SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT

ATC APPLICATION REVIEW

Dry-Batch Concrete Facility

Facility Name:	Date:
Mailing Address:	Engineer:
	Lead Engineer:
Contact Person:	
Telephone:	
Fax:	
E-Mail:	
Application #(s):	
Project #:	
Deemed Complete:	
Facility Name:	
Mailing Address:	

{Note 1: This GEAR applies to a all new dry-batch concrete plants of all capacities and with:

- Cement silo(s) served by bin vent filter or baghouse,
- Flyash* silo(s) served by bin vent filter or baghouse (Note: if flyash not used at the facility, just delete the reference to flyash),
- A cement and flyash weigh batcher served by a bin vent filter or a baghouse
- A sand and coarse aggregate weigh batcher (different from the cement and flyash weigh batcher), and
- A concrete truck loading dust shroud vented to a baghouse (this baghouse may be shared with the cement weigh batcher) serving the truck loading operation.

* Note that the term “flyash” will be used to denote either flyash or other cement supplements in this evaluation.

Equipment	Control device
Cement Silo(s)	Bin Vent Filter or Baghouse
Flyash Silo (Optional)	Bin Vent Filter or Baghouse
One (1) Cement and Flyash Weigh Batcher	Bin Vent Filter or Baghouse
One (1) Sand and Coarse Aggregate Weigh Batcher (different from the cement and flyash weigh batcher)	Wet Suppression
Concrete Truck Loading Operation	Dust Shroud Vented to a Baghouse

The basic equipment configuration listed above is one of the most common configurations for batch plants. However, there are numerous variations within this basic design which will be encountered often. In particular, the receiving, storage, and handling of sand and coarse aggregate is highly variable from plant to plant, depending upon a number of site-specific and business factors as well as plant operating philosophy. The evaluating engineer is required to fully understand the process design and the function of each piece of equipment and develop an exact description of all emission points and emission units within the permit units established by this GEAR. If the equipment description does not exactly match this standard lay-out, discuss this issue with your supervisor.

In addition, if this project will exceed the Major Source Threshold for this facility, this GEAR will not be applicable and you will need to discuss this issue with your supervisor.}

{Note 2: For the concrete truck loading operation, it is important to define precisely the type of device used to control PM_{10} emissions. In particular the concrete truck loading operation will be considered to be controlled by a baghouse only if the dust shroud is **directly** connected to the baghouse with no obstruction such as a feed chute full of material which prevents the removed air from the truck from being vented to the baghouse. If the proposed equipment does not match this requirement, this Gear may not be applicable and you need to discuss this issue with the applicant and your supervisor}

{Note 3: Permit Units are:
- Sand and Coarse Aggregate Receiving and Storage Operation
- Sand and Coarse Aggregate Handling Operation
- Cement Receiving and Storage Operation, consisting of n cement silo(s),
- If proposed, Flyash Receiving and Storage Operation, consisting of n flyash silo(s),
- Dry-batch Concrete Operation

{Note 4: Concrete is composed essentially of water, cement, sand (fine aggregate) and coarse aggregate. Coarse aggregate may consist of gravel, crushed stone, or iron blast furnace slag.}

I. PROPOSAL

xxx is a new facility applying for Authority to Construct (ATC) permits to build a new dry-batch concrete facility. The daily maximum capacity of this new facility is xxx $yard^3$-concrete/day.

The operation will include:

- a sand and coarse aggregate receiving and storage operation (ATC #x-xxxx-1-0)
- a sand and coarse aggregate handling operation (ATC #x-xxxx-2-0)
- a cement truck unloading and cement storage operation consisting of xxx cement storage silo{s} (ATC #x-xxxx-3-0),
- a flyash truck unloading and flyash storage operation consisting one (1) flyash storage silo (ATC #x-xxxx, -4-0) {delete if not applicable}, and
- a dry-batch concrete operation (ATC #x-xxxx-5-0).

II. APPLICABLE RULES

District Rule 2201	New and Modified Stationary Source Review (8/15/19)
District Rule 2520	Federally Mandated Operating Permits (8/15/19)
District Rule 4101	Visible Emissions (2/17/05)
District Rule 4102	Nuisance (12/17/92)
District Rule 4201	Particulate Matter Concentration (12/17/02)
District Rule 4202	Particulate Matter-Emission Rate (12/17/02)
District Rule 8011	General Requirements (8/19/04)
District Rule 8031	Bulk Materials (8/19/04)
District Rule 8041	Carryout and Trackout (8/19/04)
District Rule 8071	Unpaved Vehicle/Equipment Traffic Areas (9/16/04)
CH&SC 41700	California Health and Safety Code
CH&SC 42301.6	California Health and Safety Code

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 project is located at 12345 N. Street Rd. in Any City, CA. The District has verified that the equipment [is/is not] located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 [is/is not] applicable to this project.

IV. PROCESS DESCRIPTION

ATC #x-xxxx-1-0: Sand and Coarse Aggregate Receiving & Storage Operation

Sand and coarse aggregate are received at the plant by truck. {Expand to describe how the material is moved from the trucks to the storage piles, bunkers, or bins. A common and simple configuration, particularly in smaller plants is direct truck delivery to outdoor storage piles. The equipment description in this case is:} Each truck, containing either sand or coarse aggregate, dumps the material directly into outdoor stockpiles. {Larger and more modernized plants may propose more specialized equipment such as:} Each truck is equipped with a bottom-dump gate which discharges the contents of the truck through a grizzly and into the receiving hopper, located below grade. The receiving hopper discharges onto the receiving conveyor which delivers the sand and coarse aggregate to the storage piles (or bunkers or bins). {Alternatively, there may be no outdoor storage pile and the delivery truck dumps directly into a loader hopper and all the sand and aggregate storage is in the overhead bins. Note that a possible configuration for large plants is for the batch plant to be associated with a sand and gravel operation, which produces the sand and aggregate on-site and delivers it to the sand and aggregate stockpile. In this case the emissions associated with delivering and storing the material may be a part of the permit for the sand and aggregate operation and not a part of the batch plant.}

ATC #x-xxxx-2-0: Sand and Coarse Aggregate Handling Operation

{Describe how the material is reclaimed from storage and delivered to the overhead bins. A common configuration addressed directly in this GEAR is to reclaim the material directly from a storage pile using a front end loader. The loader dumps the material into a feed hopper which discharges onto a conveyor(s) which, in turn, delivers the material to the overhead bins:} Sand and coarse aggregate are reclaimed from the storage piles {or bunkers or bins} by a front end loader. The reclaimed material is dumped into the sand and coarse aggregate loader hopper. Material discharges from the bottom of the bin onto the sand and coarse aggregate reclaim conveyors which deliver the material to the overhead bins. {Other potential configurations include reclaim conveyors which recover the material directly from the stockpiles or bulk storage bins, or use of a reclaimer (powered equipment item) which reclaims material from the face of the stockpile and delivers it to a conveyor for transport to the overhead bins}.

ATCs #x-xxxx-3-0, and -4-0: Cement {and Flyash} Receiving & Storage Operation

Dry Portland cement {or flyash} is transported to the site by trucks. The cement {or flyash} is then pneumatically conveyed to the cement {or flyash} silo{s} through air pressure tubes. {Each / The} cement {or flyash} storage silo{s} is {are} served by a {bin vent filter / baghouse} which serves to filter the conveying air steam leaving the silo.

ATC #x-xxxx-5-0: Dry-Batch Concrete Operation

{The following description covers the majority of dry batch concrete operations. Revise as necessary to cover minor variations} Concrete is batched via computer by the batcher operator from the dispatch office. Drivers back-up the concrete mixer trucks beneath the plant batch discharge.

Cement {and flyash} are auger-fed through a closed system into the cement{/flyash} weigh batcher served by {a bin vent filter /a baghouse}. Sand and coarse aggregate are weighed in a separate sand and coarse aggregate weigh batcher.

Sand, coarse aggregate, cement and flyash are proportioned and are then directly loaded into a ready-mix truck where they are combined. Water is finally added to the mixed load directly into the truck. The truck loading operation is served by a dust shroud vented to {a baghouse / the baghouse serving both the truck loading operation and the cement {and flyash} weigh batcher}.

Appendix I: Process Flow Diagram

The proposed operating schedule of this operation is: xx hours/day, x days/week, and xx weeks/year.

V. EQUIPMENT LISTING

{To ensure uniformity, the following standard equipment description will be used}

Proposed New Permit Units:

ATC #x-xxxx-1-0: SAND AND COARSE AGGREGATE RECEIVING AND STORAGE OPERATION CONSISTING OF XX SAND AND COARSE AGGREGATE TRUCK UNLOADING POINTS {EACH SERVED BY DUST SUPPRESSION WATER SPRAYS} AND XXX ACRES (OR SQUARE FEET) OF SAND AND COARSE AGGREGATE STOCKPILES

{If the equipment description includes conveyors or other powered stationary equipment, modify the following table as appropriate, otherwise delete:)}

Detailed Equipment Listing for Unit # xxxx-1-0			
Equipment the Motor Serves	**Motor Power Rating (hp)**	**Quantity**	**Total Power Rating (hp)**
Sand Conveyor #			
Sand Conveyor #			
Sand Conveyor #			
Coarse Aggregate Conveyor #			
Coarse Aggregate Conveyor #			
Coarse Aggregate Conveyor #			
TOTAL Electrical hp			**0**

ATC #x-xxxx-2-0: SAND AND COARSE AGGREGATE HANDLING OPERATION CONSISTING OF A SAND AND COARSE AGGREGATE LOADER HOPPER AND XXX SAND AND COARSE AGGREGATE RECLAIM CONVEYOR{S}

Detailed Equipment Listing for Unit # xxxx-2-0			
Equipment the Motor Serves	**Motor Power Rating (hp)**	**Quantity**	**Total Power Rating (hp)**
Sand Conveyor #			
Sand Conveyor #			
Sand Conveyor #			
Coarse Aggregate Conveyor #			
Coarse Aggregate Conveyor #			
Coarse Aggregate Conveyor #			
TOTAL Electrical hp			**0**

ATC #x-xxxx-3-0: {if only 1 cement silo} CEMENT TRUCK UNLOADING AND CEMENT STORAGE OPERATION CONSISTING OF ONE XXX GALLON CEMENT STORAGE SILO WITH A PNEUMATIC TRUCK UNLOADING CONVEYOR SERVED BY A {BRAND AND MODEL} BIN VENT FILTER

{if several cement silos} CEMENT TRUCK UNLOADING AND CEMENT STORAGE OPERATION CONSISTING OF (XXX) {IDENTICAL} XXX GALLON CEMENT STORAGE SILO{S} {, AND ONE XXX BARREL CEMENT STORAGE SILO}, EACH WITH A PNEUMATIC TRUCK UNLOADING CONVEYOR AND EACH SERVED BY A {BRAND AND MODEL} BIN VENT FILTER

{Note: 1 BBL = 376 lb = 29.9 gal @ 94lb/gal}

Detailed Equipment Listing for Unit # xxxx-3-0					
Equipment		**Equipment Description**			
Cement Silo #	Capacity	xxx BBL	x 31.5 gal/BBL =	xxx gal	
	Bin Vent Filter / Baghouse	Brand Name	Model #	xx hp	xx cfm
Cement Silo #	Capacity	xxx BBL	x 31.5 gal/BBL =	xxx gal	
	Bin Vent Filter / Baghouse	Brand Name	Model #	xx hp	xx cfm
Cement Silo #	Capacity	xxx BBL	x 31.5 gal/BBL =	xxx gal	
	Bin Vent Filter / Baghouse	Brand Name	Model #	xx hp	xx cfm

ATC #x-xxxx-4-0: FLYASH TRUCK UNLOADING AND FLYASH STORAGE OPERATION CONSISTING OF ONE (1) xxx GALLON FLYASH STORAGE SILO WITH PNEUMATIC TRUCK UNLOADING CONVEYOR SERVED BY A {BRAND AND MODEL} BIN VENT FILTER

{if several cement silos} FLYASH TRUCK UNLOADING AND FLYASH STORAGE OPERATION CONSISTING OF (XXX) {IDENTICAL} XXX GALLON FLYASH STORAGE SILO{S} {, AND ONE XXX BARREL CEMENT STORAGE SILO}, EACH WITH A PNEUMATIC TRUCK UNLOADING CONVEYOR AND EACH SERVED BY A {BRAND AND MODEL} BIN VENT FILTER

{Note: 1 BBL = 376 lb = 29.9 gal @ 94lb/gal}

Detailed Equipment Listing for Unit # xxxx-4-0					
Equipment		Equipment Description			
Flyash Silo #	Capacity	xxx BBL	x 31.5 gal/BBL =	xxx gal	
	Bin Vent Filter / Baghouse	Brand Name	Model #	xx hp	xx cfm
Flyash Silo #	Capacity	xxx BBL	x 31.5 gal/BBL =	xxx gal	
	Bin Vent Filter / Baghouse	Brand Name	Model #	xx hp	xx cfm

ATC #x-xxxx-5-0: {use if one single baghouse serves the cement and flyash weigh batcher and the concrete truck loading dust shroud} DRY-BATCH CONCRETE OPERATION CONSISTING OF ONE ENCLOSED CEMENT {AND FLYASH} WEIGH BATCHER WITH ENCLOSED DISCHARGE CHUTES ALL SERVED BY A {BRAND NAME} MODEL XXX BIN VENT FILTER {BAGHOUSE}; XXX CEMENT {AND FLYASH} ENCLOSED SCREW CONVEYOR{S}; SAND AND COARSE AGGREGATE OVERHEAD BINS, XXX SAND AND COARSE AGGREGATE CONVEYOR{S}; ONE SAND AND COARSE AGGREGATE WEIGH BATCHER; ONE CONCRETE TRUCK LOADING OPERATION WITH A DUST SHROUD SEALED TO THE CONCRETE TRUCK AND VENTED TO THE BAGHOUSE SERVING THE CEMENT {AND FLYASH} WEIGH BATCHER; ONE PLANT WATER PUMP; AND ONE AIR COMPRESSOR

{use a bin vent filter serves the cement and flyash weigh batcher and a separate baghouse serves the concrete truck loading dust shroud} DRY-BATCH CONCRETE OPERATION CONSISTING OF ONE ENCLOSED CEMENT {AND FLYASH} WEIGH BATCHER WITH ENCLOSED DISCHARGE CHUTES ALL SERVED BY A {BRAND NAME} MODEL XXX BIN VENT FILTER; XXX CEMENT {AND FLYASH} ENCLOSED SCREW CONVEYOR{S}; SAND AND COARSE AGGREGATE OVERHEAD BINS, XXX SAND AND COARSE AGGREGATE CONVEYOR{S}; ONE SAND AND COARSE AGGREGATE WEIGH BATCHER; ONE CONCRETE TRUCK LOADING OPERATION WITH A DUST SHROUD SEALED TO THE CONCRETE TRUCK AND VENTED TO A {BRAND NAME} MODEL XXX BAGHOUSE; ONE PLANT WATER PUMP; AND ONE AIR COMPRESSOR.

Detailed Equipment Listing for Unit # xxxx-5-0			
Equipment the Motor Serves	**Motor Power Rating (hp)**	**Quantity**	**Total Power Rating (hp)**
Cement Conveyor #			
Flyash Conveyor #			
Sand and Coarse Aggregate Conveyor #			
Sand and Coarse Aggregate Conveyor #			
Baghouse Serving the Cement and Flyash Weigh Batcher			
Water Pump			
Electrical Air Compressor			
TOTAL Electrical hp			**0**

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

This ready-mix dry-batch concrete plant operation will emit Particulate Matter with an aerodynamic diameter smaller than or equal to a nominal 10 microns (PM_{10}). The applicant is proposing to control PM_{10} emissions from this process by the use of:

- {Bin vent filters or baghouses} for the cement {and flyash} delivery and storage operations;
- A {bin vent filter or baghouse} serving the cement {and flyash} weigh batcher,
- Enclosed discharge chute from the cement {and flyash} weigh batcher served by a dust shroud sealed to the concrete truck during the loading operation, and vented to {a baghouse / the cement {and flyash} weigh batcher baghouse} to control PM_{10} emissions from the concrete truck loading operation, and
- Wet suppression techniques for sand and coarse aggregate handling {delete if not applicable to this facility}:
  {describe the emissions points controlled by water spray, such as}
  - Truck unloading points {and}
  - Conveyor xxx transfer point, from the {equipment description} to the {equipment description}, {and
  - Conveyor xxx transfer point, from the {equipment description} to the {equipment description}. }

ATC #x-xxx-1-0: Sand and Coarse Receiving and Storage Operation
{applicable if water sprays used to control moisture content of sand or coarse aggregate from truck unloading and/or a minimum moisture content is specified to prevent visible emissions from the stockpile. If not, delete this paragraph}
Since PM_{10} emissions from the truck unloading will be controlled using water sprays, the following permit conditions will be listed on the permit(s) as follows:

- The sand and coarse aggregate truck unloading transfer point(s) shall be equipped with spray nozzles.. [District Rule 2201]

- The spray nozzles serving the sand and coarse aggregate truck unloading transfer point(s) shall be installed and maintained in proper working condition at all times and shall be turned on and confirmed to be operating correctly prior to truck unloading. [District Rule 2201]

Emissions from the sand and coarse aggregate stockpile will be controlled by maintaining the sand and coarse aggregate in the stockpile adequately wetted to pervent visible emission exceeding 5% opacity, the following permit conditions will be listed on the permit(s) as follows:

- The sand and coarse aggregate stockpile shall be equipped with spray nozzles which allow uniform control of moisture content of the material in the stockpile. [District Rule 2201]

- Moisture content of sand and aggregate stored in the sand and coarse aggregate stockpile shall be maintained at xxx% or greater, by weight, or at a moisture content adequate to prevent visible emissions greater than 5% opacity, whichever is greater. [District Rule 2201]

ATC #x-xxx-2-0: Sand and Coarse Aggregate Handling Operation
ATC #x-xxxx-5-0: Dry-Batch Concrete Operation
{applicable if water sprays used to control moisture content of sand or coarse aggregate. If no water spray, delete this paragraph}

Since PM_{10} emissions from {equipment description} will be controlled using water sprays, the following permit conditions will be listed on the permit(s) as follows:

{if all sand and/or coarse aggregate transfer points are equipped with spray nozzles, use the following permit conditions, modified as required to match the equipment configuration as well as be consistent with the BACT conditions listed in the BACT analysis of Section VII.A.3 - otherwise delete}

- All {sand and coarse aggregate} conveyor transfer points shall be equipped with spray nozzles installed and maintained in proper working condition at all times. [District Rule 2201]

{if specific equipment are served by spray nozzles, use the following condition, otherwise delete}

- Spray nozzles serving the {equipment description} shall be installed and be maintained in proper working condition at all times. [District Rule 2201]

{if spray nozzles are used, and in addition to the previous permit conditions, use the following permit condition, otherwise, if no spray nozzle, delete the following condition}

- All spray nozzles shall be turned on prior to operation of the line and shall remain on through the process to limit visible dust emissions, and maintain moisture content requirements of this permit. [District Rule 2201]

ATCs #C-xxxx-3-0: Cement Truck Unloading and Cement Storage Operation,
ATCs #C-xxxx-4-0: Flyash Truck Unloading and Flyash Storage Operation,
ATCs #C-xxxx-5-0: Dry-Batch Concrete Operation

Baghouses evaluation

The air/cloth ratio for the proposed dust collectors is calculated as follows:

Air/Cloth Ratio = Air Flow Rate ÷ Cloth Area

Air Flow Determination for Cement {and Flyash} Silo Loading Operations

{For bin vent filters on the cement silos, the facility may have an installed blower for the pneumatic conveying operation in which case the air flow rate is determined directly from the installed blower capacity. More typically, cement receiving is from trucks equipped with on-board blowers which power the pneumatic conveying operation. In this case, use the following approach to determine the conveying air rate to the bin vent filters on the silos based on the conveying tube diameter (typically 4"), otherwise delete:}

Since the applicant utilizes various trucking contractors for delivery of cement and flyash, the air flow capacity of each truck is unknown. Therefore, the air flow rate for both silo loading operations is estimated based on the size of the pneumatic fill line and the recommended conveying air velocity for portland cement as follows:

Bulk density[1] of loose portland cement = 94 lb/ft^3

Recommended conveying air velocity = 9,000 ft/minute[2]

Pneumatic fill line size = 4" dia. (0.087 ft^2 flow area)

Estimated air flow rate = air velocity x flow area

= 9,000 ft/min x 0.087 ft^2 = 783 acfm

(1) Chemical Engineer's Handbook, 5th ed., Table 3-120 (Densities of Miscellaneous Materials), page 3-90.
(2) Chemical Engineer's Handbook, 5th ed., Table 7-13 (Air Velocities Needed to Convey Solids of Various Bulk Densities), page 7-19.

