SMAQMD BACT CLEARINGHOUSE

IN PROGRESS

CATEGORY Type: **CONCRETE PLANT**

BACT Category: Small Emitter BACT (PTE <10lb/day)

BACT Determination Number:	389	**BACT Determination Date:**	

Equipment Information

Permit Number: N/A - Generic BACT Determination

Equipment Description: Concrete Batch Plant Less Than 5 Cubic Yards Per Batch

Unit Size/Rating/Capacity: Less than 5 cubic yards per batch

Equipment Location: N/A - Generic BACT Determination

BACT Determination Information

District Contact: Felix Trujillo, Jr. **Phone No.:** 2792071154 **Email:** ftrujillo@airquality.org

ROCs	**Standard:**	
	Technology Description:	
	Basis:	
NOx	**Standard:**	
	Technology Description:	
	Basis:	
SOx	**Standard:**	
	Technology Description:	
	Basis:	
PM10	**Standard:**	
	Technology Description:	See Page 9 of BACT 389 Evaluation
	Basis:	Achieved in Practice
PM2.5	**Standard:**	
	Technology Description:	
	Basis:	
CO	**Standard:**	
	Technology Description:	

		Basis:	
	LEAD	**Standard:**	
		Technology Description:	
		Basis:	
Comments:		This is a generic BACT determination based on BACT determinations made, and published, by other air agencies in California and/or other States.	

Printed: 01/22/2025

777 12th Street, Suite 300 Sacramento, CA 95814

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION

DETERMINATION NO.:	389
DATE:	1/3/25
ENGINEER:	Felix Trujillo, Jr.

Category/General Equip Description: Concrete Batch Plant

Equipment Specific Description: Concrete Batch Plant < 5 Cubic Yards per Batch

Equipment Size/Rating: Minor Source BACT

Previous BACT Det. No.: 306

This BACT determination will update Determination #306 for concrete batch plants with a throughput less than 5 cubic yards per batch.

Concrete batching operations involve the processing of concrete and the handling of concrete components. Concrete is a mixture of sand, coarse aggregate, portland cement, and water. Sand and coarse aggregate add strength and cement acts as a binding agent in the mixture. A cement supplement, such as potash, may replace a portion of the cement to influence the mixture's properties such as its permeability or strength. The concrete formula may vary depending upon the engineering specifications, its specific application, and the weather. Various types of equipment used in concrete batching operations can include hoppers, silos, conveyors, pumps, storage bins, front end loaders, trucks, engines, motors, generators, and boilers/water heaters. In general, the smaller concrete batch plants will only include the sand and coarse aggregate storage piles, loading hopper and loading conveyor to the aboveground bins prior to the material entering the concrete batch plant for processing. The larger concrete batch plants will normally include an underground grizzly that will be fed by bottom dump trucks and multiple conveyors to transfer the material to their respective storage areas and to transfer the material into the plant for processing.

There are two general methods of producing concrete: Wet-batching and dry batching. Wet-batching is a process whereby concrete is mixed at the plant and is then transported to a job site where it's poured. The concrete may also be mixed and poured into molds on-site to create pre-formed products such as concrete pipes, slabs, and beams. Dry-batching is a process whereby concrete components are loaded into a truck mounted mixer and then subsequently mixed by the truck enroute to a job site where it is poured.

The District's Small Emitter and "Otherwise-Exempt Equipment" BACT Determinations policy states that units which are classified as small emitters (less than 10 lbs/day of VOC, NOx, SOx, PM10, or PM2.5 and less than 550 lbs/day of CO) and are located at non-major stationary sources are only

required to meet BACT standards that have been achieved in practice. Therefore, this BACT determination will only be based on what is achieved in practice and will be only applied to small emitters at non-major sources. BACT will be evaluated on a case-by-case basis for units that do not fit this criteria.

