

Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

JAN 13 2020

Ms. Jodi Dugan
CFO
Ray County Stone Producers LLC
9596 EE Hwy
Richmond, MO 64085

RE: New Source Review Permit - Project Number: 2019-08-044
Project Number: 2019-08-044; Installation Number: 177-0047

Dear Ms. Dugan:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and your new source review permit application are necessary for continued compliance. In addition, please note that Ray County Stone Producers LLC cannot operate with any other plants that have ambient impact limits based on the Air Pollution Control Program's nomographs. Please refer to the permits of any plant that you are operating with to see if their respective permits contain an ambient impact limit. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date



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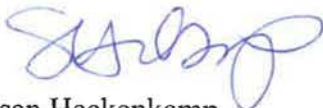
Mr. Brock Wilson
Page Two

was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.ao.mo.gov/ahc.

If you have any questions, please do not hesitate to contact Chad Stephenson, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



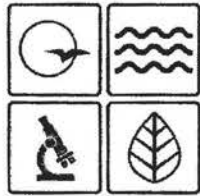
Susan Heckenkamp
New Source Review Unit Chief

SH:scj

Enclosures

c: Kansas City Regional Office
PAMS File: 2019-08-044

Permit Number: **012020-005**



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **012020-005**

Project Number: 2019-08-044

Installation ID: 177-0047

Parent Company: Ray County Stone Producers LLC

Parent Company Address: 9596 EE Hwy, Richmond, MO 64085

Installation Name: Ray County Stone Producers LLC

Installation Address: 9565 EE Hwy, Richmond, MO 64085

Location Information: Ray County, S5 T51N R28W

Application for Authority to Construct was made for:
Replace crusher and engine. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

Kendall B. Halo for

Director or Designee
Department of Natural Resources

JAN 13 2020

Effective Date



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DEPARTMENT OF
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Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

Director or Designee
Department of Natural Resources

Effective Date

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Enforcement and Compliance Section of the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:

<http://dnr.mo.gov/regions/>

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (3)(E). "Conditions required by permitting authority."

1. **Superseding Condition**
The conditions of this permit supersedes all Special Conditions found in the previously issued construction permit, Permit Number 052013-010.
2. **Generic Plant Designation and Maximum Combined Hourly Design Rate**
Ray County Stone Producers LLC has been designated to be a Generic Plant Operation. The combined MHDR of each of the following generic equipment types shall not exceed the rates and numbers listed in Table 1.

Table 1: Generic Equipment

Equipment Type	New or Existing	MHDR	Maximum Number of Units
Primary Unit(s) (Primary Crusher)	Existing	250 tons per hour	1
Secondary Crusher	Existing	250 tons per hour	1
Conveyor(s), Stacker(s)	Existing	2,250 tons per hour	9
Primary Screen	Existing	250 tons per hour	1
Secondary Screen	Existing	250 tons per hour	1
Diesel Generator	New	400 horsepower	1

3. **Generic Plant Equipment Identification Requirement**
 - A. Ray County Stone Producers LLC shall submit the following information to the Air Pollution Control Program's Permitting Section and the Kansas City Regional Office within 15 days of actual startup.
 - 1) A master list of all equipment that will be permitted for use with the generic plant. This master list shall include at minimum the following information for each piece of equipment:
 - a) Manufacturer's name
 - b) Model number
 - c) Serial number
 - d) Actual MHDR
 - e) Date of manufacture
 - f) Any other additional information that is necessary to uniquely identify the equipment.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- 2) A list of the core equipment that will always be utilized with the generic plant. The core equipment associated with the generic plant shall include at least one primary unit that controls the rate of the process flow (e.g., a primary crusher or primary screen).
 - 3) A determination of the applicability of 40 CFR Part 60, Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" for each piece of equipment indicating whether each piece of equipment is subject to Subpart OOO and justification for this determination.
 - 4) Ray County Stone Producers LLC shall notify the Air Pollution Control Program's Permitting Section and the Kansas City Regional Office when new equipment is added to the master list and when core equipment is changed within 30 days of the change.
- B. Ray County Stone Producers LLC shall maintain a list of the specific equipment currently being utilized with the generic plant. Any arrangement of the generic plant's equipment must be such that the core equipment is not bypassed in the process flow.
4. Undocumented Watering
Ray County Stone Producers LLC shall apply a water spray on all haul roads and vehicular activity areas whenever conditions exist that would allow visible emissions from these sources to leave the property.
 5. Annual Emission Limit
 - A. Ray County Stone Producers LLC shall emit less than 15.0 tons of PM₁₀ in any 12-month period from the entire installation which consists of the emission points listed in Table 2. The SSM emissions as reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 *Start-Up, Shutdown, and Malfunction Conditions* shall be included in the limit.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Table 2: Equipment List