Air Flow Determination for Cement and Flyash Weigh Batcher Operations

{When the cement weigh batcher is equipped with a dedicated filter, it is most often a bin vent filter which filters the air displaced by the filling of the weigh batcher. In this case, use the following approach to determine the air rate to the bin vent filters on the silos based on the potential displacement of air, otherwise delete:}

Since there is no fan on the vent filter to be installed on the weigh batcher, air flow is caused by the displacement of air during the loading operation. Air flow for the weigh batch filter is estimated based on the potential air displacement caused by loading the weigh batcher with cement through the slide gate.

One batch of concrete = 9 $yard^3$ (typical ready-mix truck capacity)

Cement weight per batch = 9 $yard^3$/batch x 0.3 tons-cement/$yard^3$ x 2000 lb/ton

= 5,400 lb-cement/batch

Based on a loading time of XX seconds (per the applicant) and cement density of 94 lb/ft^3:

Air Displacement = 5,400 lb/batch x 1 batch/XX sec x 1 ft^3/94 lb x 60 sec/min

= XXX ft^3/min

{filtration cleaning method: mechanical shaking, pulse jet, reverse air}

Equipment	Manufacturer	Filtration Cleaning Method	Air Flow Rate	Filter Area	A/C Ratio
			ft^3/min	ft^2	ft/min
Bin Vent Filter Serving Cement Silo #	Brand Name				
Bin Vent Filter Serving Cement Silo #	Brand Name				
Bin Vent Filter Serving Flyash Silo #	Brand Name				
Baghouse Serving Cement {and Flyash} Weigh Batcher, {and the Dust Shroud}	Brand Name				
{Baghouse serving the Dust Shroud}	Brand Name				

{Choose the appropriate baghouse cleaning mechanism design (mechanical shaking, pulse jet, or reverse air) and address **each baghouse**, combined if identical or one by one if different type}

Mechanical shaking is accomplished by using a motor that drives a shaft to move a rod connected to the bags. The shaking motion and speed depends upon the vendor's design and the composition of dust deposited on the bag. The flow of dirty gas is stopped during the cleaning process. The duration of the cleaning cycle is usually 30 seconds to a few minutes. Mechanical shaking baghouses are generally designed with air-to-cloth ratio (filtering velocity) between 2 and 6 ft/min.

{or}
The pulse jet cleaning mechanism uses a high pressure jet of air to remove the dust from the bags. The dust cake is removed from the bag by a blast of compressed air injected into the top of the bag tube. The air blast causes the bag to flex or expand as the shock wave travels down the bag tube. As the bag tube flexes, the dust cake fractures and deposited particulates are discharged from the bag. Pulse jet baghouses are generally designed with air-to-cloth ratio (filtering velocity) between 5 and 15 ft/min.

{or}
Reverse air cleaning is accomplished by stopping the flow of dirty gas into the compartment and backwashing the compartment with a low pressure flow of air. Dust is removed by merely allowing the bags to collapse, thus causing the dust cake to break and fall into the hopper. Cleaning frequency varies from 30 minutes to several hours, depending on the inlet dust concentration. The cleaning duration is approximately 10 to 30 seconds. Reverse air cleaning baghouses are generally designed with very low air-to-cloth ratio (filtering velocity), which are usually between 1 and 4 ft/min.

{and, if velocity within the proper range}
The calculated air-to-cloth ratio for the proposed {mechanical shaking or pulse jet or reverse air} cleaning baghouse is xxx ft/min which is within the typical range.

Thus, the proposed baghouse is considered to be designed for optimum performance, and is expected to achieve a control efficiency of at least 99% for PM_{10}.

{and, if velocity out of the proper range but vendor guarantee available:}
The calculated air-to-cloth ratio for the proposed {mechanical shaking or pulse jet or reverse air} cleaning baghouse is xxx ft/min which is {above or below} the typical range.

However, according to the manufacturer, this piece of equipment has been specifically designed for this application and is guaranteed to perform with a collection efficiency of 99% {or, operation of this equipment at the proposed air to cloth has been previously proven in this application and {the manufacturer guaranties operation with a collection efficiency of 99%}}.

Thus, the proposed baghouse(s) and vent filters will be considered to be designed for optimum performance, and are expected to achieve a control efficiency of at least 99% for PM_{10}.
{Or, if velocity outside proper range and no vendor guarantee available, use the following:}

Since the baghouse (bin vent filter) is not designed to operate within normal operating ranges and has not been specifically designed or guaranteed for this service, the baghouse is considered to provide a control efficiency of only 90% per District practice.

{note that the above does not meet BACT for the emissiopn unit. If BACT is triggered a 99% effective control device will be required}

Permit Conditions

To ensure that each baghouse or bin vent filter will be working properly, the following conditions will be placed on ATCs #x-xxxx-x-'3-0 and '-4-0.

- The bin vent filter(s) shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]

- The bin vent filter(s) cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]

- A spare set of bags or filters shall be maintained for each bin vent filter on the premises at all times. [District Rule 2201]

- {10} The bin vent filter(s) 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]

{Plus add conditions from either Case 1 or Case 2 below as applicable:}

{Case 1: If manufacturer information available for ATC evaluation, place the following condition on the ATC:}

- The bin vent filter shall operate at all times with a minimum differential pressure of X inches water column and a maximum differential pressure of X inches water column. [District Rule 2201]

{Or,}

{Case 2: If manufacturer information is not available for ATC evaluation, the differential pressure restriction above will be placed on the PTO at time of conversion. Place the following condition on the ATC:}

- The differential pressure gauge reading range shall be established per manufacturer's recommendation at time of start up inspection. [District Rule 2201]

{Plus the following conditions:}

- Differential operating pressure of the bin vent filter shall be monitored and recorded on each day that the bin vent filter(s) operates. [District Rule 2201]

- Records of all maintenance of the bin vent filter(s), including all change outs of filter media, shall be maintained. [District Rule 2201]

- Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

The following conditions will be placed on ATC #x-xxxx-x-5-0.

- The concrete truck loading operation shall be served by a dust shroud sealed to the concrete truck during loading operation, and vented to a baghouse. [District Rule 2201]

{if separate baghouses serve the cement and weigh batcher and the truck loading operation, use the following conditions}

- The baghouse serving the cement {and flyash} weigh batcher shall be turned on prior loading, mixing and unloading operation of the weigh batcher and shall remain on through the process. [District Rule 2201]

- The baghouse serving the concrete truck loading operation shall be turned on prior loading and shall remain on through the concrete loading operation. [District Rule 2201]

{alternatively, if a single baghouse serves the cement and weigh batcher and the truck loading operation, use the following condition}

- The baghouse serving the cement {and flyash} weigh batcher and concrete truck loading operation shall be turned on prior to loading, mixing and unloading operation of the equipment served and shall remain on through the process. [District Rule 2201]

{plus add the following conditions for either case}

- Baghouse(s) and bin vent filter(s) shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]

- Baghouse(s) and bin vent filter(s) cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]

- {73} Material removed from the baghouse serving the truck loading shroud shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule]

- A spare set of bags or filters shall be maintained for each baghouse and bin vent filter on the premises at all times. [District Rule 2201]

- {10} The baghouse serving the truck loading shroud 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]

{Plus add conditions from either Case 1 or Case 2 below as applicable:}

{Case 1: If manufacturer information available for ATC evaluation, place the following condition on the ATC:}

- The baghouse serving the truck loading shroud shall operate at all times with a minimum differential pressure of X inches water column and a maximum differential pressure of X inches water column. [District Rule 2201]

{Or,}

{Case 2: If manufacturer information is not available for ATC evaluation, the differential pressure restriction above will be place on the PTO at time of conversion. Place the following condition on the ATC:}

- The differential pressure gauge reading range for the baghouse serving the truck loading shroud shall be established per manufacturer's recommedation at time of start up inspection. [District Rule 2201]

{Plus the following conditions:}

- Differential operating pressure for the baghouse serving the truck loading operation shall be monitored and recorded on each day that the baghouse operates. [District Rule 2201]

- Records of all maintenance of all baghouse(s) and bin vent filter(s), including all change outs of filter media, shall be maintained. [District Rule 2201]

- Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

VII. CALCULATIONS

A. Assumptions

- Maximum potential emissions are based on a 8 hours/day, 365 days/year
- PM_{10} will be the only emissions associated with this project.
- Grain conversion: 1 pound = 7,000 grains (AP-42-Appendix A-18)
- District procedures consider any sand or coarse aggregate material processed with moisture content greater than or equal to 6% by weight, as having negligible fugitive emissions due to the extreme water saturation
- 1.0 $yard^3$-concrete weighs 2.012 ton-concrete (AP-42, Table 11.12-2, footnote a)

Maximum daily throughput:

	Maximum Daily Throughput	Moisture Content	Source
Sand Received to Stockpile	xxx ton-sand/day	x%	Applicant's data

Coarse Aggregate Received to Stockpile	xxx ton-coarse aggregate/day	x%	Applicant's data
Sand Processed to Concete	xxx ton-sand/day	x%	Applicant's data
Coarse Aggregate Procesed to Concrete	xxx ton-coarse aggregate/day	x%	Applicant's data
Sand and Coarse Aggregate Combined (on conveyors from the weigh batcher to the truck loading)	xxx ton-sand and coarse aggregate/day	x%	Applicant's data
Cement Silo Loading	xxx ton-cement/day	N/A	Applicant's data
Cement Silo Unloading	xxx ton-cement/day	N/A	Applicant's data
Flyash Silo Loading	xxx ton-flyash/day	N/A	Applicant's data
Flyash Silo Unloading	xxx ton-flyash/day	N/A	Applicant's data
Concrete	xxx $yard^3$/day	N/A	Applicant's data

B. Emissions Factors

Emissions factors for this dry-batch concrete plant are listed in the following table (See next page).

{Note 1: Use the following table to identify the proper emissions factors}

{Note 2: Delete the unnecessary rows, and unnecessary controlled EF, but, since they are used to calculate controlled EF, do not delete any uncontrolled EF}

{Note 3: Make sure you select the proper EF for truck loading operation. So, carefully read table footnote (4). FYI, a simple shroud with water spray is consider "control" with EF = 0.0235 lb-PM_{10}/$yard^3$-concrete. To be considered controlled with a baghouse, the shroud has to be directly connected to the baghouse, meaning direct duct from the shroud to the baghouse}

{Note 4: Only for very specific cases use the calculation table attached in table foot note (4) to recalculate EF with different data (Wind speed, particle size multiplier), otherwise, in every other cases, use the EF as listed in the following table}.

EMISSIONS FACTORS FOR CONCRETE DRY-BATCH PLANT (1)

EMISSIONS UNITS	UNIT	UNCONTROLLED	*CONTROLLED*		
			Water (spray bars, …)		**Baghouse / Bin Vent Filter** (8)
			Moisture < 6%	Moisture ≥ 6%	
Stockpiles	lb-PM_{10}/1,000 ft^2/day lb-PM_{10}/acre/day	0.00382 0.1666 (2)	0.00382 x (1 - 70%) = 0.0011 0.1666 x (1 - 70%) = 0.050 (3)	0.0 0.0 (4)	- - -
Sand Transfer Point	lb-PM_{10}/ton-sand	@ 1%: 0.0092 (5)	@ 3%: 0.0020 @ 4%: 0.0013 @ 5%: 0.00097 (5)	0.0 (4)	- - -
Coarse Aggregate Transfer Point	lb-PM_{10}/ton-aggregate	@ 1%: 0.0092 (5)	@ 2%: 0.00350 (2% is maximum, >2% not technically feasible)	Not Technically Feasible	- - -
Sand and Coarse Aggregate Weigh Batcher Loading	lb-PM_{10}/ton-sand & aggregate	0.0024	0.0024 x (1 - 70%) = 0.00072 (3)	0.0 (4)	0.0024 x (1 - 99%) = 0.000024 0.0024 x (1 - 90%) = 0.00024
Sand and Coarse Aggregate Weigh Batcher Unloading	lb-PM_{10}/ton-sand & aggregate	@ 1%: 0.0092 (5)	@ 3%: 0.0020 @ 4%: 0.0013 @ 5%: 0.00097 (5)	0.0 (4)	0.0092 x (1 - 99%) = 0.000092
Cement Silo Loading (pneumatic)	lb-PM_{10}/ton-cement	0.46	- - -	- - -	0.00034
Fly Ash (Supplement) Silo Loading (pneumatic)	lb-PM_{10}/ton-fly ash	1.10	- - -	- - -	0.0049
Cement Weigh batcher Loading	lb-PM_{10}/ton-cement	0.0024	- - -	- - -	0.0024 x (1 - 99%) = 0.000024 0.0024 x (1 - 90%) = 0.00024
Fly Ash (Supplement) Weigh Batcher Loading	lb-PM_{10}/ton-fly ash	0.0024	- - -	- - -	0.0024 x (1 - 99%) = 0.000024 0.0024 x (1 - 90%) = 0.00024
Concrete Truck Loading (Uncaptured Emissions)	lb-PM_{10}/$yard^3$-concrete	0.0784	0.0784 x (1-70%) = 0.0235 (3), (6)		0.0784 x (1-97%) = 0.00235 (8)
Concrete Truck Loading (Baghouse Emissions)	lb-PM_{10}/$yard^3$-concrete	- - -	- - -		(0.0784-0.00235) x 1-96%) = 0.00304 (9) (0.0784-0.00235) x 1-99%) = 0.000761 (9)

(1): Except for stockpiles, and sand and coarse aggregate transfer point, emissions factors are from AP42, Table 11.12-2, and Table 11.12-3 (for Truck Loading Operation only).

For more specific cases, refer to:
- AP42, Section 11.12, *Concrete Batching,* Table 11.12-2 (lb-PM_{10}/ton)
- AP42, Section 11.12, *Concrete Batching,* Table 11.12-5 (lb-PM_{10}/yard^3-concrete)
- AP42, Section 11.19.1, *Sand And Coarse aggregate Processing*
- AP42, Section 13.2.4, *Aggregate Handling And storage Piles*
- AP42, Section 13.2.5, *Industrial Wind Erosion*

(2): Emission Factors are calculated using AP42, Section 13.2.5, *Industrial Wind Erosion*, guideline, and based on:
- Threshold Friction Velocity: 0.54 (Worse case, Fine Coal dust on concrete pad)
- Wind Speed: 12.0 mph, per District Regulation 8 for District Rule Development (more conservative than 7.5 mph from AP42, Section 7.1.63, for Stockton)
- Conical pile with typical Us/Ur distribution.

For more specific data, use *Wind Erosion Emissions from Bulk Storage Piles for Rule 8031, Bulk Materials1* calculation spreadsheet.

(3): AP42, Section 11.19.1, *Sand And Gravel Processing*, Paragraph 11.19.1.2, *Emissions and Controls*, page 11.19.1-3 indicates that water spray systems at transfer point and on material handling operations have been estimated to reduce emissions 70 to 95%. Conservatively, we will consider 70% reduction

(4): District procedures consider any aggregate material processed with moisture content greater than or equal to 6% by weight, as having negligible fugitive emissions due to the extreme water saturation.

(5): AP42, Section 13.2.4, *Aggregate Handling And storage Piles*, Paragraph 13.2.4.3, *Predictive Emission Factor Equations*, page 13.2.4-3, identifies emission factors as follows:

					3%	4%	5%
EF =	$0.0032 \times k \times \frac{(U/5)^{1.3}}{(M/2)^{1.4}}$	=	0.009224	$/ M^{1.4}$	0.0020	0.0013	0.00097

With
- k: Particule Size Multiplier = 0.35
- U: Wind Speed (mile per hour) = 12.0 mph (per District Regulation 8 for District Rule development, and more conservative than 7.5 mph from AP42, Section 7.1.63, for Stockton)
- M: Material Moisture Content = %

For uncontrolled emissions, since the material is not completely dry, we will consider 1% moisture content.

(6): AP42, Section 11.12, *Concrete Batching*, Paragraph 11.12-2, *Emissions and Controls*, identifies water sprays, shrouds, movable and telescoping chutes as control device for controlled PM_{10} emissions factor for this type of operation.

(7): Since the control device proposed by applicant is a shroud served by a baghouse, we will consider the PM_{10} emission factor proposed by AP42, Section 11.12, *Concrete Batching,* Table 11.12-2 (lb-PM_{10}/ton) for uncontrolled operation, adjust for a capture efficiency of 97.3% per reference 14, and then apply 99% control efficiency.

(8): Capture efficiency of the truck shroud is considered to be 97 % based on a 97.3% average capture efficiency for properly designed truck shroud operations served by a baghouse as reported in AP-42, 11.12, reference 14.

(9): Control efficiency is considered 99% for baghouses designed and operated with air-to-cloth within the typical range (see CARB Baghouse manual) and with control efficiency guaranteed by the manufacturer equal or exceeding 99%. Otherwise the filter control efficiency is assumed to be 96% per average test data for AP-42, 11.12, references 9, 10, and 14. “Sock”-type filters are considered to have an efficiency of 90%..

C. Pre-Project Potential to Emit (PE1)

ATC #x-xxx-1-0: Sand and Coarse Receiving and Storage Operation

As this unit is a new source, the Pre-Project Potential to Emit (PE1) is:

PE1 = 0

ATC #x-xxx-2-0: Sand and Coarse Handling Operation

As this unit is a new source, the Pre-Project Potential to Emit (PE1) is:

PE1 = 0

ATC #C-xxx-3-0: Cement Truck Unloading and Cement Storage Operation

As this unit is a new source, the Pre-Project Potential to Emit (PE1) is:

PE1 = 0

ATC #C-xxx-4-0: Flyash Truck Unloading and Flyash Storage Operation

As this unit is a new source, the Pre-Project Potential to Emit (PE1) is:

PE1 = 0

ATC #C-xxx-5-0: Dry-Batch Concrete Operation

As this unit is a new source, the Pre-Project Potential to Emit (PE1) is:

PE1 = 0

D. Post-Project Potential to Emit (PE2)

{Note 1: It is important to precisely identify the different emissions units associated with this project. Revise the following calculation tables as required to accurately reflect your specific project.