BACT ANALYSIS

A: ACHIEVED IN PRACTICE (Rule 202, §205.1a)

The following control technologies are currently employed as BACT for Concrete Batch plants that produce less than 5 cubic yards per batch by the following air pollution control districts:

US EPA

BACT
Source: EPA RACT/BACT/LAER Clearinghouse RBLC ID: NV-0047 (02/26/2008), RBLC ID: NV-0045 (12/11/2006)

Concrete Batch Plants (A)	
PM10	a. Maintain a min 1.5% moisture content in materials less than 0.25 inches in diameter for the entire process and control efficiency of 81.5%. Nellis Air Force Base Concrete Batch Plant 02/26/2008, and b. Enclosure, control efficiency of 62%, Sloan Quarry 12/11/2006.
PM2.5	No standard

(A) The only criteria emissions of interest are PM10 and PM2.5 No standards are listed for VOC, NOx, SOx, or CO emissions. The batch capacity is not listed, so this BACT will be referenced in this determination.

RULE REQUIREMENTS:
None

CALIFORNIA AIR RESOURCES BOARD

BACT
Source: California Air Resources Board BACT Determination Tool

The BACTs listed in the CARB BACT Clearinghouse for concrete batch plants are the same BACTs that are listed for the SJVAPCD and SCAQMD under their respective BACT sections of this document.

RULE REQUIREMENTS:
None.

SMAQMD

BACT
Source: SMAQMD BACT #306 issued on 6/29/22

Concrete Batch Plant < 5 Cubic Yards per Batch (A)	
PM10	a. Sand and Aggregate storage: outdoor storage piles adequately wetted to prevent visible emissions > 5% opacity b. Sand and aggregate handling (all transfer points): water sprays on all transfer points c. Sand and aggregate weigh batcher: material adequately wetted to prevent visible emissions > 5% opacity d. Storage silos for cement, flyash and other supplements: enclosed silo vented to a control device with 99% efficiency (baghouse, bin vent or equivalent) e. Cement weigh batcher: enclosed weigh batcher vented to a control device with 99% efficiency (baghouse or equivalent) f. 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) g. Central mixer loading: Enclosed mixer with water sprays
PM2.5	Equivalent to PM10 control standards

(A) The only criteria emissions of interest are PM10 and PM2.5 No standards are listed for VOC, NOx, SOx, or CO emissions.

The BACT threshold for SMAQMD is 0 lb/day.

The SMAQMD evaluates the entire concrete batch plant as an emissions unit to determine if BACT is triggered. Whereas, some other districts may break up the concrete batch plant into separate emissions units. Due to the SMAQMD's evaluation of concrete batch plants for BACT purposes and the SMAQMD's 0 lb/day BACT threshold, means that concrete batch plants in Sacramento County would be subject to the strictest requirements that are posted on other district's BACT guidelines. Yet, some of those same district's may not impose those strict requirements on their concrete batch plants, since BACT may not be triggered due to the separation of the concrete batch plant into separate emissions units. In review of other district's guidelines, the use of water sprays was required for sand and aggregate handling (transfer points). Most of the BACTs (as will be seen in the BACT sections of the districts evaluated under this BACT document), don't state that water sprays are required at all transfer points. Only the SJVAPCD includes this requirement (see Appendix F of this document), which is where SMAQMD's requirement came from under the previous BACT (#246). The SJVAPCD requirement is for water sprays on all transfer points to prevent visible emissions > 5% opacity. The last part was omitted under the previous BACT (#246). Other sections of the SJVAPCD that handle sand and aggregate, just state the material must be adequately wetted to prevent visible emissions > 5% opacity. According to AP-42, Section 11.19.2 - Crushed Stone Processing and Pulverized Mineral Processing (8/04) Table 11.19.2-2 footnote b, water sprays are not required at each transfer point due to the carry over moisture in the material. Also, the