Emission Point	Equipment List	True MHDR
RC-01	Loading Into crusher/grizzly	250 tph
RC-02	Primary Crusher	250 tph
RC-03 to RC-11	9 Conveyors	2,250 tph
RC-12	Secondary Crusher	250 tph
RC-13	Screening Unit	250 tph
RC-14	Screening Unit	250 tph
RC-15a	Load-In Stockpile	250 tph
RC-15b	Load-out Stockpile	250 tph
RC-15c	Vehicular Activity (unpaved 100 feet)	1.89 VMT/hr
RC-15d	Wind Erosion	3 acres
RC-16	Haul Roads to highway (unpaved 1,400 feet)	8.29 VMT/hr
RC-17	Diesel Generator	400 hp

- B. Ray County Stone Producers LLC shall demonstrate compliance with Special Condition 5.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
6. Moisture Content Testing Requirement
- A. Ray County Stone Producers LLC shall verify that the moisture content of the processed rock is greater than or equal to 1.5 percent by weight.
 - B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
 - C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
 - D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Ray County Stone Producers LLC main office within 30 days of completion of the required test.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 6.A, another test may be performed within 15 days of the noncompliant test. If the results of that test is less than the moisture content in Special Condition 6.A, Ray County Stone Producers LLC shall either:
- 1) Apply for a new permit to account for the revised information, or
 - 2) Submit a plan for the installation of wet spray devices to the Compliance/Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.

- G. In lieu of testing, Ray County Stone Producers LLC may obtain test results that demonstrate compliance with the moisture content in Special Condition 6.A from the supplier of the aggregate.

7. **Minimum Distance to Property Boundary Requirement**
The primary emission point, primary crusher (RC-02), shall be located at least 860 feet from the nearest property boundary.
8. **Primary Equipment Requirement**
Ray County Stone Producers LLC shall process all rock through the primary crusher (RC-02). Bypassing the primary crusher is prohibited.
9. **Daily Production Limit For Rock-Crushing Plant**
A. Ray County Stone Producers LLC shall limit its daily production based on Table 3 using Attachment B, or another equivalent form, that has been approved by the Air Pollution Control Program, including electronic forms.

Table 3: Summary of Daily Production Limits

Type of Operation	Daily Production Limit
^a Solitary	3,494
^b Concurrent with other plants	1,865

^a Operation without other plants

^b Operation with other plants

10. **Concurrent Operation Requirement**
Ray County Stone Producers LLC cannot operate with any other plants that have ambient impact limits based on the Air Pollution Control Program's nomographs. When other plants locate to the site, please refer to the special conditions of that plant's permit.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