See the following examples of Permit Unit / Emissions Unit / Emissions Point Breakdowns for:

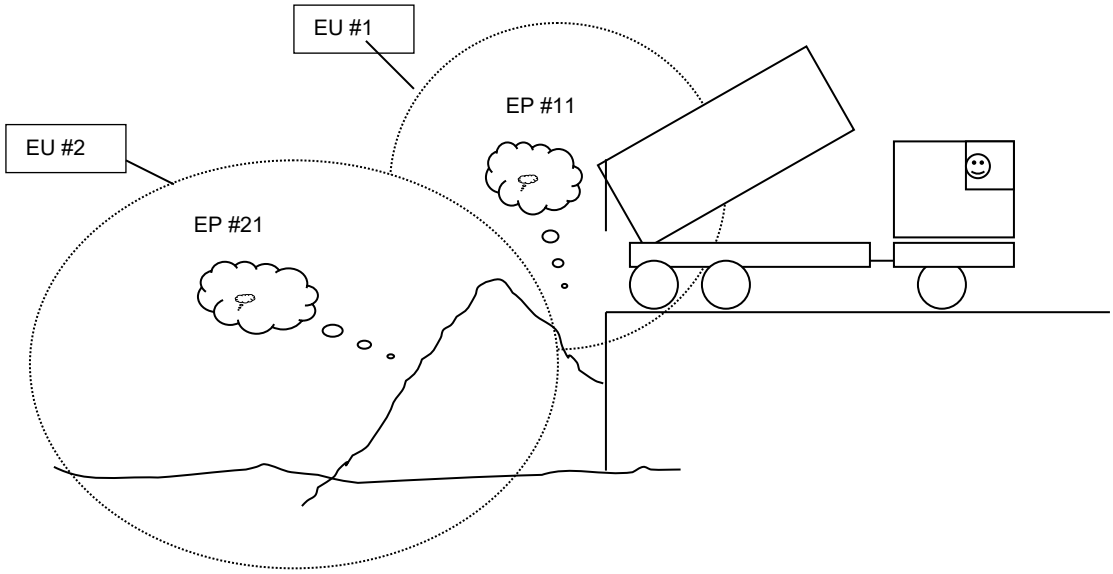
1. Sand and Coarse Aggregate Receiving and Storage Operation (with direct truck delivery to open sand and coarse aggregate stockpiles).
2. Sand and Coarse Aggregate Handling Operation (with reclaim by front end loader and transfer to the overhead bins).
3. Cement (or Flyash) Truck Unloading and Cement (or Flyash) Storage
4. Dry Batch Concrete Operation (with a bin vent filter serving the cement weigh batcher and a dedicated baghouse serving the truck loading shroud).

These examples follow the guidelines from District Policy APR 1025, *Permit Unit Determination.* Since specific equipment configurations may vary widely, these should be used as a guide only for establishing the emission unit/emission point breakdown for each permit unit.}

{Note: do not attach the following process flow chart to the evaluation, this is only a guideline}

Permit Unit x-xxxx-1-0

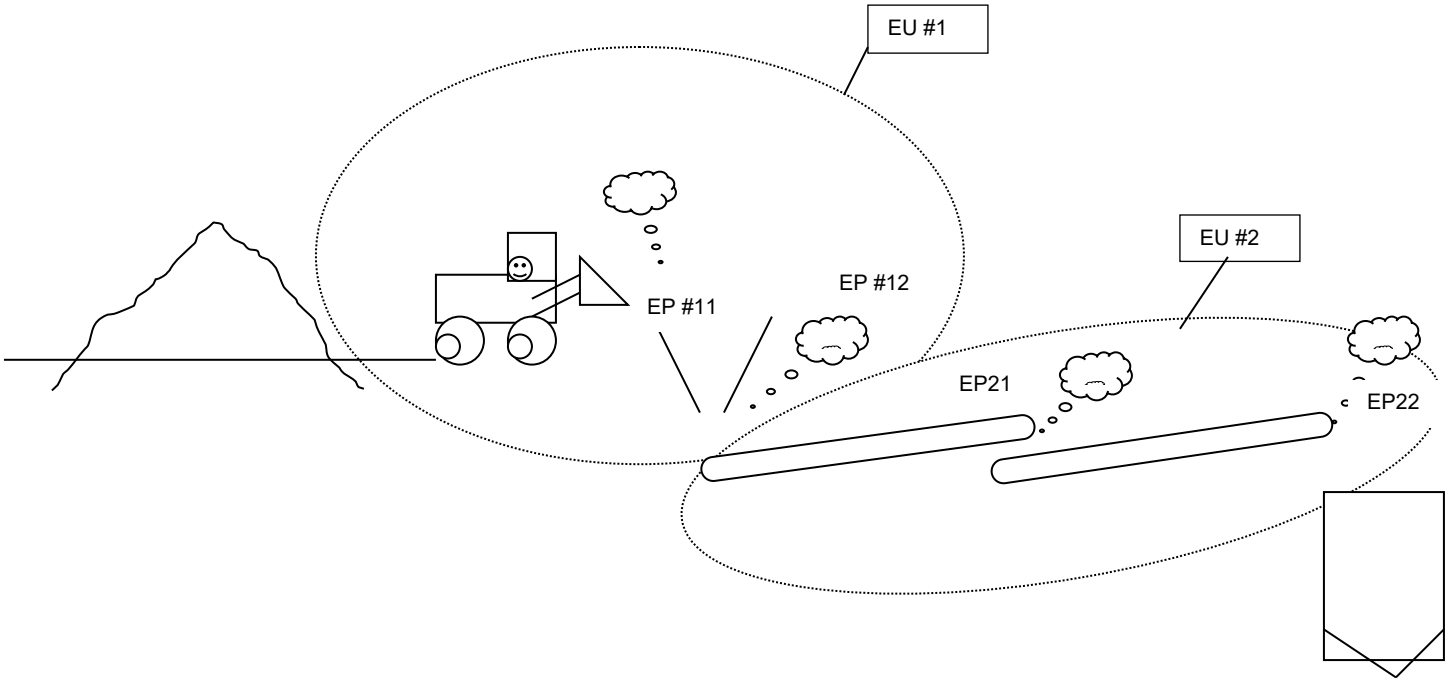
Example of
Permit Unit / Emissions Unit / Emission Points Breakdown
Sand And Coarse Aggregate Receiving and Storage Operation



Permit Unit: Sand And Coarse Receiving and Storage Operation	
EU: Emissions Unit	**EP: Emissions Point**
EU #1: Sand and Coarse Aggregate Receiving	EP #11: Sand and Coarse Aggregate Truck Unloading
EU #2: Sand and Coarse Aggregate Storage Piles	EP #21: Sand and Coarse Aggregate Pile Wind Erosion

Permit Unit x-xxxx-2-0

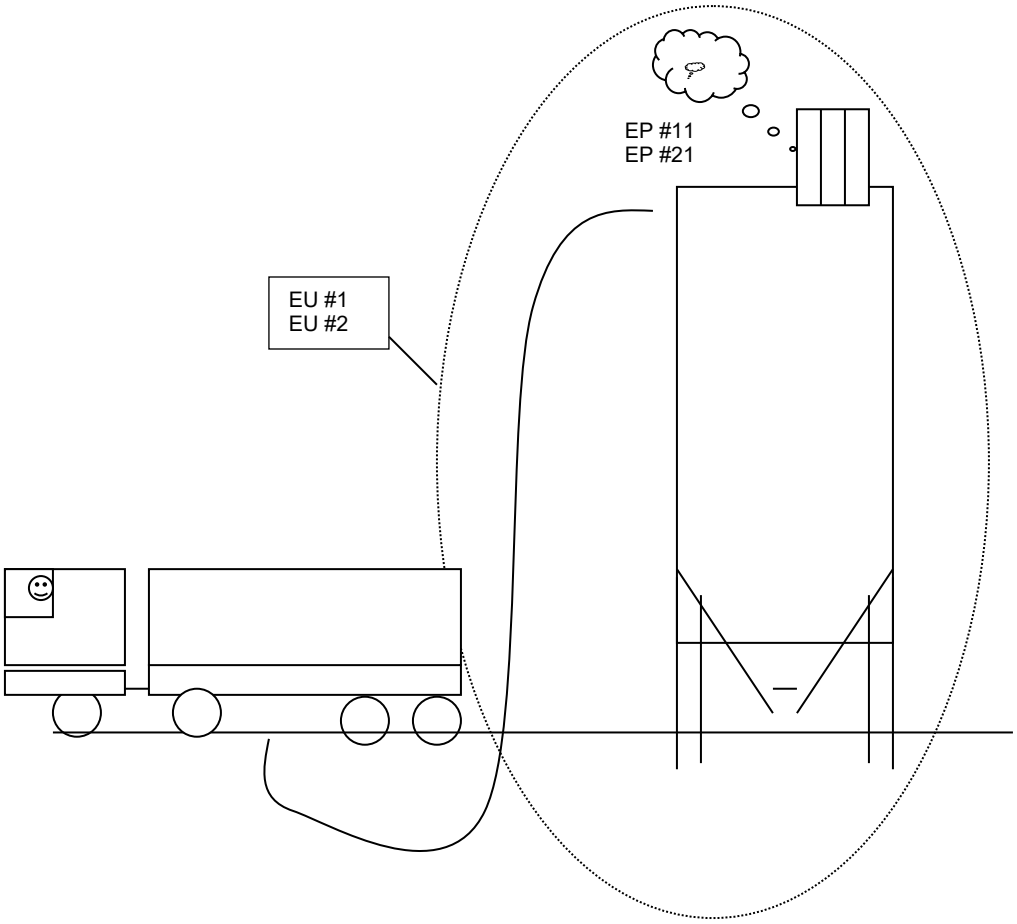
Example of
Permit Unit / Emissions Unit / Emission Points Breakdown
Sand And Coarse Aggregate Handling Operation



Permit Unit: Sand And Coarse Receiving and Storage Operation	
EU: Emissions Unit	**EP: Emissions Point**
EU #1: Sand and Coarse Aggregate Loader Hopper	EP #11: Sand and Coarse Aggregate Hopper Loading EP #12: Sand and Coarse Aggregate Hopper Unloading
EU #2: Sand and Coarse Aggregate Conveyors	EP #21: Sand and Coarse Aggregate Transfer Point EP #22: Sand and Coarse Aggregate Transfer Point (Bin Loading)

Permit Units x-xxxx-3-0 and '-4-0

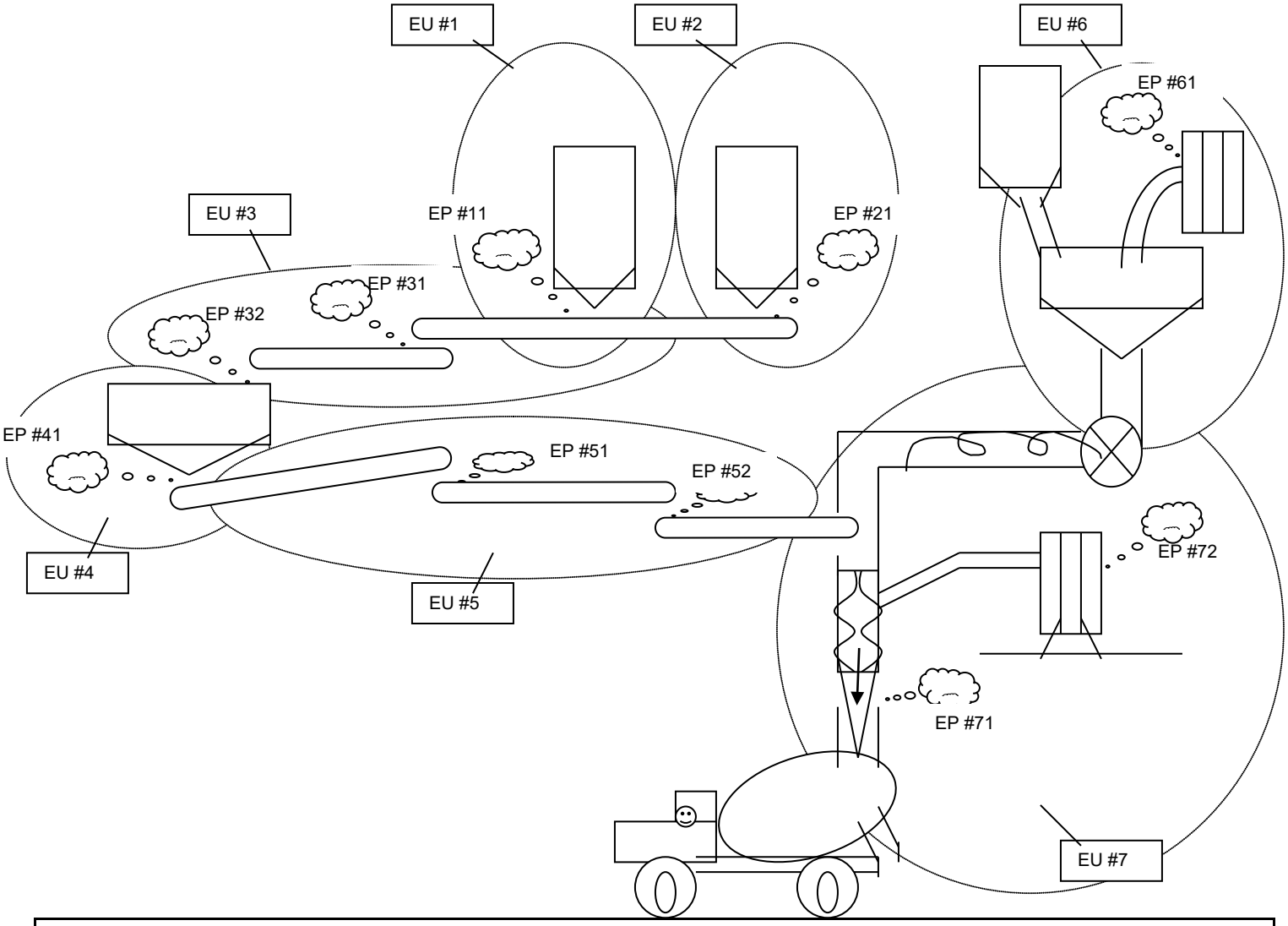
Example of
Permit Unit / Emissions Unit / Emission Points Breakdown
Cement and Flyash Receiving and Storage Operation



Permit Unit: Cement and Flyash Receiving and Storage Operation	
EU: Emissions Unit	**EP: Emissions Point**
EU #1: Cement Silo Loading	EP #11: Cement Truck Unloading Operation
EU #2: Flyash Silo Loading	EP #21: Flyash Truck Unloading Operation

Permit Unit x-xxxx-5-0

Example of
Permit Unit / Emissions Unit / Emission Points Breakdown
Dry Batch Concrete Operation



Permit Unit: Sand And Coarse Receiving and Storage Operation	
EU: Emissions Unit	**EP: Emissions Point**
EU #1: Sand Bin	EP #11: Sand Bin Unloading
EU #2: Coarse Aggregate Bin	EP #21: Coarse Aggregate Bin Unloading
EU #3: Sand and Coarse Aggregate Reclaim Conveyors	EP # 31: Sand and Coarse Aggregate Reclaim Conveyors
EU #4: Sand and Coarse Aggregate Weigh Batcher	EP # 41: Sand and Coarse Aggregate Weigh Batcher Unloading Operation
EU #5: Sand and Coarse Aggregate Weigh Batcher Transfer Conveyors	EP # 51: Sand and Coarse Aggregate Transfer Point EP # 52: Sand and Coarse Aggregate Transfer Point
EU #6: Cement and Flyash Weigh Batcher	EP # 61: Cement and Flyash Weigh Batcher Loading Operation
EU #7: Concrete Truck Loading Operation	EP # 71: Truck Loading EP # 71: Truck Loading Baghouse Vent

ATC #x-xxxx-1-0: Sand and Coarse Aggregate Receiving and Storage Operation

The Post-Project Potential to Emit (PE2) is calculated as follows:

Pre-Project Potential to Emit, X-XXXX-1-0								
Emission Units		**Commodity**	**Emission Factor**	**Emission Points**	**Process Rate**	**Daily PE1**	**Annual PE1**	**Quarterly PE1**
			lb-PM10/ton (lb-PM10/day-ft^2)		ton/day (ft^2)	lb-PM10/day	lb-PM10/year	lb-PM10/qtr
			-1	-2	-3	(4) = (1) x (2) x (3)	(5) = (4) x 365	(6) = (5)/4
Truck Unloading		Sand						
		Coarse Aggregate						
EU1	**Sand & Coarse Aggregate Receiving**							
Sand and Coarse Aggregate Wind Erosion		Sand & Coarse Aggregate						
EU2	**Sand and Coarse Aggregate Storage piles**							
ATC# X-XXXX-1-0								

ATC #x-xxxx-2-0: Sand and Coarse Aggregate Handling Operation

The Post-Project Potential to Emit (PE2) is calculated as follows:

Pre-Project Potential to Emit, X-XXXX-2-0

Emission Units		Commodity	Emission Factor	Emission Points	Process Rate	Daily PE1	Annual PE1	Quarterly PE1
			lb-PM10/ton		ton/day	lb-PM10/day	lb-PM10/year	lb-PM10/qtr
			-1	-2	-3	(4) = (1) x (2) x (3)	(5) = (4) x 365	(6) = (5)/4
Hopper loading		Sand						
		Coarse Aggregate						
Hopper Unloading		Sand						
		Coarse Aggregate						
EU1	**Sand & Coarse Aggregate Loader Hopper**							
Sand and Coarse Aggregate Transfer Points		Sand						
		Coarse Aggregate						
EU2	**Sand & Coarse Aggregate Conveyors**							
ATC #X-XXXX-2-0								

ATC #x-xxxx-3-0: Cement Truck Unloading and Cement Storage Operation

The Post-Project Potential to Emit (PE2) is calculated as follows:

Pre-Project Potential to Emit, X-XXXX-3-0

Emission Units		Emission Factor	Emission Points	Process Rate	Daily PE1	Annual PE1	Quarterly PE1
		lb-PM10/ton		ton/day	lb-PM10/day	lb-PM10/year	lb-PM10/qtr
		-1	-2	-3	(4) = (1) x (2) x (3)	(5) = (4) x 365	(6) = (5)/4
EU1	Cement Silo Loading						
ATC #X-XXXX-3-0							

ATC #x-xxxx-4-0: Flyash Truck Unloading and Flyash Storage Operation

The Post-Project Potential to Emit (PE2) is calculated as follows:

Pre-Project Potential to Emit, X-XXXX-4-0

Emission Units		Emission Factor	Emission Points	Process Rate	Daily PE1	Annual PE1	Quarterly PE1
		lb-PM10/ton		ton/day	lb-PM10/day	lb-PM10/year	lb-PM10/qtr
		-1	-2	-3	(4) = (1) x (2) x (3)	(5) = (4) x 365	(6) = (5)/4
EU1	Flyash Silo Loading						
ATC #X-XXXX-4-0							

ATC #x-xxxx-5-0: Dry-Batch Concrete Operation

Pre-Project Potential to Emit, X-XXXX-5-0								
Emission Units		**Commodity**	**Emission Factor**	**Emission Points**	**Process Rate**	**Daily PE1**	**Annual PE1**	**Quarterly PE1**
			lb-PM10/ton		ton/day	lb-PM10/day	lb-PM10/year	lb-PM10/qtr
			-1	-2	-3	(4) = (1) x (2) x (3)	(5) = (4) x 365	(6) = (5)/4
Sand Bin Unloading		Sand						
EU1	**Sand Bin**							
Coarse Aggregate Bin Unloading		Coarse Aggregate						
EU2	**Coarse Aggregate Bin**							
Sand and Coarse Aggregate Reclaim Conveyors		Sand						
		Coarse Aggregate						
EU3	**Sand and Coarse Aggregate Reclaim Conveyors**							
Sand and Coarse Aggregate Weigh Batcher		Sand and Coarse Aggregate						
EU4	**Sand and Coarse Aggregate Weigh Batcher**							
Sand & Coarse Aggregate Weigh Batcher Conveyors		Sand and Coarse Aggregate						
EU5	**Sand & Coarse Aggregate Weigh Batcher Conveyors**							
Cement and Flyash Weigh Batcher		Cement						
		Flyash						
EU6	**Cement and Flyash Weigh Batcher**							
Truck Loading								
Baghouse Vent								
EU7	**Concrete Truck Loading Operation**							

ATC #X-XXXX-5-0							

E. 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, there are no valid ATCs, PTOs, or ERCs at the Stationary Source; therefore, the SSPE1 will be equal to zero.