background document for AP-42 Section 11.19.2 (Background Information for Revised AP-42 Section 11.19.2, Crushed Stone Processing and Purlverized Mineral Processing (5/12/02)) Reference 1 indicates that materials with less than 1.5 moisture content were considered uncontrolled and materials with ≥ 1.5% moisture content were considered controlled. The coarse aggregate and sand used by concrete batch plants in Sacramento County have been thoroughly washed to remove deleterious material at the wash plants of the aggregate plants where the materials come from. It has been proven, that clean sand and aggregate provide more durability and strength in concrete (https://onlinepubs.trb.org/Onlinepubs/hrr/1968/226/226-003.pdf). Also, Sacramento County has three large aggregate plants that can supply these materials without having to travel long distances outside of Sacramento County. So, the material received has enough moisture to prevent any dust from becoming airborne. That is normally the case for the smaller concrete batch plants that only include a loading hopper and loading conveyor to the aboveground storage compartments. The sand and coarse aggregate stockpiles do not remain at the sites for extended periods of time (less than a week), since they are constantly being used to produce concrete. The use of water sprays would most likely be used by the larger concrete batch plants, which may include an underground grizzly and multiple conveyors to transfer the materials to their respective storage areas. But as previously stated, the use of water sprays at all of the transfer points is not necessary. Therefore, it will be assumed that the moisture in the material and low silt, due to the washing process, will be equivalent to the use of water sprays at all transfer points. A five percent opacity standard will be included for the sand and aggregate transfer points to ensure the particulate emissions at these points are minimized, as required for the sand and aggregate storage piles and sand and aggregate weigh batcher. Item b in the table above will, therefore, be revised by the requirement down below:

b. Sand and aggregate handling: water sprays on transfer points as necessary to prevent visible emissions > 5% opacity or material adequately wetted or with enough moisture to prevent visible emissions > 5% opacity

RULE REQUIREMENTS:
None

South Coast AQMD

BACT
Source: SCAQMD BACT Guidelines for Non-Major Polluting Facilities (Updated 2/2/24), Page 32

Concrete Batch Plant < 5 Cubic Yards/Batch (A)	
PM10	Central Mixed: Water Spray (1988) Transit-Mixed: Baghouse Venting the Cement Weigh Hopper and the Mixer Truck Loading Station. Adequate Aggregate Moisture (07-11-97)
PM2.5	No standard

(A) The only criteria emissions of interest are PM10 and PM2.5 No standards are listed for VOC, NOx, SOx, or CO emissions.

The SCAQMD has a BACT threshold of 1 lb/day.

RULE REQUIREMENTS:
None

San Diego County APCD

BACT
Source: SDCAPCD NSR Requirements for BACT (Updated November 2023), Page 40

The SDCAPCD has a BACT trigger level of 10 lb/day. Therefore, the SDCAPCD BACT clearinghouse will not be referenced for this small emitter BACT determination.

RULE REQUIREMENTS:
None

Bay Area AQMD

BACT
Source: BAAQMD Guideline 49.1 (9/4/91)

The BAAQMD has a BACT trigger level of 10 lb/day. Therefore, the BAAQMD BACT clearinghouse will not be referenced for this small emitter BACT determination.

RULE REQUIREMENTS:
None

San Joaquin Valley APCD

BACT
Source: SJVUAPCD BACT Guideline 6.2.2 (Updated 7/31/18)

Concrete Batch Plants < 5 cubic yards per batch (A)	
PM10	a. SAND/AGGREGATE STORAGE: Outdoor storage piles adequately wetted a) to prevent visible emissions > 5% opacity, or b) with minimum moisture content of 2% for aggregate and 4% for sand b. SAND AND AGGREGATE HANDLING (ALL TRANSFER POINTS): Water sprays on all transfer points to prevent visible emissions > 5% opacity. c. SAND AND AGGREGATE WEIGH BATCHER: Material adequately wetted to prevent visible emissions > 5% opacity d. STORAGE SILOS FOR CEMENT, FLYASH AND OTHER SUPPLEMENTS: Enclosed silo vented to a control device with 99% efficiency (baghouse, bin vent or equivalent)