11. Fuel Requirement-Diesel Generator
 - A. Ray County Stone Producers LLC shall burn exclusively ultra low sulfur diesel in the diesel generator (RC-17) with a sulfur content less than or equal to 15 parts per million by weight (15 ppm).
 - B. Ray County Stone Producers LLC shall demonstrate compliance with Special Condition 11.A by obtaining records of the fuel's sulfur content from the vendor for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.040 *Reference Methods*.
 - C. Ray County Stone Producers LLC shall keep the records required by Special Condition 11.B with the unit and make them available for Department of Natural Resources' employees upon request.
12. Ray County Stone Producers LLC shall only operate its diesel engine (RC-17) to power equipment during production.
13. Record Keeping Requirement
Ray County Stone Producers LLC shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.
14. Reporting Requirement
Ray County Stone Producers LLC shall report to the Air Pollution Control Program, Compliance / Enforcement Section by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at AirComplianceReporting@dnr.mo.gov, no later than 10 days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2019-08-044
Installation ID Number: 177-0047
Permit Number:

Ray County Stone Producers LLC:
9565 EE Hwy
Richmond, MO 64085

Complete: August 21, 2019

Parent Company:
Ray County Stone Producers LLC
9596 EE Hwy
Richmond, MO 64085

Ray County, S5 T51N R28W

PROJECT DESCRIPTION

Ray County Stone Producers LLC will be establishing a stationary rock crushing operation at 9565 EE Hwy, Richmond, MO 64085. The stationary plant will be a generic rock crushing plant consisting of a primary crusher, secondary crusher, two screens, nine conveyors, and a 400 horsepower diesel generator. The maximum hourly design rate (MHDR) of the primary emission unit (primary crusher, RC-02) is 250 tons per hour. There will be one haul road approximately 1,400 feet long and up to 3 acres of storage piles. The plant will be powered with a diesel generator. A stationary rock crushing plant was permitted at this site under permit 052013-010. Special Condition 8 of permit 052013-010 stated that if at any time Ray County Stone Producers LLC diesel engines did not meet the requirements found in 40 CFR 89.2 "Non-Road Engine" (1)(i) through (iii) in order to be classified as a non-road engine, Ray County Stone Producers LLC must submit a new Application for Authority to Construct to account for the emissions from the diesel engines. The diesel engine being used to power the equipment at this site has not been operated as a non-road engine. This permit is part of a remedial action by the Air Pollution Control Program to include the diesel engine emissions in the calculations and to include an additional two conveyors previously not included. Ray County Stone Producers LLC has also requested to replace the crusher from permit 0522013-010 with a new crusher and designate the plant as a generic plant.

The applicant is using undocumented watering to control emissions from haul roads and vehicular activity areas.

Daily production limits were calculated from values in permit 052013-010. An ambient impact of 80 $\mu\text{g}/\text{m}^3$ was used to calculate the daily production while operating with other plants. Solitary operating scenario was determined from the ambient impact from

permit 052013-010. The change reflects the Air Pollution Control Program’s updated construction industry policy “Ceasing the Use of Nomographs” dated May 1, 2016.

This installation is located in Ray County, an attainment/unclassifiable area for all other criteria pollutants.

This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

TABLES

The following permits have been issued to Ray County Stone Producers LLC at 9565 EE Hwy, Richmond, MO from the Air Pollution Control Program.

Table 4: Permit History

Permit Number	Description
052013-010	Stationary Rock Crushing Plant
112015-008	PORT-0725
122017-002	PORT-0725 replacing primary and secondary crushers

The table below summarizes the emissions of this project. The potential emissions of the process equipment exclude emissions from haul roads and wind erosion. The existing actual emissions were taken from the previous year’s EIQ for PORT-0716. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual PM₁₀ emission limit.

Table 5: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Potential Emissions of Process Equipment	Existing Actual Emissions (2018 EIQ)	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	9.11	N/D	260.89	46.95
PM ₁₀	15.0	5.66	4.93	83.36	<15.0
PM _{2.5}	10.0	4.03	1.08	13.53	2.43
SO _x	40.0	0.02	0.15	0.02	0.003
NO _x	40.0	52.71	2.27	52.71	9.49
VOC	40.0	4.30	0.18	4.30	0.77
CO	100.0	11.36	0.49	11.36	2.04
Total HAPs	25.0	0.05	N/D	0.05	0.01

N/D = Not Determined

^aExcludes haul road and storage pile emissions

^bIncludes haul road and storage pile emissions

EMISSIONS CALCULATIONS

Emissions for the project were calculated using emission factors found in the United States EPA document AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42).