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

The Post-Project Stationary Source Potential to Emit (SSPE2) is:

Permitted Units	**SSPE2**				
	NO_X	**SO_X**	**PM_{10}**	**CO**	**VOC**
	lb-/year	lb-/year	lb-/year	lb-/year	lb-/year
ATC #x-xxxx-1-0 Sand and Coarse Aggregate Receiving and Storage Operation	0	0		0	0
ATC #x-xxxx-2-0 Sand and Coarse Aggregate Handling Operation	0	0		0	0
ATC #x-xxxx-3-0 Cement Truck Unloading and Cement Storage Operation	0	0		0	0
ATC #x-xxxx-4-0 Flyash Truck Unloading and Flyash Storage Operation	0	0		0	0
ATC #x-xxxx-5-0 Dry-batch Concrete Operation	0	0		0	0
Total Stationary Source Potential to Emit (SSPE2)	**0**	**0**		**0**	**0**

G. Major Source Determination

Pursuant to Section 3.24 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 3.24.2 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."

Pollutant	SSPE1	SSPE2	Major Source Thresholds	Major Source ?
NO_X	0 lb-NO_X/year	0 lb-NO_X/year	20,000 lb-NO_X/year	No
SO_X	0 lb-SO_X/year	0 lb-SO_X/year	140,000 lb-SO_X/year	No
PM_{10}	xxx lb-PM_{10}/year	xxx lb-PM_{10}/year	140,000 lb-PM_{10}/year	No
CO	0 lb-CO/year	0 lb-CO/year	200,000 lb-CO/year	No
VOC	0 lb-VOC/year	0 lb-VOC/year	20,000 lb-VOC/year	No

This new facility is not becoming a Major Source as a result of this project.

{If any Major Source threshold is exceeded: **STOP**…this is not a GEAR}

H. 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 is a new emissions unit, BE = PE1 = 0 for all criteria pollutants.

I. SB 288 Major Modification

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

As discussed in Section VII.C.5 above, this facility is not a major source for any of the pollutants addressed in this project; therefore, the project does not constitute a SB 288 Major Modification.

J. Federal Major Modification

District Rule 2201, Section 3.18 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM_{10} (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

K. Quarterly Net Emissions Change

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

VIII. COMPLIANCE

District 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 in any one day,
(b) The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds in any one day, and
(c) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (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 of CO per year.

2. BACT Analysis

a New Emission Unit, with PE > 2 lb/day

For new emissions units, BACT is triggered if the Potential to Emit exceeds two pounds in any one day.{Revise the following tables as required to reflect the emission unit breakdown of your project}

ATC #x-xxxx-1-0: Sand And Coarse Aggregate Receiving and Storage Operation

Emissions Units	Daily PE2	BACT Threshold	BACT Required?
Sand and Coarse Aggregate Truck Receiving	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Sand and Coarse Aggregate Storage Pile	lb-PM_{10}/day	2.0 lb/day	**Yes** / No

ATC #x-xxxx-2-0: Sand And Coarse Aggregate Handling Operation

Emissions Units	Daily PE2	BACT Threshold	BACT Required?
Sand and Coarse Aggregate Loading Hopper	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Sand and Coarse Aggregate Reclaim Conveyors	lb-PM_{10}/day	2.0 lb/day	**Yes** / No

ATC #x-xxxx-3-0: Cement Truck Unloading and Cement Storage Operation

Emissions Unit	Daily PE2	BACT Threshold	BACT Required?
Cement Storage Silo {#1} Served by a Bin Vent Filter	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Cement Storage Silo {#2} Served by a Bin Vent Filter	lb-PM_{10}/day	2.0 lb/day	**Yes** / No

ATC #x-xxxx-3-0: Flyash Truck Unloading and Flyash Storage Operation

Emissions Unit	Daily PE2	BACT Threshold	BACT Required?
Flyash Storage Silo Served by a Bin Vent Filter	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Flyash Storage Silo Served by a Bin Vent Filter	lb-PM_{10}/day	2.0 lb/day	**Yes** / No

ATC #x-xxxx-5-0: Dry-Batch Concrete Operation

Emissions Units	Daily PE2	BACT Threshold	BACT Required?

Sand Bin Unloading	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Coarse Aggregate Bin Unloading	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Bin Reclaim Conveyors	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Sand and Coarse Aggregate Weigh Batcher	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Sand and Coarse Aggregate Weigh Batcher Transfer Conveyors	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Cement and Flyash Weigh Batcher	lb-PM_{10}/day	2.0 lb/day	**Yes** / No
Concrete Truck Loading Operation	lb-PM_{10}/day	2.0 lb/day	**Yes** / No

b. Relocation of Emissions Units, with PE > 2 lb/day

This project does not include any unit being relocated from one stationary source to another.

Therefore, BACT is not triggered, for the relocation of emissions units purposes.

c. Modification of Emissions Units, AIPE > 2 lb/day

This project does not include any unit being modified.

Therefore, AIPE calculations are not required, and BACT is not triggered, for AIPE exceeding the 2lb/day threshold.

d. Major Modification

As discussed in Section VII-I of this evaluation, this project does not constitute a Major Modification.

Therefore, BACT is not triggered for Major Modification purposes.

3. Top Down BACT Analysis

As indicated above, none of the emissions units at this new facility triggers BACT.

{or}
As indicated above, BACT is triggered for the following emissions units:

{Revise the following to accurately reflect your specific project}

- the Sand and Ccoarse Aggregate Truck Unloading
- the Sand and Coarse Aggregate Stockpile
- the Sand and Coarse Aggregate Loader Hopper
- Sand and Coarse Aggregate Reclaim Conveyors
- Cement Truck Unloading and Cement Storage Operation
- Flyash Truck Unloading and Flyash Storage Operation
- the Sand Bin
- the Coarse Aggregate Bin
- the Sand and Coarse Aggregate Weigh Batcher
- the Sand and Coarse Aggregate Weigh Batcher Transfer Conveyors
- the cement and flyash weigh batcher
- the concrete truck loading operation.

{For each emissions unit that triggers BACT, the following discussion is required. Delete the paragraph for units that do not trigger BACT}

Sand and Coarse Aggregate Truck Unloading

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of water sprays on all sand and coarse aggregate transfer points.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the following permit conditions will be listed on permit as follows

- The sand and coarse aggregate truck unloading transfer point shall be equipped with spray nozzles.. [District Rule 2201]

- The spray nozzles serving the sand and coarse aggregate truck unloading transfer point shall be installed and maintained in proper working condition at all times and shall be turned on and confirmed to be operating correctly prior to truck unloading. [District Rule 2201]

Sand and Coarse Aggregate Stockpiles

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of water to prevent visible emissions from the {sand and coarse aggregate} storage piles > 5% opacity.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the following permit conditions will be listed on permit as follows

- {new} Moisture content of sand and aggregate stored in the sand and coarse aggregate stockpiling operation shall be maintained at xxx% or greater, by weight, or at a moisture content adequate to prevent visible emissions greater than 5% opacity, whichever is greater. [District Rule 2201]

Sand and Coarse Aggregate Loader Hopper

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of water sprays on the {sand and coarse aggregate} loader hopper.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the following permit conditions will be listed on permit as follows

- Spray nozzles serving the {sand and coarse aggregate} loader hopper shall be installed and be maintained in proper working condition at all times. [District Rule 2201]

- All spray nozzles shall be turned on prior to operation of the line and shall remain on through the process to limit visible dust emissions, and maintain moisture content requirements of this permit. [District Rule 2201]

Sand and Coarse Aggregate Reclaim Conveyors

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of water sprays on all transfer points of the {sand and coarse aggregate} conveyor #xxx.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the following permit conditions will be listed on permit as follows

- All {sand and coarse aggregate} conveyor transfer points shall be equipped with spray nozzles installed and maintained in proper working condition at all times. [District Rule 2201]

- All spray nozzles shall be turned on prior to operation of the line and shall remain on through the process to limit visible dust emissions, and maintain moisture content requirements of this permit. [District Rule 2201]

Cement Truck Unloading and Cement Storage Operation

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of an enclosed cement storage silo vented to a bin vent filter with 99% PM_{10} control efficiency.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the equipment description will identify the PM_{10} control device serving the flyash truck unloading and flyash storage operation, and specify that all cement handling is fully enclosed.

Flyash Truck Unloading and Flyash Storage Operation

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of enclosed flyash conveyors, and flyash storage silo vented to a bin vent filter with 99% PM_{10} control efficiency.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the equipment description will identify the PM_{10} control device serving the flyash truck unloading and flyash storage operation, and specify that all flyash handling is fully enclosed.

Sand Bin Unloading

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of water sprays on all sand and coarse aggregate transfer points.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the following permit conditions will be listed on permit as follows

- The sand bin unloading point shall be equipped with spray nozzles installed and maintained in proper working condition at all times. [District Rule 2201]

- All spray nozzles shall be turned on prior to operation of the line and shall remain on through the process to limit visible dust emissions, and maintain moisture content requirements of this permit. [District Rule 2201]

Coarse Aggregate Bin Unloading

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of water sprays on all sand and coarse aggregate transfer points.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the following permit conditions will be listed on permit as follows

- The coarse aggregate bin unloading point shall be equipped with spray nozzles installed and maintained in proper working condition at all times. [District Rule 2201]

- All spray nozzles shall be turned on prior to operation of the line and shall remain on through the process to limit visible dust emissions, and maintain moisture content requirements of this permit. [District Rule 2201]

Sand and Coarse Aggregate Weigh Batcher

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in Appendix lll, BACT requirements are satisfied with sand and coarse aggregate adequately wetted to prevent visible emissions > 5% opacity.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the equipment description will identify the baghouse serving the sand and coarse aggregate weigh batcher, and specify that discharge chutes are enclosed and vented to the baghouse.

In addition the following permit condition will be listed on permit as follows:

- Moisture content of the sand and coarse aggregate handled at the Sand and Coarse Aggregate Weigh Batcher shall be maintained at a level adequate to prevent visible emissions > 5% opacity. [District Rule 2201]

Sand and Coarse Aggregate Weigh Batcher Transfer Conveyors

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of water sprays on all transfer points of the {sand and coarse aggregate} conveyor #xxx.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the following permit conditions will be listed on permit as follows

- All {sand and coarse aggregate} conveyor transfer points shall be equipped with spray nozzles installed and maintained in proper working condition at all times. [District Rule 2201]

- All spray nozzles shall be turned on prior to operation of the line and shall remain on through the process to limit visible dust emissions, and maintain moisture content requirements of this permit. [District Rule 2201]

Cement {and Flyash} Weigh Batcher

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of a cement {and flyash} enclosed weigh batcher and screw conveyors; and weigh batchers and discharge chutes all enclosed and vented to a baghouse or bin vent filter with 99 % PM_{10} control efficiency.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the equipment description will identify the enclosed conveyors and the baghouse {or bin vent filter} serving the cement {and flyash} weigh batcher, and specify that discharge chutes are fully enclosed.

Concrete Truck Loading Operation

For this new emissions unit, BACT requirements guideline is BACT Guideline 6.2.2, *Concrete Batch Plant*.

See Appendix III: BACT requirements, BACT Clearinghouse (Xrd quarter, XXXX) Guideline 6.2.2, Concrete Batch Plant

As discussed in the top-down BACT analysis, BACT requirements are satisfied with the use of a discharge chute to a truck loading station served by a flexible shroud, which seals to the truck and vented to a baghouse with 99 % PM_{10} control efficiency.

See Appendix IV: BACT Analysis.

To enforce BACT requirements, the equipment description will identify the discharge chute to the concrete truck is served by dust shroud sealed to the concrete truck, and vented to a baghouse.

In addition the following permit condition will be listed on permit as follows:

- The concrete truck loading operation shall be served by a dust shroud sealed to the concrete truck during loading operation, and vented to a baghouse. [District Rule 2201]

- The baghouse serving the concrete truck loading operation shall be turned on prior to loading and maintained in operation for the duration of the concrete loading operation. [District Rule 2201]

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 of 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.

Pollutant	SSPE2	Offset Thresholds	Offsets triggered ?
NO_X	0 lb-NO_X/year	20,000 lb-NO_X/year	No
SO_X	0 lb-SO_X/year	54,750 lb-SO_X/year	No
PM_{10}	lb-PM_{10}/year	29,200 lb-PM_{10}/year	**Yes** / No
CO	0 lb-CO/year	200,000 lb-CO/year	No
VOC	0 lb-VOC/year	20,000 lb-VOC/year	No

2. Quantity of Offsets Required (QOR)

{if offsets are not required}
Since the SSPE2 does not exceed the offset threshold for any pollutant, offsets are not required.

{if offsets are required}
Pursuant District Rule 2201, Section 4.7.2, since SSPE1 is below the PM_{10} offsets threshold and SSPE2 exceeds the PM_{10} offsets threshold, PM_{10} Emission Offsets Quantity (EOQ) is calculated as follows:

PM_{10} QOR = PM_{10} EOQ x DOR

With

DOR: Distance Offset Ratio, determined pursuant to District Rule 2201, Section 4.8
PM_{10} EOQ: PM_{10} Emission Offsets Quantity (EOQ) calculated as follows:

PM_{10} EOQ = Annual SSPE2 PM_{10} – PM_{10} Offsets Threshold + all Increase in Cargo Carrier Emissions

PM_{10} Emission Offsets Quantity (EOQ)

In this case there is no cargo carrier at this facility, therefore:

PM_{10} EOQ = (Annual SSPE2 PM_{10} – PM_{10} Offsets Threshold) x DOR

PM_{10} EOQ = xx lb-PM_{10}/year – 29,200 lb-PM_{10}/year

PM_{10} EOQ = xx lb-PM_{10}/year

Since Actual Emission Reductions will be affected on a quarterly basis, therefore, the required offsets are listed is the following table.

Amount of PM_{10} Emissions to be Offset					
	Annual	Quarter #1	Quarter #2	Quarter #3	Quarter #4
PM_{10} (lbs)					

Quantity of Offsets Required (QOR)

QOR = EOR x DOR

Applicant identified a source of offsets for PM_{10}. Based on applicant's data, Emission Reduction Credits (ERC) Certificate Number xxx-c shall be used to supply the required offsets.

Permit conditions will be placed on the permit to ensure that offsets will be provided for the above emissions at the proper offset ratio pursuant to Section 4.8 of Rule 2201:

- {1957} Prior to operating equipment under this Authority to Construct, permittee shall surrender (pollutant) emission reduction credits for the following quantities of emissions: 1st quarter - xxx lb, 2nd quarter - xxx lb, 3rd quarter - xxx lb, and fourth quarter - xxx lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/15/06). [District Rule 2201]

- {1983} ERC Certificate Number x-xxxx-x- 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. Public Notice Applicability

Public noticing is required for:

a. New Facility which is becoming a new Major Source,

b. Major Modification,
c. Any project which results in the offset thresholds being surpassed,
d. Any new Emissions Unit with a PE greater than 100 pounds during any one day for any one pollutant, and/or
e. Any project with a SSIPE (Stationary Source Increase in Permitted Emission) of greater than 20,000 lb/year for any pollutant.

2. Public Notice Analysis

a. New Facility becoming a New Major Source

This facility is a new facility and does not become Major Source as result of this project. Therefore public noticing is not required for New Major Source purposes.

b. Major Modification

As discussed in Section VII-I, this project does not constitute a Major modification and therefore, public noticing is not required for Major Modification purposes.

c. Offset Threshold

Public notification is required for modifications that increase the Pre-Project Stationary Source Potential to Emit (SSPE1) from a level below the emissions offsets thresholds level to a level exceeding the emissions offsets thresholds level for one or more pollutants.

Pollutant	SSPE1	SSPE2	Offset Thresholds	Public Notice triggered ?
NO_X	0 lb-NO_X/year	0 lb-NO_X/year	20,000 lb-NO_X/year	No
SO_X	0 lb-SO_X/year	0 lb-SO_X/year	54,750 lb-SO_X/year	No
PM_{10}	0 lb-PM_{10}/year	lb-PM_{10}/year	29,200 lb-PM_{10}/year	**Yes** / No
CO	0 lb-CO/year	0 lb-CO/year	200,000 lb-CO/year	No
VOC	0 lb-VOC/year	0 lb-VOC/year	20,000 lb-VOC/year	No

{for a project not surpassing the offsets threshold}
As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

{for a project surpassing the offsets threshold}
This is a new Stationary Source with a post-project Stationary Source Potential to Emit (SSPE2) exceeding the emissions offset threshold for PM_{10} emissions.

Since the Pre-Project Stationary Source Potential to Emit (SSPE1) does not exceed the emissions offsets threshold, and the Post-Project Stationary Source Potential to Emit (SSPE2) exceeds the emissions offsets threshold level for PM_{10} emissions, pursuant District Rule 2201, Section 5.4.3, Public notice is required.

d. Potential to Emit (PE) > 100 lb/day, for new Emission Unit

This project does not include any new emissions unit with a potential to emit exceeding 100 lb/day. Therefore Public Noticing is not required for this project for new emissions unit PE exceeding this limit.

e. Stationary Source Increase in Permitted Emissions (SSIPE) > 20,000 lb/year

Public noticing is required if the SSIPE exceeds 20,000 lb/year for any pollutant, with:

SSIPE = SSPE2 - SSPE1

As discussed above, since this a new facility, SSPE1 = 0, and therefore:

SSIPE = SSPE2

The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Pollutant	SSIPE = SSPE2	Public Notice Thresholds	Public Notice Triggered ?
NO_X	0 lb-NO_X/year	20,000 lb-NO_X/year	No
SO_X	0 lb-SO_X/year	20,000 lb-SO_X/year	No
PM_{10}	xxx lb-PM_{10}/year	20,000 lb-PM_{10}/year	**Yes** / No
CO	0 lb-CO/year	20,000 lb-CO/year	No
VOC	0 lb-VOC/year	20,000 lb-VOC/year	No

{SSIPE $\leq$ Public Notice Thresholds}
Since the SSIPE for PM_{10} emissions does not exceed the SSIPE public notice thresholds of 20,000 lb/year, public noticing for SSIPE is not required for this project.