Concrete Batch Plants < 5 cubic yards per batch (A)	
PM10	e. CEMENT/FLYASH/SUPPLEMENTS WEIGH BATCHER: Enclosed weigh batcher vented to a control device with 99% efficiency (baghouse or equivalent) f. 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) g. CENTRAL MIXER LOADING: Enclosed mixer with water sprays
PM2.5	No standard

(A) The only criteria emissions of interest are PM10 and PM2.5 No standards are listed for VOC, NOx, SOx, or CO emissions.

The SJVAPCD has a BACT Threshold of 2 lb/day.

RULE REQUIREMENTS:
None

The following control technologies have been identified and are ranked based on stringency:

SUMMARY OF ACHIEVED IN PRACTICE CONTROL TECHNOLOGIES (A)	
PM10	1) All a. Sand and Aggregate storage: outdoor storage piles adequately wetted to prevent visible emissions > 5% opacity b. Sand and aggregate handling: water sprays on transfer points as necessary to prevent visible emissions > 5% opacity or material adequately wetted or with enough moisture to prevent visible emissions > 5% opacity c. Sand and aggregate weigh batcher: material adequately wetted to prevent visible emissions > 5% opacity d. Storage silos for cement, flyash and other supplements: enclosed silo vented to a control device with 99% efficiency (baghouse, bin vent or equivalent) e. Cement weigh batcher: enclosed weigh batcher vented to a control device with 99% efficiency (baghouse or equivalent) f. 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) g. Central mixer loading: Enclosed mixer with water sprays – [SMAQMD, SJVAPCD] 2) Transit Mixed a. Baghouse Venting the Cement Weigh Hopper and the Mixer Truck Loading Station; and Adequate Aggregate Moisture (07-11-97) - [SCAQMD] 3) Central Mixed < 5 Cubic Yards/Batch a. Water spray - [SCAQMD]

SUMMARY OF ACHIEVED IN PRACTICE CONTROL TECHNOLOGIES (A)	
PM10	4) All a. Maintain a min 1.5% moisture content in materials less than 0.25 inches in diameter for the entire process and control efficiency of 81.5%, and b. Enclosure of Aggregate/Cement Mixing with a control efficiency of 62%, – [US EPA]
PM2.5	Equivalent to PM10 control standards – [SMAQMD]

(A) The only criteria emissions of interest are PM10 and PM2.5 No standards are listed for VOC, NOx, SOx, or CO emissions.

The following control technologies have been identified as the most stringent, achieved in practice control technologies:

BEST CONTROL TECHNOLOGIES ACHIEVED		
Pollutant	**Standard**	**Source**
VOC	No Standard	
NOx	No Standard	
SOx	No Standard	
PM10	a. Sand and Aggregate storage: outdoor storage piles adequately wetted to prevent visible emissions > 5% opacity b. Sand and aggregate handling: water sprays on transfer points as necessary to prevent visible emissions > 5% opacity or material adequately wetted or with enough moisture to prevent visible emissions > 5% opacity c. Sand and aggregate weigh batcher: material adequately wetted to prevent visible emissions > 5% opacity d. Storage silos for cement, flyash and other supplements: enclosed silo vented to a control device with 99% efficiency (baghouse, bin vent or equivalent) e. Cement weigh batcher: enclosed weigh batcher vented to a control device with 99% efficiency (baghouse or equivalent) f. 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) g. Central mixer loading: enclosed mixer with water sprays	SMAQMD
PM2.5	Equivalent to PM10 control standards	SMAQMD
CO	No Standard	

B. TECHNOLOGICALLY FEASIBLE AND COST EFFECTIVE (Rule 202, §205.1.b.):

The District's Small Emitter and "Otherwise-Exempt Equipment" BACT Determinations policy (dated 5/16/2019) states that units which are classified as small emitters (less than 10 lbs/day of VOC, NOx, SOx, PM10, or PM2.5 and less than 550 lbs/day of CO) and are located at non-major stationary sources are only required to meet BACT standards that have been achieved in practice. Therefore, this BACT determination will only be based on what is achieved in practice and will only be applied to small emitters at non-major sources. BACT will be evaluated on a case-by-case basis for units that do not fit these criteria.