Emissions from the rock-crushing equipment were calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. The controlled emission factors were used because the inherent moisture content of the crushed rock is greater than 1.5 % by weight.

Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006. A 50% control efficiency for PM and PM₁₀ and a 41% control efficiency for PM_{2.5} were applied to the emission calculations for the use of undocumented watering. Emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4. The moisture content of the aggregate is greater than 1.5% by weight, and this shall be supported through the requirements of special condition 5 in this permit. Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program's Emissions Inventory Questionnaire Form 2.8 "Storage Pile Worksheet."

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual PM₁₀ emission limit of 15.0 tons per year for stationary plants in order to avoid refined modeling. Potential emissions of PM are above de minimis but below major source levels. There are no modeling requirements for PM.

APPLICABLE REQUIREMENTS

Ray County Stone Producers LLC shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110.
- No Operating Permit is required.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- 40 CFR Part 63 Subpart ZZZZ, “National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines” applies to the diesel engine.
- 40 CFR 60 Subpart IIII, “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines”
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) or National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) apply to the proposed equipment.
- *Control of Sulfur Dioxide Emissions*, 10 CSR 10-6.261. The rock crushing plant complies with 10 CSR 10-6.261 (3)(C) because it burns exclusively ultra-low sulfur diesel with a sulfur content of 15 ppm in its generator.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 1, 2019, received August 20, 2019, designating Ray County Stone Producers LLC as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

% percent	MMBtuMillion British thermal units
°F degrees Fahrenheit	MMCFmillion cubic feet
acfm actual cubic feet per minute	MSDSMaterial Safety Data Sheet
BACT Best Available Control Technology	NAAQSNational Ambient Air Quality Standards
BMPs Best Management Practices	NESHAPs ..National Emissions Standards for Hazardous Air Pollutants
Btu British thermal unit	NO_xnitrogen oxides
CAM Compliance Assurance Monitoring	NSPSNew Source Performance Standards
CAS Chemical Abstracts Service	NSRNew Source Review
CEMS Continuous Emission Monitor System	PMparticulate matter
CFR Code of Federal Regulations	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
CO carbon monoxide	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
CO₂ carbon dioxide	ppmparts per million
CO_{2e} carbon dioxide equivalent	PSD Prevention of Significant Deterioration
COMS Continuous Opacity Monitoring System	PTEpotential to emit
CSR Code of State Regulations	RACTReasonable Available Control Technology
dscf dry standard cubic feet	RALRisk Assessment Level
EQ Emission Inventory Questionnaire	SCCSource Classification Code
EP Emission Point	scfmstandard cubic feet per minute
EPA Environmental Protection Agency	SDS Safety Data Sheet
EU Emission Unit	SICStandard Industrial Classification
fps feet per second	SIPState Implementation Plan
ft feet	SMALScreening Model Action Levels
GACT Generally Available Control Technology	SO_xsulfur oxides
GHG Greenhouse Gas	SO₂sulfur dioxide
gpm gallons per minute	SSMstartup, shutdown, & malfunction
gr grains	tphtons per hour
GWP Global Warming Potential	tpytons per year
HAP Hazardous Air Pollutant	VMTvehicle miles traveled
hr hour	VOC Volatile Organic Compound
hp horsepower	
lb pound	
lbs/hr pounds per hour	
MACT Maximum Achievable Control Technology	
µg/m³ micrograms per cubic meter	
m/s meters per second	
Mgal 1,000 gallons	
MW megawatt	
MHDR maximum hourly design rate	