{SSIPE > Public Notice Thresholds}
Since the SSIPE for PM_{10} emissions exceeds the SSIPE public notice thresholds of 20,000 lb/year, public noticing for SSIPE is required for this project.

3. Conclusion

As discussed above, Public Notification is not required for this project.

D. Daily Emission Limits (DELs)

Rule 2201, Section 3.15 requires Daily Emissions Limits (DELs) to be included on the Permit Requirements. DELs are required to reflect applicable emission limits and to enforce the applicability of BACT.

This will be satisfied by including the following conditions:

ATC #x-xxxx-1-0: Sand and Coarse Aggregate Receiving and Storage Operation

- The maximum daily throughput of sand received at the sand and coarse aggregate receiving operation shall not exceed xxx ton-sand/day, in any one day. [District Rule 2201]
- The maximum daily throughput of coarse aggregate received at the sand and coarse aggregate receiving operation shall not exceed xxx ton-coarse aggregate/day, in any one day. [District Rule 2201]
- Total footprint area of the sand and coarse aggregate stockpile shall not exceed xxxx ft^2. [District Rule 2201]
- Moisture content of sand received at the sand and coarse aggregate receiving and storage operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]
- Moisture content of aggregate received at the sand and coarse aggregate handling operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]
- Moisture content of sand and coarse aggregate received at the sand and coarse aggregate receiving and storage operation shall be measured on monthly basis and when requested by the District. [District Rule 2201]
- PM_{10} emissions rate from the sand truck unloading operation shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]
- PM_{10} emissions rate from the coarse aggregate truck unloading operation shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]
- PM_{10} emissions rate from the sand and coarse aggregate stockpiling operation shall not exceed xxx lb-PM_{10}/ton-sand and coarse aggregate. [District Rule 2201]

ATC #x-xxxx-2-0: Sand and Coarse Aggregate Handling Operation

- The maximum daily throughput of sand processed at the sand and coarse aggregate handling operation shall not exceed xxx ton-sand/day, in any one day. [District Rule 2201]

- The maximum daily throughput of coarse aggregate processed at the sand and coarse aggregate handling operation shall not exceed xxx ton-coarse aggregate/day, in any one day. [District Rule 2201]

- Moisture content of sand processed at the sand and coarse aggregate handling operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- Moisture content of aggregate processed at the sand and coarse aggregate handling operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- PM_{10} emissions rate from the sand loading operation at the sand and coarse aggregate loader hopper shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate loading operation at the sand and coarse aggregate loader hopper shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the sand unloading operation at the sand and coarse aggregate loader hopper shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate unloading operation at the sand and coarse aggregate loader hopper shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the sand transfer operation at each sand and coarse aggregate conveyor shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate transfer operation at each sand and coarse aggregate conveyor shall not exceed xxx lb-PM_{10}/ton-coarse aggregate. [District Rule 2201]

ATC #x-xxxx-3-0: Cement Truck Unloading and Cement Storage Operation

- The maximum daily throughput of cement processed at the cement truck unloading and cement storage operation shall not exceed xxx ton-cement/day, in any one day. [District Rule 2201]

- PM_{10} emissions rate from the cement truck unloading and cement storage operation shall not exceed xxx lb-PM_{10}/ton-cement. [District Rule 2201]

ATC #x-xxxx-4-0: Flyash Truck Unloading and Flyash Storage Operation

- The maximum daily throughput of flyash processed at the flyash truck unloading and flyash storage operation shall not exceed xxx ton-flyash/day, in any one day. [District Rule 2201]

- Daily PM_{10} emissions rate from the flyash truck unloading and flyash storage operation shall not exceed xxx lb-PM_{10}/ton-flyash. [District Rule 2201]

ATC #x-xxxx-5-0: Dry-Batch Concrete Operation

- The maximum daily throughput of concrete processed at the dry-batch concrete operation shall not exceed xxx $yard^3$-concrete/day, in any one day. [District Rule 2201]

- The maximum daily throughput of cement processed at the dry-batch concrete operation shall not exceed xxx ton-cement/day, in any one day. [District Rule 2201]

- {if flyash is used, otherwise delete} The maximum daily throughput of flyash processed at the dry-batch concrete operation shall not exceed xxx ton-flyash/day, in any one day. [District Rule 2201]

- The maximum daily throughput of sand processed at the dry-batch concrete operation shall not exceed xxx ton-sand/day, in any one day. [District Rule 2201]

- The maximum daily throughput of coarse aggregate processed at the dry-batch concrete operation shall not exceed xxx ton-coarse aggregate/day, in any one day. [District Rule 2201]

- PM_{10} emissions rate from the sand bin unloading operation shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate bin unloading operation shall not exceed xxx lb-PM_{10}/ton-coarse aggregate. [District Rule 2201]

- {if several conveyors in series, feeding the weigh batcher, otherwise delete} PM_{10} emissions rate from the sand transfer operation at each sand and coarse aggregate conveyor feeding the weigh batcher shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- {if several conveyors in series, feeding the weigh batcher, otherwise delete} PM_{10} emissions rate from the coarse aggregate transfer operation at each sand and coarse aggregate conveyor feeding the weigh batcher shall not exceed xxx lb-PM_{10}/ton-coarse aggregate. [District Rule 2201]

- Moisture content of sand and coarse aggregate combined discharged from the sand and coarse aggregate weigh batcher onto the sand and coarse aggregate weigh batcher conveyors shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- PM_{10} emissions rate from the sand and coarse aggregate weigh batcher unloading operation shall not exceed xxx lb-PM_{10}/ton-sand and coarse aggregate. [District Rule 2201]

- {if several conveyors in series, feeding the truck loading operation, otherwise delete} PM_{10} emissions rate from the sand transfer operation at each sand and coarse aggregate conveyor feeding the truck loading operation shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- {if several conveyors in series, feeding the truck loading operation, otherwise delete} PM_{10} emissions rate from the coarse aggregate transfer operation at each sand and coarse aggregate conveyor feeding the truck loading operation shall not exceed xxx lb-PM_{10}/ton-coarse aggregate. [District Rule 2201

- PM_{10} emissions rate from the cement weigh batcher loading operation shall not exceed xxx lb-PM_{10}/ton-cement. [District Rule 2201]

- {if flyash is used, otherwise delete} PM_{10} emissions rate from the cement and flyash weigh batcher loading operation shall not exceed either of the following limits: xxx lb-PM_{10}/ton-cement or xxx lb-PM_{10}/ton-flyash. [District Rule 2201]

- {106 Modified} There shall be no visible emissions from the cement {and flyash} weigh batcher unloading operation for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201 and 4101]

- Uncaptured PM_{10} emissions rate from the concrete truck loading operation shall not exceed xxx lb-PM_{10}/yard^3-concrete. [District Rule 2201]

- PM_{10} emissions rate from the concrete truck loading operation, emitted to the atmosphere through the baghouse, shall not exceed xxx lb-PM_{10}/yard^3-concrete. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

Initial source testing will not be required for this operation. District Policy 1705 does not require initial source testing for units served by baghouses with emissions <30 lb/day, applicable to the {weigh batchers and concrete truck loading operation}. Other dust emissions are fugitive in nature, which are difficult and costly to measure through direct source testing.

2. Monitoring

{Since EF's are based on moisture content, it is required to monitor the moisture content of:
- Sand
- Coarse aggregate
- Sand and coarse aggregate combined.

The permittee shall monitor visible emissions and moisture content of sand and coarse aggregated processed through operation.

This shall be satisfied by including the following conditions:

ATC #x-xxxx-1-0: Sand and Coarse Receiving and Storage Operation

- {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]

- Moisture content of sand received at the sand and coarse aggregate receiving and storage operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- Moisture content of aggregate received at the sand and coarse aggregate handling operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- Moisture content of sand and coarse aggregate received at the sand and coarse aggregate receiving and storage operation shall be measured on monthly basis and when requested by the District. [District Rule 2201]

- The percent moisture of sand or aggregate shall be determined by weighing an approximately 2-lb sample of sand or aggregate from any point of the operation, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the dry weght times 100% is the moisture content. [District Rule 2201]

ATC #x-xxxx-2-0: Sand and Coarse Aggregate Handling Operation

- {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]

- Moisture content of sand and coarse aggregate processed at the sand and coarse aggregate handling operation shall be measured on monthly basis and when requested by the District. [District Rule 2201]

- The percent moisture of sand or aggregate shall be determined by weighing an approximately 2-lb sample of sand or aggregate from any point of the operation, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the dry weght times 100% is the moisture content. [District Rule 2201]

ATC #x-xxxx-3-0: Cement Truck Unloading and Cement Storage Operation

- Visible emissions from the bin vent filter serving the cement truck unloading and cement storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

ATC #x-xxxx-4-0: Flyash Truck Unloading and Flyash Storage Operation

- Visible emissions from the bin vent filter serving the flyash truck unloading and flyash storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

ATC #x-xxxx-5-0: Dry-Batch Concrete Operation

- {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]

{If separate filters serve the cement weigh batcher and the truck shroud, use the following:}

- Visible emissions from the bin vent filter {or baghouse} serving the cement weigh batcher shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- Visible emissions from the baghouse serving the dust shroud of the truck loading operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

{If a single filter serves the cement weigh batcher and the truck shroud, use the following:}

- Visible emissions from the baghouse serving the cement {and flyash} weigh batcher and the dust shroud of the truck loading operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

{Use all the following in all cases}

- Visible emissions from the dust shroud of the truck loading operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- There shall be no visible emissions from the cement {and flyash} weigh batcher unloading operation for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201 and 4101]

- Visible emissions from the sand and aggregate weigh batcher unloading operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- Moisture content of sand and coarse aggregate combined processed at the dry-batch concrete operation shall be measured on monthly basis and when requested by the District. [District Rule 2201]

- The percent moisture of sand or aggregate shall be determined by weighing an approximately 2-lb sample of sand or aggregate from any point of the operation, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the dry weght times 100% is the moisture content. [District Rule 2201]

3. Record Keeping

ATC #x-xxxx-1-0: Sand and Coarse Aggregate Receiving and Storage Operation

- Records of daily amount of sand and records of daily amount of coarse aggregate received at the sand and coarse aggregate receiving and storage operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rules 1070 and 2201]

- Records of monthly moisture content of sand and records of monthly moisture content of coarse aggregate stockpiled at the sand and coarse aggregate receiving and storage operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon. [District Rules 1070 and 2201]

ATC #x-xxxx-2-0: Sand and Coarse Aggregate Handling Operation

- Records of daily amount of sand and records of daily amount of coarse aggregate processed at the sand and coarse aggregate handling operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rules 1070 and 2201]

- Records of monthly moisture content of sand and records of monthly moisture content of coarse aggregate processed at the sand and coarse aggregate handling operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon. [District Rules 1070 and 2201]

ATC #x-xxxx-3-0: Cement Truck Unloading and Cement Storage Operation

- Records of daily amount of cement processed at the cement truck unloading and cement storage operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rules 1070 and 2201]

ATC #x-xxxx-4-0: Flyash Truck Unloading and Flyash Storage Operation

- Records of daily amount of flyash processed at the flyash truck unloading and flyash storage operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rules 1070 and 2201]

ATC #x-xxxx-5-0: Dry-Batch Concrete Operation

- Records of daily amount of sand, coarse aggregate and concrete processed at the dry-batch concrete operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rules 1070 and 2201]

- Record of monthly moisture content of sand and coarse aggregate combined processed at the concrete dry-batch operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon. [District Rules 1070 and 2201]

F. Ambient Air Quality Analysis (AAQA)

(Note: Applicable only when public notice is triggered, otherwise delete this section.)
(Note: If there is an exceedance of the Ambient Air Quality Standards, this project no longer qualifies as a GEAR. Talk to a supervisor.)

An AAQA is conducted by the Technical Services group for any project with an increase in emissions and triggers public notice. Discuss the AAQA results as follows:

For example:
An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Appendix X** 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 the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

(Note: Special permit conditions may be required as a result of the AAQA.)

District Rule 2520 Federally Mandated Operating Permits

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

District Rule 4101 Visible Emissions

For operation not served by a baghouse, Section 5.0 indicates that 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 dark or darker than Ringlemann 1 or equivalent to 20% opacity.

For operation served by a baghouse, visible emissions shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour.

{Note: concrete batch plant are not expected to crush or grind nonmetallic material, therefore, pursuant to 40 CFR Sections 60.670 and 60.671, this concrete batch plant is not subject to 40 CFR Subpart OOO.}

ATC #x-xxxx-1-0: Sand and Coarse Aggregate Receiving and Storage Operation

Permit condition will be listed on permit as follows:

- {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]

ATC #x-xxxx-2-0: Sand and Coarse Aggregate Handling Operation

Permit condition will be listed on permit as follows:

- {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]

ATC #x-xxxx -3-0: Cement Truck Unloading and Cement Storage Operation

Since this unit is served by a baghouse, a permit conditions will be listed on permit as follows:

- {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]

- Visible emissions from the bin vent filter serving the cement truck unloading and cement storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

ATC #x-xxxx -4-0: Flyash Truck Unloading and Flyash Storage Operation

Since this unit is served by a baghouse, a permit condition will be listed on permit as follows:

- {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]

- Visible emissions from the bin vent filter serving the flyash truck unloading and flyash storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

ATC #x-xxxx-5-0: Dry-Batch Concrete Operation

Permit conditions will be listed on permit as follows:

- {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]

- Visible emissions from the bin vent filter {or baghouse} serving the cement weigh batcher shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- Visible emissions from the baghouse serving the dust shroud of the truck loading operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- Visible emissions from the dust shroud of the truck loading operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- There shall be no visible emissions from the cement {and flyash} weigh batcher unloading operation for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201 and 4101]

Therefore, compliance with District Rule 4101 requirements is expected.

District Rule 4102 Nuisance

District Rule 4102 Section 4.0 prohibits of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. The following condition will be listed on the permits:

- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CH&SC 41700 - California Health and Safety Code

The District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, 3/2/01) requires that a Risk Management Review is performed for any increase in hourly or annual emissions of Hazardous Air Pollutants (HAPs). HAPs are limited to substances included on the list in CH&SC 44321 and that have an OEHHA approved health risk value.

This project results in increases in emissions of HAPs.

The risk associated with emissions increase for this project was reviewed by performing a prioritization in accordance with the requirements of the CAPCOA prioritization guidelines. The resulting prioritization score, acute hazard index, chronic hazard index, and cancer risk from this project is shown below.

Health Risk Assessment Summary *Worst Case Potential*	
Prioritization Score	[ ] at [ ] meters
Cancer Risk	xxx
Acute Hazard Index	xxx
Chronic Hazard Index	xxx
T-BACT Required?	**Yes/No**
Project Approved?	**Yes/No**

{Use one of the following paragraphs}

{Prioritization Score ≤ to 1.0}
Pursuant to the District Risk Management Policy for New and Modified Sources, since the prioritization score is equal to or less than 1.0, a screening Health Risk Assessment (HRA) is not required.

The project is approved for permitting without consideration of Toxic Best Available

Control Technology (T-BACT).

In accordance with this policy, no further analysis is required, and compliance with District Rule 4102 requirements is expected.

See Appendix V: Health Risk Assessment Summary

{**OR** Prioritization Score > to 1.0 and Cancer Risk ≤ to 1.0 per million (acute and chronic indices)}

Pursuant to the District Risk Management Policy for New and Modified Sources, a Health Risk Assessment (HRA) is required for projects with a prioritization score greater than 1.0. Since the prioritization score of the sum of all projects subject to District's Risk Management Review Policy is greater than one, a HRA is requested.

District policy APR 1905 specifies that the increase in emissions associated with a proposed new source or modification project not pose a significant health risk. A cancer risk greater than 1.0 per million is considered to pose a significant risk.

Since the HRA indicates that risk is below District acute, chronic, and cancer risk thresholds, Toxic Best Available Technology (T-BACT) is not required for this project.

In accordance with the policy, no further analysis is required. As long as the unit is properly maintained and operated, it should not be a public nuisance. Therefore compliance with District Rule 4102 requirements is expected.

See Appendix V: Health Risk Assessment Summary

{**OR** Prioritization Score > to 1.0 and Cancer Risk > to 1.0 per million (acute and chronic indices)}

Pursuant to the District Risk Management Policy for New and Modified Sources, a Health Risk Assessment (HRA) is required for projects with a prioritization score greater than one. Since the prioritization score of the sum of all projects subject to District's Risk Management Review Policy is greater than one, a HRA is requested.

District policy APR 1905 specifies that the increase in emissions associated with a proposed new source or modification project not pose a significant health risk. A cancer risk greater than 1.0 per million is considered to pose a significant risk.

For projects where the increase in cancer risk is greater than 1.0 per million, Toxic Best Available Technology (T-BACT) is required.

Based on the HRA results, T-BACT is required for this project.

The applicant has proposed T-BACT, therefore, compliance with District Risk Management Policy is expected.

{Note: If T-BACT is not proposed, the project cannot be approved}

The following permit conditions are required to ensure compliance with the assumptions made for the risk management review:

•

In accordance with the policy, no further analysis is required. As long as the unit is properly maintained and operated it should not be a public nuisance. Therefore compliance with District Rule 4102 requirements is expected.

See Appendix V: Health Risk Assessment Summary

District Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. This rule is applicable to the atmospheric vent from each baghouse or bin vent filter.

The grain loading concentration from each baghouse or bin vent filter is calculated as follows:

$$\frac{grain}{dscf} = \frac{lb - PM10}{ton\ of\ material} \times \frac{ton\ of\ material}{day} \times \frac{7{,}000\ grain}{lb} / \left(\frac{dscf}{\min} \times \frac{60\ \min}{hour} \times \frac{24\ hour}{day}\right)$$

Use of the above equation requires establishing the air flow rate, the PM emission factor (lb-PM/ton of material), and the material throughput (tons per day) for each controlled emission unit.

Air flow for each baghouse or vent filter was previously determined in the baghouses evaluation in section IV. Material throughputs were established in the PE calculations in section VII.D.

Controlled emission factors for PM emissions are derived from AP-42, Table 11.12-2 or Table 11.12-5 for each source controlled by a baghouse or vent filter as follows:

{Revise the following tables as required to match your project.}

PM Emission Factors for Rule 4201		
Emission Unit	PM Emission Factor	Emission Factor Basis
Cement Truck Unloading (bin vent filter serving the cement silo)	0.0008 lb-PM/ton cement	Derived from AP-42, Table 11.12-5 based on 0.246 tons cement per per yard of concrete

Flyash Truck Unloading (bin vent filter serving the flyash silo)	0.0082 lb-PM/ton flyash	Derived from AP-42, Table 11.12-5 based on 0.0365 tons flyash per per yard of concrete
Cement Weigh Hopper Loading (bin vent filter serving the cement	0.000051 lb-PM/ton cement and flyash	Based on 99% control of the uncontrolled emission factor of 0.0051 taken from AP-42, Table 11.12-2.
Concrete Truck Loadout (baghouse serving the truck loadout)	0.013 lb-PM/yard3 concrete	Based on 96% control of the uncontrolled emission factor of 0.316 taken from AP-42, Table 11.12-2, and a worst case assumption of 100% capture efficiency at the truck shroud.