C. SELECTION OF BACT:

Based on the above analysis, BACT for PM10 will be the most stringent standards of what is currently achieved in practice. As PM2.5 is a subset of PM10, BACT for PM2.5 will be set to the same standard as is set for PM10.

BACT FOR CONCRETE BATCH PLANTS < 5 CUBIC YARD PER BATCH		
Pollutant	**Standard**	**Source**
VOC	No Standard	
NOx	No Standard	
SOx	No Standard	
PM10	a. Sand and Aggregate storage: outdoor storage piles adequately wetted to prevent visible emissions > 5% opacity b. Sand and aggregate handling: water sprays on transfer points as necessary to prevent visible emissions > 5% opacity or material adequately wetted or with enough moisture to prevent visible emissions > 5% opacity c. Sand and aggregate weigh batcher: material adequately wetted to prevent visible emissions > 5% opacity d. Storage silos for cement, flyash and other supplements: enclosed silo vented to a control device with 99% efficiency (baghouse, bin vent or equivalent) e. Cement weigh batcher: enclosed weigh batcher vented to a control device with 99% efficiency (baghouse or equivalent) f. 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) g. Central mixer loading: enclosed mixer with water sprays	SMAQMD
PM2.5	Equivalent to PM10 control standards	SMAQMD
CO	No Standard	

D. SELECTION OF T-BACT:

Toxics are in the form of PM matter. The control of particulate matter through meeting the BACT standard will also control toxics found in the PM. Therefore, meeting the BACT controls for the control of PM will be considered equivalent to meeting the T-BACT requirements.

APPROVED BY: _____ **DATE:** _____

Attachment A

EPA BACT Determinations

Pollutant Information

Click on the Process Information button to see more information about the process associated with this pollutant.
Or click on the Process List button to return to the list of processes.

RBLC Home | New Search | Search Results | Facility Information | Process List | Process Information | Pollutant Information

Help

FINAL

RBLC ID: NV-0045
Corporate/Company: AGGREGATE INDUSTRIES
Facility Name: SLOAN QUARRY
Process: AGGREGATE/CEMENT MIXING

Pollutant: Particulate matter, filterable < 10 µ (PPM10)
CAS Number: PM

Pollutant Group(s): Particulate Matter (PM),
Substance Registry System: Particulate matter, filterable < 10 µ (PPM10)

Pollution Prevention/Add-on Control Equipment/Both/No Controls Feasible: P

P2/Add-on Description: ENCLOSURE

Test Method:	Unspecified (EPA/OAR Methods / All Other Methods)
Percent Efficiency:	62.000
Compliance Verified:	Yes
EMISSION LIMITS:	
Case-by-Case Basis:	LAER
Other Applicable Requirements:	
Other Factors Influence Decision:	
Emission Limit 1:	0.0038 LB/T
Emission Limit 2:	0.3800 LB/H
Standard Emission Limit:	0.0038 LB/T
COST DATA:	
Cost Verified?	No
Dollar Year Used in Cost Estimates:	
Cost Effectiveness:	0 $/ton
Incremental Cost Effectiveness:	0 $/ton
Pollutant Notes:	THE ANNUAL EMISSION LIMIT FOR THIS UNIT IS 0.29 TONS PER YEAR.

http://cfpub.epa.gov/rblc/index.cfm?action=PermitDetail.ProcessInfo&facility_id=26652&PROCESS_ID=106068
Last updated on 10/2/2015

Technology Transfer Network

Clean Air Technology Center | RACT/BACT/LAER Clearinghouse | Clean Air Technology Center

RACT/BACT/LAER Clearinghouse | RBLC Basic Search | RBLC Search Results | Process Information - Details

Process Information - Details

For information about the pollutants related to this process, click on the specific pollutant in the list below.

