphaltic concrete batch 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 minded 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 form 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]

37. {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]

38. {3718} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]

39. {3719} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]

40. {3720} Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]

41. Source testing to measure PM10 emissions shall be conducted using EPA method 201 and 202, or EPA method 201A and 202, or CARB method 501 and 5. [District Rule 1081]

42. In lieu of performing a source test for PM10, the results of the total particulate test may be used for compliance with the PM10 emission limit provided the results include both the filterable and condensable (back half) particulates, and that all particulate matter is assumed to be PM10. If this option is exercised, source testing shall be conducted using CARB Method 5 or EPA Method 5 (including condensible (back half) particulates). [District Rule 1081]

43. {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]

44. {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]

CONDITIONS CONTINUE ON NEXT PAGE

45. The 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]

46. {3742} 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]

47. {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]

48. {3744} The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx 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]

49. Differential operating pressure shall be monitored and recorded on each day that the baghouse operates. [District Rule 2201]

50. A daily log shall be maintained and shall include the following: (a). Total quantity of aggregate used (in tons); (b). Total quantity of reclaimed asphalt pavement (RAP) used (in tons); (c). Total quantity of asphaltic concrete produced (in tons); (d). Total quantity of fuel heat input to the rotary drum dryer/mixer (in MMBtu). The fuel heat input can be determined by multiplying the amount of natural gas fuel combusted (in scf) by a heating value of 1,000 Btu/scf. [District Rules 1070 & 2201]

51. The permittee shall maintain a record of the cumulative annual amount of asphaltic concrete produced (in tons). The cumulative total shall be updated at least monthly. [District Rules 1070 & 2201]

52. The permittee shall maintain a record of the cumulative annual fuel heat input to the rotary drum dryer/mixer. The cumulative total shall be updated at least monthly. The fuel heat input can be calculated by multiplying the amount of natural gas fuel combusted (in scf) by a heating value of 1,000 Btu/scf. [District Rules 1070 & 2201]

53. Records of all maintenance of the baghouse, including all change outs of filter media, shall be maintained. [District Rule 2201]

54. {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]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7940-2-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: GRANITE CONSTRUCTION COMPANY
MAILING ADDRESS: 2716 GRANITE COURT
FRESNO, CA 93706

LOCATION: 44999 ROAD 200
O'NEALS, CA 93645

EQUIPMENT DESCRIPTION:
3 ASPHALTIC CONCRETE SILOS AND UNDER-SILO TRUCK LOAD OUTS VENTILATED TO DRUM BURNER (LISTED ON C-7940-1) AND A PERMIT EXEMPT OIL HEATER (LPG FIRED, 2 MMBTU/HR OR LESS)

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {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]
3. {24} All haul roads and other roadways traversed by mobile equipment and/or motor vehicles shall be adequately moistened with water at such a frequency as required to prevent visible emissions equal to or in excess of 20% opacity from such roads. [District NSR Rule]
4. {271} 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 NSR Rule]
5. Visible emissions from the blue smoke control unit 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. The quantity of asphaltic concrete transferred into the storage silos and loaded into trucks shall not exceed 3,200 tons in any one day and 100,000 tons in any one calendar year. [District Rule 2201]
7. CO emissions from the filling of the storage silos shall not exceed 0.00118 lb/ton of asphaltic concrete produced. [District Rule 2201]
8. VOC emissions from the filling of the storage silos shall not exceed 0.01219 lb/ton of asphaltic concrete produced. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-7940-2-0 : Apr 19 2010 10:59AM – MASLOWST : Joint Inspection NOT Required

9. PM10 emissions from the filling of the storage silos shall not exceed 0.000586 lb/ton of asphaltic concrete produced. [District Rule 2201]
10. CO emissions from the truck loadout operation shall not exceed 0.001349 lb/ton of asphaltic concrete loaded. [District Rule 2201]
11. VOC emissions from the truck loadout operation shall not exceed 0.004159 lb/ton of asphaltic concrete loaded. [District Rule 2201]
12. PM10 emissions from the truck loadout operation shall not exceed 0.00052 lb/ton of asphalt concrete loaded. [District Rule 2201]
13. A daily log shall be maintained and shall include the following: (a). Total quantity of asphaltic concrete transferred into the storage silos (in tons); and (b). Total quantity of asphaltic concrete loaded into trucks (in tons). [District Rules 1070 & 2201]
14. The permittee shall maintain a record of the cumulative annual amount of asphaltic concrete transferred into the storage silos and loaded into trucks. The cumulative total shall be updated at least monthly. [District Rule 1070 & 2201]
15. {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]