Calculation results are presented in the following table:

PM Concentration Calculations for Compliance with District Rule 4201

Unit	Emission Factor	Daily throughput	Air Flow	PM Concentration
	lb-PM_{10}/ton (lb-PM10/$yard^3$)	Tons ($yards^3$)	cfm	grain/dscf
Bin Vent Filter Serving the Cement Silo				
Bin Vent Filter Serving the Flyash Silo				
Bin Vent Filter Serving the Cement and Flyash Weigh Batcher				
Baghouse Serving the Concrete Truck Loadout				

None of the PM concentrations from the baghouse{s} or bin vent filter{s} exceeds the 0.1 grain/dscf threshold.

Therefore, compliance with District Rule 4201 requirements is expected.

District Rule 4202 Particulate Matter Emission Rate

Per section 4.1, particulate matter (PM) emissions from any source operation shall not exceed the allowable hourly emission rate (E) as calculated using the following applicable formulas:

$E = 3.59\ P^{0.62}$ (when, P = process weight rate $\leq$ 30 tons/hr)
$E = 17.31\ P^{0.16}$ (when, P = process weight rate $>$ 30 tons/hr)

ATC #x-xxxx-1-0: Sand and Coarse Aggregate Receiving and Storage Operation

In order to quantify the maximum PM hourly emissions of each unit, and to be conservative, we will consider the worse case scenario which will occur when receiving sand at xxx% moisture content or coarse aggregate at xxx% moisture content {the lowest proposed moisture contents} and at the maximum daily receiving rate for each commodity during an 8 hour operating day.

Maximum Processing Rate

The maximum hourly processing rates for sand and coarse aggregate are:

Process rate for sand = XXXX tons/day ÷ 8 hours/day = XXX tons/hour

Process rate for coarse aggregate = XXXX tons/day ÷ 8 hours/day = XXX tons/hour

Maximum Allowable Emission Rate

The maximum allowable PM hourly emission rate from each truck unloading point at the sand and coarse aggregate receiving and storage operation is calculated as follows:

$E = 3.59 \times XXX^{0.62}$ = xx.xx lb-PM/hr
{or}
$E = 17.31 \times XXX^{0.16}$ = xx.xx lb-PM/hr

Actual Emission Rate

Per AP-42, Table 11.12-2 (June, 2006), the PM emission factor for a sand or aggregate transfer point is calculated as:

$EF = 0.0032 \times K \times (U/5)^{1.3}/(M/2)^{1.4}$

With,

K = Particle Size Multiplier = 0.74 for PM
U = Wind Speed = 12 mph per District Policy
M = Sand Moisture Content = X% for this project
M = Coarse Aggregate Moisture Content = X% for this project

Then,
EF = x.xxxxx lb-PM/ton for sand

EF = x.xxxxx lb-PM/ton for sand

Using the PM emission factors calculated above, the maximum actual PM emissions from the each truck unloading point at the sand and coarse aggregate receiving and storage operation is expected to be:

PM_{sand} = x.xxxxx lb-PM/ton x XXX tons/hour = xxx lb/PM/hour
$PM_{coarse\ aggregate}$ = x.xxxxx lb-PM/ton x XXX tons/hour = xxx lb/PM/hour

Since both PM_{sand} and $PM_{coarse\ aggregate}$ $\leq$ xxx lb-PM/hour < E, compliance with this District Rule 4202 is expected for each truck unloading point at the sand and coarse aggregate receiving and storage operation.

ATC #x-xxxx-2-0: Sand and Coarse Aggregate Handling Operation

In order to quantify the maximum PM hourly emissions of each unit, and to be conservative, we will consider the worse case scenario which will occur when handling sand at xxx% moisture content or coarse aggregate at xxx% moisture content {the lowest proposed moisture contents} and at the maximum daily processing rate for each commodity during an 8 hour operating day.

Maximum Processing Rate

The maximum hourly processing rates for sand and coarse aggregate are:

Process rate for sand = XXXX tons/day ÷ 8 hours/day = XXX tons/hour

Process rate for coarse aggregate = XXXX tons/day ÷ 8 hours/day = XXX tons/hour

Maximum Allowable Emission Rate

The maximum allowable PM hourly emission rate for each transfer point at the sand and coarse aggregate handling operation is calculated as follows:

$E = 3.59 \times XXX^{0.62}$ = xx.xx lb-PM/hr
{or}
$E = 17.31 \times XXX^{0.16}$ = xx.xx lb-PM/hr

Actual Emission Rate

Per AP-42, Table 11.12-2 (June, 2006), the PM emission factor for a sand or aggregate transfer point is calculated as:

$$EF = 0.0032 \times K \times (U/5)^{1.3}/(M/2)^{1.4}$$

With,

K = Particle Size Multiplier = 0.74 for PM
U = Wind Speed = 12 mph per District Policy

M = Sand Moisture Content = X% for this project
M = Coarse Aggregate Moisture Content = X% for this project

Then,
EF = x.xxxxx lb-PM/ton for sand
EF = x.xxxxx lb-PM/ton for sand

Using the PM emission factors calculated above, the maximum actual PM emissions from the each transfer point at the sand and coarse aggregate handling operation is expected to be:

PM_{sand} = x.xxxxx lb-PM/ton x XXX tons/hour = XXX lb/PM/hour
$PM_{coarse\ aggregate}$ = x.xxxxx lb-PM/ton x XXX tons/hour = XXX lb/PM/hour

Since both PM_{sand} and $PM_{coarse\ aggregate} \leq$ xxx lb-PM/hour < E, compliance with this District Rule 4202 is expected for each transfer point at the sand and coarse aggregate handling operation.

ATC #x-xxxx-3-0: Cement Truck Unloading and Cement Storage Operation

{if several identical cement silos served by identical bin vent filters, use the following paragraph otherwise delete it}
The cement truck unloading and cement storage operation consists of several identical silos served by identical bin vent filters, therefore showing compliance for one single cement unloading storage operation using the maximum daily capacity of the operation will demonstrate compliance of each unit.

{if several different cement silos served by different bin vent filters, compliance has to be demonstrate for each silo; otherwise delete this sentence}

{if only one cement silo, or for each different silo and bin vent filters}

Maximum Processing Rate

The maximum cement hourly throughput at this unit is:

xxx ton-cement/day = xx.x ton-cement/hr

Maximum Allawable Emission Rate

The maximum allowable PM hourly emission rate from the bin vent filter at the cement unloading and storage operation is calculated as follows:

E = 3.59 x ppp0.62 = xx.xx lb-PM/hr
{or}
E = 17.31 x ppp0.16 = xx.xx lb-PM/hr

Actual Emission Rate

Per AP-42, Table 11.12-2 (June, 2006), the controlled PM emission factor for cement silo loading is 0.00099 lb-PM/ton. The maximum PM emissions from the cement silo during cement truck unloading operation are expected to be:

PM = 0.00099 lb-PM/ton-cement x xx.x ton-cement/hr = xx.xx lb-PM/hr

PM = xx.xx lb-PM/hr < E = xx.xx lb-PM/hr

Therefore compliance with this District Rule 4202 is expected for cement truck unloading and cement storage operation.

ATC #x-xxxx-3-0: Flyash Truck Unloading and Flyash Storage Operation

{if several identical flyash silos served by identical bin vent filters, use the following paragraph otherwise delete it}
The flyash truck unloading and flyash storage operation consists of several identical silos served by identical bin vent filters, therefore showing compliance for one single flyash unloading storage operation using the maximum daily capacity of the operation will demonstrate compliance of each unit.

{if several different flyash silos served by different bin vent filters, compliance has to be demonstrate for each silo; otherwise delete this sentence}

{if only one flyash silo, or for each different silo and bin vent filters}

Maximum Processing Rate

The maximum flyash hourly throughput at this unit is:

xxx ton- flyash/day = xx.x ton- flyash/hr

Maximum Allowable Emission Rate

Assuming in the worse case 100% PM is PM_{10}, the maximum allowable PM hourly emission rate from the bin vent filter at the flyash unloading and storage operation is calculated as follows:

E = 3.59 x ppp0.62 = xx.xx lb-PM/hr
{or}
E = 17.31 x ppp0.16 = xx.xx lb-PM/hr

Actual Emission Rate

Per AP-42, Table 11.12-2 (June, 2006), the controlled PM emission factor for flyash silo loading is 0.0089 lb-PM/ton. The maximum PM emissions from the flyash silo during flyash truck unloading operation are expected to be:

PM = 0.0089 lb-PM/ton-flyash x xx.x ton-flyash/hr = xx.xx lb-PM/hr

PM = xx.xx lb-PM/hr < E = xx.xx lb-PM/hr

Therefore compliance with this District Rule 4202 is expected for flyash truck unloading and flyash storage operation.

ATC #x-xxxx-5-0: Dry-Batch Concrete Operation

In order to consider the worse case PM emissions at the dry-batch concrete operation we will calculate PM emission rate from the truck loading operation.

Maximum Processing Rate

The maximum daily throughput of concrete at this unit is:

X,XXX yard^3/day = X,XXX yard^3/day x 2.012 ton-concrete/yard^3-concrete
X,XXX yard^3/day = X,XXX ton-concrete/day

X,XXX ton-concrete/day = XXX.X ton-concrete/hr

Maximum Allowable Emission Rate

The maximum allowable PM hourly emission rate from the truck loading operation is calculated as follows:

$E = 17.31 \times 269.3^{0.16}$ = xx.x lb-PM/hr

Actual Emission Rate

Per AP-42, Table 11.12-2 (June, 2006), the controlled PM emission factor for concrete truck loading is 0.0981 lb-PM/ton–cement and cement supplement (flyash) or 0.028 lb-PM/yard^3 concrete based on the average concrete composition presented in footnote a of Table 11.12-2 (0.282 tons cement and cement supplement per yard^3 of concrete). Maximum PM emissions from the truck loading operation are expected to be:

(0.028 lb-PM/yard^3-concrete x X,XXX yard^3-concrete/day) / (24 hr/day) = XX.X lb-PM/hr

XX.X lb-PM/hr < 42.4 lb-PM/hr

Therefore compliance with this District Rule 4202 is expected for each unit at the dry-batch concrete operation.

District Rule 8011 General Requirements

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

District Rule 8031 Bulk Materials

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

Handling of Bulk Materials:

Table 8031-1, Section A, prescribes the following control measures for handling of bulk materials, applicable to permit units '-1-0 and '-2-0 only:

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

The following condition will be placed on permits '-1-0 and '-2-0 to ensure compliance:

- {3443} When handling bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, wind barriers with less than 50% porosity shall also be used. [District Rules 8011 and 8031]

Storage of Bulk Materials:

Table 8031-1, Section B, prescribes the following control measures for storage of bulk materials, applicable to permit unit '-1-0 only:

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

The following condition will be placed in permit '-1-0 to ensure compliance:

- {3444} When storing bulk materials outside an enclosed structure or building, water or chemical/organic stabilizers/suppressants shall be applied as required to limit Visible Dust Emissions to a maximum of 20% opacity. When necessary to achieve this opacity limitation, all bulk material piles shall also be either maintained with a stabilized surface as defined in Section 3.58 of District Rule 8011, or shall be

protected with suitable covers or barriers as prescribed in Table 8031-1, Section B, of District Rule 8031. [District Rules 8011 and 8031]

On-Site Transporting of Bulk Materials:

Table 8031-1, Section C, prescribes the following control measures for on-site transporting of bulk materials, applicable to permit units '-1-0 and '-2-0 only:

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

The following condition will be placed on permits '-1-0 and '-2-0 to ensure compliance:

- {3445} When transporting bulk materials outside an enclosed structure or building, all bulk material transport vehicles shall limit Visible Dust Emissions to 20% opacity by either limiting vehicular speed, maintaining sufficient freeboard on the load, applying water to the top of the load, or covering the load with a tarp or other suitable cover. [District Rules 8011 and 8031]

Off-Site Transporting of Bulk Materials:

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

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

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

Outdoor Transport of Bulk Materials with a Chute or Conveyor:

Table 8031-1, Section E, prescribes the following control measures for outdoor transport of bulk materials with a chute or conveyor, applicable to permit units '-2-0 and '-5-0 only:

a. *Fully enclose the chute or conveyor; or*

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

The following condition will be placed on permits '-2-0 and '-5-0:

- {modified 3446} All outdoor chutes and conveyors shall be controlled by any of the following options: 1) full enclosure, 2) operation with material sufficiently wetted such that VDE is limited to 20% opacity, or 3) the concentration of particles having an aerodynamic diameter of 10 microns or less in the conveyed material shall be sufficiently small to limit VDE to 20% opacity. [District Rules 8011 and 8031]

Section 6.0 of Rule 8031 requires the facility to maintain records in accordance with the requirements of Rule 8011. The following condition will be placed on permits '-1-0, '-2-0 and '-5-0:

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

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

District Rule 8041 Carryout and Trackout

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

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

The following condition will be placed on permits '-1-0, '-2-0, '-3-0, '-4-0 and '-5-0 to ensure compliance:

- {3447} An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically

exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8041]

District Rule 8071 Unpaved Vehicle/Equipment Traffic Areas

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

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

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

Since this facility will transport sand and aggregate using a front-end loader over unpaved areas, the AADT of 50 is expected to be exceeded, requiring implementation of a control measure. The following conditions will be placed on permits '-1-0, '-2-0, '-3-0, '-4-0 and '-5-0 to ensure compliance:

- {3438} Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

- {3448} Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

Section 5.3 requires an owner/operator to restrict access and periodically stabilize a disturbed surface area whenever a site becomes inactive to comply with the conditions for

a stabilized surface as defined in Rule 8011. The following condition will be placed on permits '-1-0, '-2-0, '-3-0, '-4-0 and '-5-0 to ensure compliance:

- {3450} Whenever any portion of the site becomes inactive, permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

Section 6.0 of this rule requires the owner/operator to comply with the recordkeeping requirements specified in Rule 8011. The following condition, previously mentioned, will be placed on permits '-1-0, '-2-0, '-3-0, '-4-0 and '-5-0 to ensure compliance:

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

California Health & Safety Code 42301.6 (School Notice)

Reference project location and its proximity to a school and state whether or not school notice is required for this project.

Example (a): (For a Non-School Notice project - > 1,000 feet.)
The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

Example (b): (For a Non-School Notice project - < 1,000 feet.)
The District has verified that this site is located within 1,000 feet of a school. However, pursuant to California Health and Safety Code 42301.6, since this project will not result in an increase in emissions, a school notice is not required.

Example (c): (For a School Notice project.)
The District has verified that this site is located within 1,000 feet of the following school:

School Name: [Name]
Address: [Address]

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.

[If there is a school w/in ¼ mile of the emissions increase, include the following discussion, otherwise delete]:
Since a school notice has been triggered (due to the above-listed school within 1,000 of the emission source), notices will also be provided to the parents/guardians of all students from all school sites within ¼ mile of the emission source. The following schools(s) are within ¼ mile of the emission source:

School Name: [Name]
Address: [Address]
(add additional schools if necessary)

(Note: Refer to FYI - 71 for guidance on how to process a School Notice project.)

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 District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval under the District's Guideline for Expedited Application Review (GEAR). Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit are based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate

public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

As described above, the project requires only ministerial approval, and is exempt from the provisions of CEQA. As such, an Indemnification Agreement or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. RECOMMENDATION

Issue Authorities to Construct subject to the permit conditions on the attached Draft Authority to Construct.

See *Appendix VI: Draft Authorities to Construct ATCs #X-XXXX-1-0,* '-2-0, '-3-0, '-4-0 and '-5-0.

X. BILLING INFORMATION

ATC #x-xxxx-1-0: Sand and Coarse Aggregate Receiving and Storage Operation

Fee schedule will be based on the "miscellaneous" category in PAS as listed in the table below.

ATC #x-xxxx-2-0: Sand and Coarse Aggregate Handling Operation
ATC #x-xxxx-5-0: Concrete Dry-Batch Operation

Fee schedule will be based on electrical motor horsepower as listed in the table below.

ATC #x-xxxx-3-0: Cement Truck Unloading and Cement Storage Operation

The applicable permit schedule fees for the cement unloading and storage operation is:

- Schedule 1, *Electric Motor Horsepower Schedule*, or
- Schedule 5, *Stationary Container Schedule*

Pursuant to District Rule 3020, Permit fee Schedules, in the event that more than one fee schedule is applicable to a permit unit, the governing schedule shall be that which results in the higher fee, with the exception of service station where schedule 11 applies.

In this case:

- Based on xxx electric motor horsepower (including xxx hp for the air compressor and xxx hp for the bin vent blower) for the cement truck unloading and cement storage operation, schedule 3020-01-xxx indicates $ xxx annual fee, and
- Based on the xxx gallons maximum tank{s} storage capacity of the entire cement storage operation, schedule 3020-05-xxx indicates $ xxx annual fee. {Note the maximum tank{s} storage capacity is the sum of each individual silo's capacity}

Therefore, we will consider schedule 3020-xxx-xxx related to the maximum {tank{s} storage capacity / electrical motor horsepower rating}, as the applicable schedule to this permit unit.

ATC #x-xxxx-4-0: Flyash Truck Unloading and Flyash Storage Operation

The applicable permit schedule fees for the cement unloading and storage operation is:

- Schedule 1, *Electric Motor Horsepower Schedule*, or

- Schedule 5, *Stationary Container Schedule*

Pursuant to District Rule 3020, Permit fee Schedules, in the event that more than one fee schedule is applicable to a permit unit, the governing schedule shall be that which results in the higher fee, with the exception of service station where schedule 11 applies.

In this case:

- - Based on xxx electric motor horsepower (including xxx hp for the air compressor and xxx hp for the bin vent blower) for the flyash truck unloading and flyash storage operation, schedule 3020-01- xxx indicates $ xxx annual fee, and

- - Based on the xxx gallons maximum tank{s} storage capacity of the entire flyash storage operation, schedule 3020-05- xxx indicates $ xxx annual fee. {Note the maximum tank{s} storage capacity is the sum of each individual silo's capacity}

Therefore, we will consider schedule 3020-xxx-xxx related to the maximum {tank{s} storage capacity / electrical motor horsepower rating}, as the applicable schedule to this permit unit.

FEE SCHEDULE

PERMIT UNIT	FEE SCHEDULE	FEE DESCRIPTION
ATC #x-xxxx-1-0 Sand and Coarse Aggregate Receiving and Storage Operation	3020-06	Miscellaneous
ATC #x-xxxx-2-0 Sand and Coarse Aggregate Handling Operation	3020-01-x	xx Electrical hp
ATC #x-xxxx-3-0 Cement Truck Unloading and Storage Operation	3020-{01-05}-x	{xx Electrical hp / xx gallon storage tank}
ATC #x-xxxx-3-0 Flyash Truck Unloading and Storage Operation	3020-{01-05}-x	{xx Electrical hp / xx gallon storage tank}
ATC #x-xxxx-4-0 Dry-batch Concrete Operation	3020-01-x	xx Electrical hp

APPENDICES

Appendix I: Process Flow Diagram
Appendix II: Quarterly Net Emissions Change Calculation
Appendix III: BACT Guideline 6.2.2, Portland Concrete – Batch Plant, ≥ 700 yard^3/day
Appendix IV: BACT Analysis
Appendix V: Health Risk Assessment Summary
Appendix VI: Draft Authorities to Construct (ATCs)
Appendix VII: Emission Profiles

APPENDIX I

PROCESS FLOW DIAGRAM

APPENDIX II

QUARTERLY NET EMISSIONS CHANGE CALCULATION

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 quarterly baseline emissions (BE).