RBLC Home | New Search | Search Results | Facility Information | Process List | Process Information

Help

FINAL

RBLC ID: NV-0045
Corporate/Company: AGGREGATE INDUSTRIES
Facility Name: SLOAN QUARRY
Process: AGGREGATE/CEMENT MIXING

Primary Fuel: N/A
Throughput: 100.00 T/H
Process Code: 90.012

Pollutant Information - List of Pollutants

Help

Pollutant	Primary Emission Limit	Basis	Verified
Particulate matter, filterable < 10 u (FPM10)	0.0038 LB/T	LAER	YES

Process Notes: THE EMISSION UNIT (AP12) IS THE MIXER OPERATED BY AGGREGATE/CEMENT PRODUCTS. THE ANNUAL PROCESS CAPACITY IS LIMITED TO 150,000 TONS PER YEAR.

http://cfpub.epa.gov/rblc/index.cfm?action=PermitDetail.ProcessInfo&facility_id=26873&PROCESS_ID=106717
Last updated on 10/2/2015

Technology Transfer Network

Clean Air Technology Center RACT/BACT/LAER Clearinghouse

Process Information - Details

For information about the pollutants related to this process, click on the specific pollutant in the list below.

Help

FINAL

RBLC ID: NV-0047
Corporate/Company: 99 CIVIL ENGINEER SQUADRON OF USAF
Facility Name: NELLIS AIR FORCE BASE
Process: CONCRETE BATCH PLANT

Primary Fuel: N/A
Throughput:
Process Code: 90.012

Pollutant Information - List of Pollutants

Help

Pollutant	Primary Emission Limit	Basis	Verified
Particulate matter, filterable < 10 µ (FPM10)	0.0514 LB/T PRODUCTION	Other Case-by-Case	NO

Process Notes: THE PROCESS CONSISTS OF THIRTEEN (13) EMISSION UNITS INCLUDING ONE DIESEL GENERATOR. THE CONCRETE BATCH PLANT (UNIT A015) IS SELECTED TO SHOW THE BACT DETERMINATIONS. PRODUCTION FOR THE PLANT IS LIMITED TO 200 TONS/HR AND 15,000 TONS/YR.

Pollutant Information

Click on the Process Information button to see more information about the process associated with this pollutant.
Or click on the Process List button to return to the list of processes.

RBLC Home | New Search | Search Results | Facility Information | Process List | Process Information | Pollutant Information

Help

FINAL

RBLC ID: NV-0047
Corporate/Company: 99 CIVIL ENGINEER SQUADRON OF USAF
Facility Name: NELLIS AIR FORCE BASE
Process: CONCRETE BATCH PLANT

Pollutant: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM

Pollutant Group(s): Particulate Matter (PM),
Substance Registry System: Particulate matter, filterable < 10 µ (FPM10)

Pollution Prevention/Add-on Control Equipment/Both/No Controls Feasible: P
P2/Add-on Description: MAINTAINING A MINIMUM OF 1.5% MOISTURE CONTENT IN MATERIALS LESS THAN 0.25 INCHES IN DIAMETER FOR THE ENTIRE PROCESS

Test Method: Unspecified
EPA/OAR Methods | All Other Methods

Percent Efficiency: 81.500
Compliance Verified: No
EMISSION LIMITS:
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: SIP , OPERATING PERMIT
Other Factors Influence Decision: No
Emission Limit 1: 0.0514 LB/T PRODUCTION
Emission Limit 2: 10.2900 LB/H
Standard Emission Limit: 0.0514 LB/T PRODUCTION
COST DATA:
Cost Verified? No
Dollar Year Used in Cost Estimates:
Cost Effectiveness: 0 $/ton
Incremental Cost Effectiveness: 0 $/ton
Pollutant Notes:

Pollutant Information

Click on the Process Information button to see more information about the process associated with this pollutant.
Or click on the Process List button to return to the list of processes.