As discussed above, BE = PE1, therefore, for each unit:

QBE = (PE1 lb/year) / (4 qtr/year) = 0 lb-PM_{10}/qtr

QNEC = Quarterly PE2 – QBE = Quarterly PE2

Since PM_{10} is the only pollutant of concern affected by this project, for each unit

Permit Unit	QNEC
ATC #x-xxxx-1-0 Sand and Coarse Aggregate Receiving and Storage Operation	lb-PM_{10}/qtr
ATC #x-xxxx-2-0 Sand and Coarse Aggregate Handling Operation	lb-PM_{10}/qtr
ATC #x-xxxx-3-0 Cement Truck Unloading and Storage Operation	lb-PM_{10}/qtr
ATC #x-xxxx-4-0 Flyash Truck Unloading and Storage Operation	lb-PM_{10}/qtr
ATC #x-xxxx-5-0 Dry-Batch Concrete Operation	lb-PM_{10}/qtr

APPENDIX III

BACT GUIDELINE 6.2.2

Concrete Batch Plant

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.2.2

Emission Unit: Concrete Batch Plant **Industry Type:** Minerals

Last Update: December 18, 2007

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
PM10	1. Sand and Aggregate Storage: Outdoor storage piles adequately wetted to prevent visible emissions > 5% opacity 2. Sand and Aggregate Handling (transfer points): Water sprays on all transfer points 3. Sand and Aggregate Weighbatcher: Material adequately wetted to prevent visible emissions > 5% opacity 4. Storage silos for cement, flyash and other supplements: Enclosed silo vented to a control device with 99% efficiency (baghouse, binvent or equivalent) 5. Cement Weighbatcher: Enclosed weighbatcher vented to a control device with 99% efficiency (baghouse or equal) 6. Transit-Mixed Truck Loading: Loading operation enclosed by a flexible shroud which seals to the truck and is vented to a control device with 99% efficiency (baghouse or equivalent) 7. Central Mixer Loading: a) < 5 yd3 batch capacity: Enclosed mixer with water sprays, b) ≥ 5 yd3 batch capacity: Enclosed mixer vented to a control device with 99% efficiency (baghouse or equivalent)	Sand and Aggregate Storage: Enclosed storage (building or equivalent) Central Mixer Loading: a) < 5 yd3 batch capacity: Enclosed mixer vented to a control device with 99% efficiency (baghouse or equivalent)	

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

*This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)

APPENDIX IV

BACT ANALYSIS

Top-down BACT Analysis for PM_{10} Emissions

Sand and Coarse Aggregate Truck Unloading

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

Sand and coarse aggregate truck unloading falls under the category of "sand and aggregate handling (transfer points) in BACT Guideline 6.2.2. The following options are identified for this category of operation:

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed to install water sprays on all sand and coarse aggregate truck unloading points. Since the applicant's proposal is achieved-in-practice BACT option and no other options are identified, a cost effectiveness analysis is not required, and BACT requirements are satisfied with the use of water sprays on all sand and coarse aggregate truck unloading points.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of water sprays on all sand and coarse aggregate truck unloading points.

Since the facility has proposed to install water sprays on all transfer points of the all sand and coarse aggregate truck unloading points, BACT requirements for PM_{10} emissions, for the truck unloading operation are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

{Sand Coarse Aggregate} Stockpiles

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

For the {sand and coarse aggregate} storage piles, the SJVUAPCD BACT Clearinghouse identifies:

Option 1. Sand and coarse aggregate storage piles adequately wetted to prevent visible emissions > 5% opacity (Achieved-in-Practice)

Option 2. Enclosed storage building or equivalent (Technologically Feasible).

Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Sand and coarse aggregate storage piles adequately wetted to prevent visible emissions > 5% opacity (Achieved-in-Practice)

Option 2. Enclosed storage building or equivalent (Technologically Feasible).

Step 4 - Cost Effectiveness Analysis

Pursuant to District Policy APR 1305.Section III.D, a facility with an annual Stationary Source Post Project Potential to Emit (SSPE2), less than 2 tons per year for each affected pollutant or with maximum daily facility Post Project Potential to Emit below the limits listed in the District Policy APR 1305 is a small emitter.

For this project, PM_{10} is the only pollutant of concern.

Pursuant to District Policy APR 1305, the small emitter PM_{10} Potential to Emit threshold is 2 ton-PM_{10}/year or 30 lb-PM_{10}/day.

{If facility is a small emitter, use the following statement, otherwise delete}
Since the daily facility-wide PM_{10} Potential to Emit is less than 30 lb-PM_{10}/day, the facility is a small emitter for PM_{10} emissions.

Pursuant to District Policy APR 1305, if not proposed by the applicant, the use of Technologically Feasible option is not required. Since the applicant did not proposed this Technologically Feasible option, a cost effectiveness analysis of this BACT option will not be performed.

The applicant has proposed to maintain the sand and coarse aggregate storage piles adequately wetted to prevent visible emissions > 5% opacity. Since the applicant's proposal is achieved-in-practice BACT option, a cost effectiveness analysis is not required, and BACT requirements are satisfied with maintaining the sand and coarse aggregate storage piles adequately wetted to prevent visible emissions > 5% opacity.

{or, if facility is a not small emitter, use the following statement, otherwise delete}
Since the daily facility-wide PM_{10} Potential to Emit exceeds 30 lb-PM_{10}/day, the facility is a not a small emitter for PM_{10} emissions, therefore, a cost effectiveness analysis is required for the Technologically Feasible option. {a cost effectiveness analysis for the technologically feasible option is required}.

{Cost effectiveness analysis}

{assuming the technologically option is not cost effective, use the following statement, otherwise, you need to discuss the issue with the applicant and your supervisor}

Since the cost-effectiveness threshold of PM_{10} reduction is $5,700 per ton, this option is not cost effective.

The applicant has proposed to to maintain the sand and coarse aggregate storage piles adequately wetted to prevent visible emissions > 5% opacity. Since the applicant's proposal is achieved-in-practice BACT option, a cost effectiveness analysis is not required for this option.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of {sand and coarse aggregate} storage piles adequately wetted to prevent visible emissions > 5% opacity.

Since the facility has proposed to use water to prevent visible emissions from the {sand and coarse aggregate} piles > 5% opacity, BACT requirements for PM_{10} emissions, for the {sand and coarse aggregate} storage piles are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

{Sand and Coarse Aggregate} Loader Hopper

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

The sand and coarse aggregate loader hopper falls under the category of "sand and aggregate handling (transfer points) in BACT Guideline 6.2.2. The following options are identified for this category of operation:

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed to install water sprays on the sand and coarse aggregate loader hopper. Since the applicant's proposal is achieved-in-practice BACT option and no other options are identified, a cost effectiveness analysis is not required, and BACT requirements are satisfied with the use of water sprays on the sand and coarse aggregate loader hopper.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of water sprays on the sand and coarse aggregate loader hopper.

Since the facility has proposed to install water sprays on all transfer points of the sand and coarse aggregate loader hopper, BACT requirements for PM_{10} emissions, for the sand and coarse aggregate loader hopper are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

Sand and Coarse Aggregate Reclaim Conveyors

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

The sand and coarse aggregate reclaim conveyors fall under the category of "sand and aggregate handling (transfer points) in BACT Guideline 6.2.2. The following options are identified for this category of operation:

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed to install water sprays on the sand and coarse aggregate reclaim conveyors. Since the applicant's proposal is achieved-in-practice BACT option and no other options are identified, a cost effectiveness analysis is not required, and BACT requirements are satisfied with the use of water sprays on the sand and coarse aggregate reclaim conveyors.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of water sprays on the sand and coarse aggregate reclaim conveyors.

Since the facility has proposed to install water sprays on all transfer points of the sand and coarse aggregate reclaim conveyors, BACT requirements for PM_{10} emissions for the the sand and coarse aggregate reclaim conveyors are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

Cement Truck Unloading and Cement Storage Operation

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

For the cement truck unloading and cement storage operation, the SJVUAPCD BACT Clearinghouse identifies:

Option 1. Enclosed storage silos vented to a control device with 99 % control efficiency (Achieved-in-Practice)

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible options listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Enclosed storage silos vented to a control device with 99 % control efficiency (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant proposed to use enclosed cement conveyors, and cement storage silo vented to a bin vent filter with 99% PM_{10} control efficiency.

Since the applicant's proposal is achieved-in-practice BACT option, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of an enclosed storage silo vented to a control device with 99% PM_{10} control efficiency.

Since the facility has proposed to install an enclosed cement storage silo vented to a bin vent filter with 99% PM_{10} control efficiency, BACT requirements for PM_{10} emissions, for the cement truck unloading and cement storage operation are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

Flyash Truck Unloading and Flyash Storage Operation

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

For the flyash truck unloading and flyash storage operation, the SJVUAPCD BACT Clearinghouse identifies:

Option 1. Enclosed storage silos vented to a control device with 99 % control efficiency (Achieved-in-Practice).

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible options listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Enclosed storage silos vented to a control device with 99 % control efficiency (Achieved-in-Practice).

Step 4 - Cost Effectiveness Analysis

The applicant proposed to use an storage silo vented to a bin vent filter with 99% PM_{10} control efficiency.

Since the applicant's proposal is achieved-in-practice BACT option, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of an enclosed flyash storage silo vented to a control device with 99% PM_{10} control efficiency.

Since the facility has proposed to install an enclosed flyash storage silo vented to a bin vent filter with 99% PM_{10} control efficiency, BACT requirements for PM_{10} emissions, for the flyash truck unloading and flyash storage operation are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

Sand Bin Unloading

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

The sand bin unloading operation falls under the category of "sand and aggregate handling (transfer points) in BACT Guideline 6.2.2. The following options are identified for this category of operation:

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed to install water sprays on the sand bin unloading operation. Since the applicant's proposal is achieved-in-practice BACT option and no other options are identified, a cost effectiveness analysis is not required, and BACT requirements are satisfied with the use of water sprays on the sand bin unloading operation.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of water sprays on the sand bin unloading operation.

Since the facility has proposed to install water sprays on all transfer points of the sand bin unloading operation, BACT requirements for PM_{10} emissions for the sand bin unloading operation are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

Coarse Aggregate Bin Unloading

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

The coarse aggregate bin unloading operation falls under the category of "sand and aggregate handling (transfer points) in BACT Guideline 6.2.2. The following options are identified for this category of operation:

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed to install water sprays on the coarse aggregate unloading operation. Since the applicant's proposal is achieved-in-practice BACT option and no other options are identified, a cost effectiveness analysis is not required, and BACT requirements are satisfied with the use of water sprays on the coarse aggregate unloading operation.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of water sprays on the coarse aggregate unloading operation.

Since the facility has proposed to install water sprays on all transfer points of the coarse aggregate unloading operation, BACT requirements for PM_{10} emissions for the coarse aggregate unloading operation are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

Sand and Coarse Aggregate Weigh Batcher

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

For the sand and coarse aggregate weigh batcher, the SJVUAPCD BACT Clearinghouse identifies:

Option 1. Sand and coarse aggregate adequately wetted to prevent visible emissions > 5% opacity)Achieved-in-Practice)

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Sand and coarse aggregate adequately wetted to prevent visible emissions > 5% opacity)Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant proposed to use a sand and coarse aggregate weigh batcher with sand and coarse aggregate adequately wetted to prevent visible emissions > 5% opacity.

Since the applicant's proposal is achieved-in-practice BACT option, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of a sand and coarse aggregate with sand and coarse aggregate adequately wetted to prevent visible emissions > 5% opacity.

Since the facility has proposed to install a sand and coarse aggregate weigh batcher with sand and coarse aggregate adequately wetted to prevent visible emissions > 5% opacity, BACT requirements for PM_{10} emissions, for the sand and coarse aggregate weigh batcher are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

Sand and Coarse Aggregate Weigh Batcher Transfer Conveyors

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

The coarse aggregate bin weigh batcher transfer conveyors fall under the category of "sand and aggregate handling (transfer points) in BACT Guideline 6.2.2. The following options are identified for this category of operation:

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Water sprays on all transfer points (Achieved-in-Practice)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed to install water sprays on the coarse aggregate bin weigh batcher transfer conveyors. Since the applicant's proposal is achieved-in-practice BACT option and no other options are identified, a cost effectiveness analysis is not required, and BACT requirements are satisfied with the use of water sprays on the coarse aggregate weigh batcher transfer conveyors.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of water sprays on the coarse aggregate weigh batcher transfer conveyors.

Since the facility has proposed to install water sprays on all transfer points of the coarse aggregate weigh batcher transfer conveyors, BACT requirements for PM_{10} emissions for the coarse aggregate weigh batcher transfer conveyors are satisfied.

Cement {and Flyash} Weigh Batcher

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

For the cement {and flyash} weigh batcher, the SJVUAPCD BACT Clearinghouse identifies:

Option 1. Enclosed weigh batcher vented to a control device with 99 % PM_{10} control efficiency (Achieved-in-Practice).

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Enclosed weigh batcher vented to a control device with 99 % PM_{10} control efficiency (Achieved-in-Practice).

Step 4 - Cost Effectiveness Analysis

The applicant proposed to use a cement {and flyash} enclosed weigh vented to a baghouse with 99% PM_{10} emissions control efficiency.

Since the applicant's proposal is achieved-in-practice BACT option, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of a cement {and flyash} enclosed weigh batcher vented to a control device with 99 % PM_{10} control efficiency.

Since the facility has proposed to install a cement {and flyash} enclosed weigh batcher and vented to a baghouse with 99 % PM_{10} control efficiency, BACT requirements for PM_{10} emissions, for the cement {and flyash} weigh batcher are satisfied.

Top-down BACT Analysis for PM_{10} Emissions

Concrete Truck Loading Operation

{Delete the whole section if BACT is not triggered for this unit}

The applicable BACT Guideline is:
BACT Guideline 6.2.2, *Concrete Batch Plant*

Step 1 - Identify All Possible Control Technologies

For the concrete truck loading operation, the SJVUAPCD BACT Clearinghouse identifies:

Option 1. Discharge chute to a truck loading station served by a flexible shroud, which seals to the truck and vented to a control device with 99 % control (Achieved-in-Practice).

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible options listed.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option 1. Discharge chute to a truck loading station served by a flexible shroud, which seals to the truck and vented to a control device with 99 % control (Achieved-in-Practice).

Step 4 - Cost Effectiveness Analysis

The applicant proposed to use a discharge chute to a truck loading station served by a flexible shroud which seals to the truck and vented to a baghouse with 99% PM_{10} emissions control efficiency.

Since the applicant's proposal is achieved-in-practice BACT option, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for the emission unit is determined to be the use of a discharge chute served by a flexible shroud which seals to the truck and vented to a control device with 99 % PM_{10} control efficiency.

Since the facility has proposed to install a discharge chute to a truck loading station served by a flexible shroud which seals to the truck and vented to a baghouse with 99% PM_{10} emissions control efficiency, BACT requirements for PM_{10} emissions, for the concrete truck loading operation are satisfied.

APPENDIX V

HEALTH RISK ASSESSMENT SUMMARY

APPENDIX VI

DRAFT AUTHORITIES TO CONSTRUCT

ATCs #x-xxxx-1-0,
-2-0,
-3-0,
-4-0, and
-5-0

APPENDIX VII

EMISSION PROFILES

{ Note: Do not include this page in the final Engineering Evaluation}

ATC CONDITIONS

ATC #x-xxx-1-0: Sand and Coarse Aggregate Receiving and Storage Operation

- {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]

- 98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

- {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]

- The maximum daily throughput of sand received at the sand and coarse aggregate receiving operation shall not exceed xxx ton-sand/day, in any one day. [District Rule 2201]

- The maximum daily throughput of coarse aggregate received at the sand and coarse aggregate receiving operation shall not exceed xxx ton-coarse aggregate/day, in any one day. [District Rule 2201]

- Total footprint area of the sand and coarse aggregate stockpile shall not exceed xxxx ft^2. [District Rule 2201]

{Include following conditions as appropriate if proposed or BACT triggered:}

- The sand and coarse aggregate truck unloading transfer point(s) shall be equipped with spray nozzles. [District Rule 2201]

- The spray nozzles serving the sand and coarse aggregate truck unloading transfer point(s) shall be installed and maintained in proper working condition at all times and shall be turned on and confirmed to be operating correctly prior to truck unloading. [District Rule 2201]

- The sand and coarse aggregate stockpile shall be equipped with spray nozzles which allow uniform control of moisture content of the material in the stockpile. [District Rule 2201]

- Moisture content of sand and aggregate stored in the sand and coarse aggregate stockpile shall be maintained at a moisture content adequate to prevent visible emissions greater than 5% opacity, whichever is greater. [District Rule 2201]

{Include the following if material moisture content gtreater than 1% is proposed}

- Moisture content of sand receved at the sand and coarse aggregate receiving and storage operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- Moisture content of aggregate received at the sand and coarse aggregate handling operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- Moisture content of sand and coarse aggregate received at the sand and coarse aggregate receiving and storage operation shall be measured on monthly basis and when requested by the District. [District Rule 2201]

- The percent moisture of sand received at the sand and coarse aggregate receiving and storage operation shall be determined by weighing an approximately 2-lb sample of freshly received sand, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the dry weght times 100% is the moisture content. [District Rule 2201]

- The percent moisture of coarse aggregate processed at the sand and coarse aggregate receiving and storage operation shall be determined by weighing an approximately 2-lb sample of freshly received coarse aggregate, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the dry weght times 100% is the moisture content. [District Rule 2201]

- Records of monthly moisture content of sand and records of monthly moisture content of coarse aggregate received at the sand and coarse aggregate receiving and storage operation shall be maintained. [District Rules 1070 and 2201]

{Include the following conditions for all cases:}

- PM_{10} emissions rate from the sand truck unloading operation shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate truck unloading operation shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the sand and coarse aggregate stockpile shall not exceed xxx lb-PM_{10}/1000 ft2 of stockpile footprint area. [District Rule 2201]

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

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

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

- An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8041 and 8011]

- Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8071 and 8011]

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

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

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

- Records of daily amount of sand and records of daily amount of coarse aggregate received at the sand and coarse aggregate receiving and storage operation shall be maintained. [District Rules 1070 and 2201]

- Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

{ Note: Do not include this page in the final Engineering Evaluation}

ATC CONDITIONS

ATC #x-xxx-2-0: Sand and Coarse Aggregate Handling Operation

- {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]

- 98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

- {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]

- The maximum daily throughput of sand processed at the sand and coarse aggregate handling operation shall not exceed xxx ton-sand/day, in any one day. [District Rule 2201]

- The maximum daily throughput of coarse aggregate processed at the sand and coarse aggregate handling operation shall not exceed xxx ton-coarse aggregate/day, in any one day. [District Rule 2201]

- PM_{10} emissions rate from the sand loading operation at the sand and coarse aggregate loader hopper shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate loading operation at the sand and coarse aggregate loader hopper shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the sand unloading operation at the sand and coarse aggregate loader hopper shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate unloading operation at the sand and coarse aggregate loader hopper shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the sand transfer operation at each sand {and coarse aggregate} conveyor shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate transfer operation at each {sand and} coarse aggregate conveyor shall not exceed xxx lb-PM_{10}/ton-coarse aggregate. [District Rule 2201]