RBLC Home | New Search | Search Results | Facility Information | Process List | Process Information | Pollutant Information

Help

FINAL

RBLC ID: NV-0045
Corporate/Company: AGGREGATE INDUSTRIES
Facility Name: SLOAN QUARRY
Process: AGGREGATE/CEMENT MIXING

Pollutant: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM

Pollutant Group(s): Particulate Matter (PM),
Substance Registry System: Particulate matter, filterable < 10 µ (FPM10)

Pollution Prevention/Add-on Control Equipment/Both/No Controls Feasible: P
P2/Add-on Description: ENCLOSURE

Test Method:	Unspecified (EPA/OAR Methods | All Other Methods)
Percent Efficiency:	62.000
Compliance Verified:	Yes
EMISSION LIMITS:	
Case-by-Case Basis:	LAER
Other Applicable Requirements:	
Other Factors Influence Decision:	
Emission Limit 1:	0.0038 LB/T
Emission Limit 2:	0.3800 LB/H
Standard Emission Limit:	0.0038 LB/T
COST DATA:	
Cost Verified?	No
Dollar Year Used in Cost Estimates:	
Cost Effectiveness:	0 $/ton
Incremental Cost Effectiveness:	0 $/ton
Pollutant Notes:	THE ANNUAL EMISSION LIMIT FOR THIS UNIT IS 0.29 TONS PER YEAR.

Pollutant Information

Click on the Process Information button to see more information about the process associated with this pollutant.
Or click on the Process List button to return to the list of processes.

RBLC Home | New Search | Search Results | Facility Information | Process List | Process Information | Pollutant Information

Help

FINAL

RBLC ID: NV-0047
Corporate/Company: 99 CIVIL ENGINEER SQUADRON OF USAF
Facility Name: NELLIS AIR FORCE BASE
Process: CONCRETE BATCH PLANT

Pollutant: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM

Pollutant Group(s): Particulate Matter (PM),
Substance Registry System: Particulate matter, filterable < 10 µ (FPM10)

Pollution Prevention/Add-on Control Equipment/Both/No Controls Feasible: P
P2/Add-on Description: MAINTAINING A MINIMUM OF 1.5% MOISTURE CONTENT IN MATERIALS LESS THAN 0.25 INCHES IN DIAMETER FOR THE ENTIRE PROCESS

Test Method: Unspecified
EPA/CAR Methods | All Other Methods

Percent Efficiency: 81.500
Compliance Verified: No
EMISSION LIMITS:
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: SIP , OPERATING PERMIT
Other Factors Influence Decision: No
Emission Limit 1: 0.0514 LB/T PRODUCTION
Emission Limit 2: 10.2900 LB/H
Standard Emission Limit: 0.0514 LB/T PRODUCTION
COST DATA:
Cost Verified? No
Dollar Year Used in Cost Estimates:
Cost Effectiveness: 0 $/ton
Incremental Cost Effectiveness: 0 $/ton
Pollutant Notes:

Attachment B

SMAQMD BACT Determination

SMAQMD BACT CLEARINGHOUSE

CATEGORY Type: **CONCRETE BATCH PLANT**

BACT Category:

BACT Determination Number: 306	**BACT Determination Date:** 6/29/2022

Equipment Information

Permit Number: N/A -- Generic BACT Determination

Equipment Description: CONCRETE BATCH PLANT LESS THAN 5 CUBIC YARDS PER BATCH

Unit Size/Rating/Capacity: Small Emitter BACT (PTE < 10 lb/day)

Equipment Location:

EXPIRED

BACT Determination Information

District Contact: Felix Trujillo, Jr. Phone No.: (279) 207-1154 email: ftrujillo@airquality.org

ROCs	**Standard:**	
	Technology Description:	
	Basis:	
NOx	**Standard:**	
	Technology Description:	
	Basis:	
SOx	**Standard:**	
	Technology Description:	
	Basis:	
PM10	**Standard:**	
	Technology Description:	See Page 7 of BACT 306
	Basis:	Achieved in Practice
PM2.5	**Standard:**	
	Technology Description:	
	Basis:	
CO	**Standard:**	
	Technology Description:	
	Basis:	
LEAD	**Standard:**	
	Technology Description:	
	Basis:	

Comments: This is a generic BACT determination based on BACT determinations made, and published, by other air agencies in California and/or other States.

Printed: 6/29/2022

C. SELECTION OF BACT:

Based on the above analysis, BACT for PM10 will be the most stringent standards of what is currently achieved in practice.

BACT FOR CONCRETE BATCH PLANTS < 5 CUBIC YARD PER BATCH		
Pollutant	**Standard**	**Source**
VOC	No Standard	
NOx	No Standard	
SOx	No Standard	
PM10	a. Sand and Aggregate storage: outdoor storage piles adequately wetted to prevent visible emissions > 5% opacity b. Sand and aggregate handling (all transfer points): water sprays on all transfer points c. Sand and aggregate weigh batcher: material adequately wetted to prevent visible emissions > 5% opacity d. Storage silos for cement, flyash and other supplements: enclosed silo vented to a control device with 99% efficiency (baghouse, bin vent or equivalent) e. Cement weigh batcher: enclosed weigh batcher vented to a control device with 99% efficiency (baghouse or equivalent) f. 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) g. Central mixer loading: enclosed mixer with water sprays	SJVAPCD
PM2.5	No Standard	
CO	No Standard	

D. SELECTION OF T-BACT:

Toxics are in the form of PM. The control of particulate matter through meeting the BACT standard will also control toxics found in the PM. Therefore, meeting the BACT controls for the control of PM will be considered equivalent to meeting T-BACT requirements.

APPROVED BY: *Brian F Krebs* **DATE:** 06-29-2022

Attachment C

SCAQMD BACT Determination

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Concrete Batch Plant

	Criteria Pollutants					
Rating/Size	**VOC**	**NOx**	**SOx**	**CO**	**PM_{10}**	**Inorganic**
Central Mixed, < 5 Cubic Yards/Batch					Water Spray (1988)	
Central Mixed, ≥ 5 Cubic Yards/Batch					Baghouse for Cement Handling and Adequate Moisture in Aggregate (1988)	
Transit-Mixed					Baghouse Venting the Cement Weigh Hopper and the Mixer Truck Loading Station; and Adequate Aggregate Moisture (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

Attachment D

SJVUAPCD BACT Determination

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.2.2*

Last Update: 7/31/2018

Concrete Batch Plant

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	1) SAND/AGGREGATE STORAGE: Outdoor storage piles adequately wetted a) to prevent visible emissions > 5% opacity, or b) with minimum moisture content of 2% for aggregate and 4% for sand 2) SAND/AGGREGATE HANDLING (ALL TRANSFER POINTS): Water sprays on all transfer points to prevent visible emissions > 5% opacity 3) SAND/AGGREGATE WEIGH BATCHER: 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, bin vent or equivalent) 5) CEMENT/FLYASH/SUPPLEMENTS WEIGH BATCHER: Enclosed weigh batcher vented to a control device with 99% efficiency (baghouse or equivalent) 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) > or = 5 yd3 batch capacity: enclosed mixer vented to a control device with 99% efficiency	1) SAND/AGGREGATE STORAGE: Enclosed storage (building, silo, or equivalent) vented to a control device with 99% control efficiency (baghouse or equivalent) 2) CENTRAL MIXER LOADING: < 5 cubic yard batch capacity: enclosed mixer vented to a control device with 99% control efficiency (baghouse or equivalent)	