{if all sand and/or coarse aggregate transfer points are equipped with spray nozzles, use the following permit conditions, modified as required to match the equipment configuration as well as

be consistent with the BACT conditions listed in the BACT analysis of Section VII.A.3 - otherwise delete}

- All {sand and coarse aggregate} conveyor transfer point shall be equipped with spray nozzles installed and maintained in proper working condition at all times. [District Rule 2201]

{if only few sand and/or coarse aggregate transfer points are equipped with spray nozzles, use the following permit condition, otherwise delete}

- Transfer point from {sand and coarse aggregate} conveyor xxx shall be equipped with spray nozzles installed and maintained in proper working condition at all times. [District Rule 2201]

{if specific equipment are served by spray nozzles, use the following condition, otherwise delete}

- Spray nozzles serving the {equipment description} shall be installed and be maintained in proper working condition at all times. [District Rule 2201]

{if spray nozzles are used, and in addition to the previous permit conditions, use the following permit condition, otherwise, if no spray nozzle, delete the following condition}

- All spray nozzles shall be turned on prior to operation of the line and shall remain on through the process to limit visible dust emissions, and maintain moisture content requirements of this permit. [District Rule 2201]

{If material moisture content greater than 1% is proposed, use the following conditions}

- Moisture content of sand processed at the sand and coarse aggregate handling operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- Moisture content of aggregate processed at the sand and coarse aggregate handling operation shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- Moisture content of sand and coarse aggregate processed at the sand and coarse aggregate handling operation shall be measured on monthly basis and when requested by the District. [District Rule 2201]

- The percent moisture of sand processed at the sand and coarse aggregate handling operation shall be determined by weighing an approximately 2-lb sample of sand processed through conveyor xxx, from the {equipment designation} to {equipment designation}, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the dry weght times 100% is the moisture content. [District Rule 2201]

- The percent moisture of coarse aggregate processed at the sand and coarse aggregate handling operation shall be determined by weighing an approximately 2-lb sample of coarse aggregate processed through {equipment designation}, from the a{equipment designation} to {equipment designation}, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the dry weght times 100% is the moisture content. [District Rule 2201]
- Records of monthly moisture content of sand and records of monthly moisture content of coarse aggregate processed at the sand and coarse aggregate handling operation shall be maintained,

retained on-site for a period of at least five (5) years and made available for District inspection upon. [District Rules 1070 and 2201]

{Include the following for all cases:}

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

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

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

- An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8041 and 8011]

- Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8071 and 8011]

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

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

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

- Records of daily amount of sand and records of daily amount of coarse aggregate processed at the sand and coarse aggregate handling operation shall be maintained, retained on-site for a period of at least five (5) years and made available for District inspection upon request. [District Rules 1070 and 2201]

- Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

{Note: Do not include this page in the final Engineering Evaluation}

ATC CONDITIONS

ATC #C-xxx-3-0: Cement Truck Unloading and Cement Storage Operation

- {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]

- 98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

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

- {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]

- Visible emissions from the bin vent filter serving the cement truck unloading and cement storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- The bin vent filter(s) shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]

- The bin vent filter(s) cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]

- A spare set of bags or filters shall be maintained for each bin vent filter on the premises at all times. [District Rule 2201]

- {10} The bin vent filter(s) 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]

{Plus add conditions from either Case 1 or Case 2 below as applicable:}

{Case 1: If manufacturer information available for ATC evaluation, place the following condition on the ATC:}

- The bin vent filter(s) shall operate at all times with a minimum differential pressure of X inches water column and a maximum differential pressure of X inches water column. [District Rule 2201]

{**Or,**}

{Case 2: If manufacturer information is not available for ATC evaluation, the differential pressure restriction above will be placed on the PTO at time of conversion. Place the following condition on the ATC:}

- The differential pressure gauge reading range for each bin vent filter shall be established per manufacturer's recommendation at time of start up inspection. [District Rule 2201]

- Differential operating pressure shall be monitored and recorded on each day that the bin vent filter(s) operates. [District Rule 2201]

{Plus the following conditions:}

- The maximum daily throughput of cement processed at the cement truck unloading and cement storage operation shall not exceed xxx ton-cement/day, in any one day. [District Rule 2201]

- PM_{10} emissions rate from the cement truck unloading and cement storage operation shall not exceed xxx lb-PM_{10}/ton-cement. [District Rule 2201]

- Records of all maintenance of the bin vent filter(s), including all change outs of filter media, shall be maintained. [District Rule 2201]

- Records of daily amount of cement processed at the cement truck unloading and cement storage operation shall be maintained. [District Rules 1070 and 2201]

- Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

{Note: Note: Do not include this page in the final Engineering Evaluation}

ATC CONDITIONS

ATC #C-xxx-4-0: Flyash Truck Unloading and Flyash Storage Operation

- {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]
- 98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]
- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- {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]
- Visible emissions from the bin vent filter serving the flyash truck unloading and flyash storage operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]
- The bin vent filter(s) shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]
- The bin vent filter(s) cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]
- A spare set of bags or filters shall be maintained for each bin vent filter on the premises at all times. [District Rule 2201]
- {10} The bin vent filter(s) 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]

{Plus add conditions from either Case 1 or Case 2 below as applicable:}

{Case 1: If manufacturer information available for ATC evaluation, place the following condition on the ATC:}

- The bin vent filter(s)shall operate at all times with a minimum differential pressure of X inches water column and a maximum differential pressure of X inches water column. [District Rule 2201]

{**Or,**}

{Case 2: If manufacturer information is not available for ATC evaluation, the differential pressure restriction above will be placed on the PTO at time of conversion. Place the following condition on the ATC:}

- The differential pressure gauge reading range for each bin vent filter shall be established per manufacturer's recommendation at time of start up inspection. [District Rule 2201]

- Differential operating pressure shall be monitored and recorded on each day that the bin vent filter(s) operates. [District Rule 2201]

{Plus the following conditions:}

- The maximum daily throughput of flyash processed at the flyash truck unloading and flyash storage operation shall not exceed xxx ton-flyash/day, in any one day. [District Rule 2201]

- PM_{10} emissions rate from the flyash truck unloading and flyash storage operation shall not exceed xxx lb-PM_{10}/ton-flyash. [District Rule 2201]

- Records of all maintenance of the bin vent filter(s), including all change outs of filter media, shall be maintained. [District Rule 2201]

- Records of daily amount of flyash processed at the flyash truck unloading and flyash storage operation shall be maintained. [District Rules 1070 and 2201]

- Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

- *{Note: Note: Do not include this page in the final Engineering Evaluation}*

ATC CONDITIONS

ATC #C-xxx-5-0: Dry-Batch Concrete Operation

- {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]

- 98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

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

- {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]

- Visible emissions from the bin vent filter serving the cement weigh batcher shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- Visible emissions from the baghouse serving the dust shroud of the truck loading operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rules 2201 and 4101]

- {106 Modified} There shall be no visible emissions from the cement {and flyash} weigh batcher unloading operation for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201 and 4101]

- The concrete truck loading operation shall be served by a dust shroud sealed to the concrete truck during loading operation, and vented to a baghouse. [District Rule 2201]
- The baghouse serving the concrete truck loading operation shall be turned on prior loading and shall remain on through the concrete loading operation. [District Rule 2201]

- Baghouse(s) and bin vent filter(s) shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]

- Cleaning frequency and duration for all baghouse(s) and bin vent filter(s) shall be adjusted to optimize the control efficiency. [District Rule 2201]

- {73} Material removed from the baghouse serving the truck loading operation shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule]
- A spare set of bags or filters shall be maintained for each baghouse and bin vent filter on the premises at all times. [District Rule 2201]

- {10} The baghouse serving the truck loading operation 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]

{Plus add conditions from either Case 1 or Case 2 below as applicable:}

{Case 1: If manufacturer information available for ATC evaluation, place the following condition on the ATC:}

- The baghouse serving the truck loading operation shall operate at all times with a minimum differential pressure of X inches water column and a maximum differential pressure of X inches water column. [District Rule 2201]

{Or,}

{Case 2: If manufacturer information is not available for ATC evaluation, the differential pressure restriction above will be place on the PTO at time of conversion. Place the following condition on the ATC:}

- The differential pressure gauge reading range for the baghouse serving the truck loading shroud shall be established per manufacturer's recommedation at time of start up inspection. [District Rule 2201]

{Plus the following conditions:}

{if all sand and/or coarse aggregate transfer points are equipped with spray nozzles, use the following permit conditions, modified as required to match the equipment configuration as well as be consistent with the BACT conditions listed in the BACT analysis of Section VII.A.3 - otherwise delete}

- All {sand and coarse aggregate} conveyor transfer points shall be equipped with spray nozzles installed and maintained in proper working condition at all times. [District Rule 2201]

{if specific equipment are served by spray nozzles, use the following condition, otherwise delete}

- Spray nozzles serving the {equipment description} shall be installed and be maintained in proper working condition at all times. [District Rule 2201]

{if spray nozzles are used, and in addition to the previous permit conditions, use the following permit condition, otherwise, if no spray nozzle, delete the following condition}

- All spray nozzles shall be turned on prior to operation of the line and shall remain on through the process to limit visible dust emissions, and maintain moisture content requirements of this permit. [District Rule 2201]

{Use the following conditions for all cases:}

- The maximum daily throughput of concrete processed at the dry-batch concrete operation shall not exceed xxx yard^3-concrete/day, in any one day. [District Rule 2201]

- The maximum daily throughput of cement processed at the dry-batch concrete operation shall not exceed xxx ton-cement/day, in any one day. [District Rule 2201]

- {if flyash is used, otherwise delete} The maximum daily throughput of flyash processed at the dry-batch concrete operation shall not exceed xxx ton-flyash/day, in any one day. [District Rule 2201]

- The maximum daily throughput of sand processed at the dry-batch concrete operation shall not exceed xxx ton-sand/day, in any one day. [District Rule 2201]

- The maximum daily throughput of coarse aggregate processed at the dry-batch concrete operation shall not exceed xxx ton-coarse aggregate/day, in any one day. [District Rule 2201]

- PM_{10} emissions rate from the sand bin unloading operation shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- PM_{10} emissions rate from the coarse aggregate bin unloading operation shall not exceed xxx lb-PM_{10}/ton-coarse aggregate. [District Rule 2201]

- {if several conveyors in series, feeding the weigh batcher, otherwise delete} PM_{10} emissions rate from the sand transfer operation at each sand and coarse aggregate conveyor feeding the weigh batcher shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- {if several conveyors in series, feeding the weigh batcher, otherwise delete} PM_{10} emissions rate from the coarse aggregate transfer operation at each sand and coarse aggregate conveyor feeding the weigh batcher shall not exceed xxx lb-PM_{10}/ton-coarse aggregate. [District Rule 2201]

- PM_{10} emissions rate from the sand and coarse aggregate weigh batcher unloading operation shall not exceed xxx lb-PM_{10}/ton-sand and coarse aggregate. [District Rule 2201]

- {if several conveyors in series, feeding the truck loading operation, otherwise delete} PM_{10} emissions rate from the sand transfer operation at each sand and coarse aggregate conveyor feeding the truck loading operation shall not exceed xxx lb-PM_{10}/ton-sand. [District Rule 2201]

- {if several conveyors in series, feeding the truck loading operation, otherwise delete} PM_{10} emissions rate from the coarse aggregate transfer operation at each sand and coarse aggregate conveyor feeding the truck loading operation shall not exceed xxx lb-PM_{10}/ton-coarse aggregate. [District Rule 2201

- PM_{10} emissions rate from the cement weigh batcher loading operation shall not exceed xxx lb-PM_{10}/ton-cement. [District Rule 2201]

- {if flyash is used, otherwise delete} PM_{10} emissions rate from the cement and flyash weigh batcher loading operation shall not exceed either of the following limits: xxx lb-PM_{10}/ton-cement or xxx lb-PM_{10}/ton-flyash. [District Rule 2201]

- Uncaptured PM_{10} emissions rate from the concrete truck loading operation shall not exceed xxx lb-PM_{10}/yard^3-concrete. [District Rule 2201]

- PM_{10} emissions rate from the concrete truck loading operation, emitted to the atmosphere through the baghouse, shall not exceed xxx lb-PM_{10}/yard^3-concrete. [District Rule 2201]

{Use the following if BACT triggered for Sand & Coarse Agg Weigh Batcher:}

- Moisture content of the sand and coarse aggregate handled at the Sand and Coarse Aggregate Weigh Batcher shall be maintained at a level adequate to prevent visible emissions > 5% opacity. [District Rule 2201]

{Use the following if material moisture content greater than 1% is proposed}

- Moisture content of sand and coarse aggregate combined discharged from the sand and coarse aggregate weigh batcher onto the sand and coarse aggregate weigh batcher conveyors shall be maintained at xxx% or greater, by weight. [District Rule 2201]

- Moisture content of sand and coarse aggregate combined processed at the dry-batch concrete operation shall be measured on monthly basis and when requested by the District. [District Rule 2201]

- The percent moisture of the sand and coarse aggregate combined processed at the dry-batch concrete operation shall be determined by weighing an approximately 2-lb sample of sand and coarse aggregate processed through conveyor xxx from the sand and coarse aggregate weigh batcher to the truck loading operation, bringing the sample to dryness in a drying oven, then weighing the dried sample. The weight difference divided by the dry weght times 100% is the moisture content. [District Rule 2201]

- Records of monthly moisture content of sand and coarse aggregate combined, processed at the concrete dry-batch operation, shall be maintained. [District Rules 1070 and 2201]

{Use the following for all cases:}

- {106 Modified} There shall be no visible emissions from the cement {and flyash} weigh batcher unloading operation for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201 and 4101]

- Differential operating pressure for the baghouse serving the truck loading operation shall be monitored and recorded on each day that the baghouse operates. [District Rule 2201]

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

- An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8041 and 8011]

- Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the

requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8071 and 8011]

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

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

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

- Records of daily amount of cement, flyash, sand, coarse aggregate and concrete processed at the dry-batch concrete operation shall be maintained. [District Rules 1070 and 2201]

- Records of all maintenance of all baghouse(s) and bin vent filter(s), including all change outs of filter media, shall be maintained. [District Rule 2201]

- Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

Attachment I

Concrete Batch Plant Supplemental Application Form

San Joaquin Valley Air Pollution Control District
Supplemental Application Form

Concrete Batch Plants

This form must be accompanied by a completed Application for Authority to Construct and Permit to Operate form

PERMIT TO BE ISSUED TO:
LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:

EQUIPMENT DESCRIPTION

Batch Plant Data	Manufacturer (if applicable):	
	Model Number (if applicable):	
	Maximum Rated Horsepower of all electric motors: _____ hp	
	Is the operation powered by an internal combustion engine?[ ] No [ ] Yes (Note: If engine is rated at greater than 50 hp an *IC Engine Supplemental Application* form is required.)	
Cement Silo(s) Data	Total Number of Silos: ___	Volume of each silo: _____ gal or ft^3 (circle one)
	Type of filter: [ ] Fabric Filter [ ] Cartridge Filter [ ] Other (please specify):	
Fly Ash Silo(s) Data	Total Number of Silos: ___	Volume of each silo: _____ gal or ft^3 (circle one)
	Type of filter: [ ] Fabric Filter [ ] Cartridge Filter [ ] Other (please specify):	
Silo Control	[ ] Yes (Baghouse/Dust Collector supplemental application required) [ ] No	

PROCESS DESCRIPTION

Maximum Cement Silo Loading Throughput	_____ ton/hr	_____ ton/day	_____ ton/yr
Maximum Cement Silo Unloading Throughput	_____ ton/hr	_____ ton/day	_____ ton/yr
Maximum Fly Ash Silo Loading Throughput	_____ ton/hr	_____ ton/day	_____ ton/yr
Maximum Fly Ash Silo Unloading Throughput	_____ ton/hr	_____ ton/day	_____ ton/yr
Maximum Aggregate Throughput	_____ ton/hr	_____ ton/day	_____ ton/yr
Maximum Sand Throughput	_____ ton/hr	_____ ton/day	_____ ton/yr
Maximum Concrete Output	_____ yd^3/hr	_____ yd^3/day	_____ yd^3/yr
Provide an Equipment Listing, Site Plan, and Material Flow Chart (on a separate sheet of paper)	a) Provide an equipment listing to include the manufacturer and model number of all major components. b) Provide a typical Site Plan for a maximum throughput scenario (include all process, control, and transfer equipment). c) Provide a Material Flow Chart for a maximum throughput scenario. (Include all process, control, and transfer equipment, their types, and their maximum ratings. Also include transfer points, stockpiles, and air pollution control methods.		

PROCESS DESCRIPTION (Continued)

Is this a "Wet Mix" type plant?	[ ] Yes [ ] No	**Is this a "Transient Mix" dry type plant?**	[ ] Yes [ ] No
Mechanical Cement Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Other (please specify) [ ] None	
Pneumatic Cement Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Other (please specify) [ ] None	
Cement Weigh Hopper Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Other (please specify) [ ] None	
Mechanical Fly Ash Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Other (please specify) [ ] None	
Pneumatic Fly Ash Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Other (please specify) [ ] None	
Fly Ash Weigh Hopper Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Other (please specify) [ ] None	
Mechanical Aggregate Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Water Spray [ ] Other [ ] None	
Mechanical Sand Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Other (please specify) [ ] None	
Sand and Aggregate Weigh Hopper Transfer Points	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Water Spray [ ] Other [ ] None	
Concrete Transfer Points (Truck Loading)	Number of Points: _____	Quantity of transfer points controlled by: [ ] Fabric Filter [ ] Bin Vent Filter [ ] Water Spray [ ] Shroud [ ] None	

PLANT LAYOUT DESCRIPTION

Total Area of Unpaved Roads within the Plant	Area: _____ acre or ft^2 (circle one)	Type of control: [ ] Water [ ] Oil/Dust Palliate [ ] Other (please specify):
Total Area of Aggregate Piles within the Plant	Area: _____ acre or ft^2 (circle one)	Type of control: [ ] Water [ ] Physical Covering [ ] Retaining Walls [ ] Other (please specify):

HEALTH RISK ASSESSMENT DATA

Operating Hours	Maximum Operating Schedule: _____ hours per day, and _____ hours per year		
Receptor Data	Distance to nearest Residence	_____ feet	Distance is measured from the proposed stack location to the nearest boundary of the nearest apartment, house, dormitory, etc.
	Direction to nearest Residence	_____	Direction from the stack to the receptor, i.e. North or South.
	Distance to nearest Business	_____ feet	Distance is measured from the proposed stack location to the nearest boundary of the nearest office building, factory, store, etc.
	Direction to nearest Business	_____	Direction from the stack to the receptor, i.e. North or South.
Stack Parameters	Release Height	_____ feet above grade	
	Stack Diameter	_____ inches at point of release	
	Rain Cap	[ ] Flapper-type [ ] Fixed-type [ ] None [ ] Other: _____	
	Direction of Flow	[ ] Vertically Upward [ ] Horizontal [ ] Other: ___° from vert. or ___° from	
Exhaust Data	Flowrate: _____ acfm	Temperature: _____°F	
Facility Location	[ ] Urban (area of dense population) [ ] Rural (area of sparse population)		

Describe any additional air pollution control equipment or technologies, including control efficiencies, on a separate sheet and submit it along with this form.