



State of Utah

GARY R. HERBERT
Governor

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Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-AN0119950001-09

November 16, 2009

Troy Allen
Allen Gravel LLC
1139 East 12700 North
Cove, UT 84320

Dear Mr. Allen:

Re: Approval Order: Modification of Approval Order DAQE-556-01 to Replace a Generator
Cache County; CDS B; Attainment Area, MACT (Part 63), NSPS (Part 60), Title V (Part 70)
Project Number: N011995-0001

The attached document is the Approval Order for the above-referenced project. Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Mr. Alan Humpherys, who may be reached at (801) 536-4142.

Sincerely,

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board

MCH:AH:sa

cc: Bear River Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**APPROVAL ORDER: Modification of Approval Order
DAQE-556-01 to Replace a Generator**

Prepared By: Mr. Alan Humpherys, Engineer

Phone: (801) 536-4142

Email: ahumpherys@utah.gov

APPROVAL ORDER NUMBER

DAQE-AN0119950001-09

Date: November 16, 2009

Allen Gravel LLC

Cove Aggregate Processing Plant

Source Contact:

Mr. Troy Allen, Owner

Phone: (435) 770-1230

M. Cheryl Heying

Executive Secretary

Utah Air Quality Board

Abstract

Allen Gravel LLC has requested a modification to AO DAQE-556-01 dated July 31, 2001 to replace an old generator with a newer, larger generator. The old generator was rated at 527 kW and the new generator is rated at 750 kW. The new generator meets EPA's Tier I emission standards. The old generator could consume up to 90,000 gallons of fuel per year, and the new generator will be allowed to consume up to 54,000 gallons of fuel per year. The difference will be deducted from the plant wide diesel fuel consumption limit of 168,000 gallons per year, which will bring the consumption limit to 132,000 gallons per year.

Cache County is an attainment area of the NAAQS for all pollutants. NSPS 40 CFR 60 Subparts A (General Provisions), Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), and Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) regulations apply to this source. 40 CFR 63 Subpart A (General Provisions) and Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) apply to this source. 40 CFR 61 regulations do not apply to this source. Title V of the 1990 Clean Air Act applies to this source, and this source is considered a Title V Area Source.

Due to the replacement of the generator, the potential emissions, in tons per year, will change as follows: PM₁₀ - 0.04, NO_x - 11.59, SO₂ - 1.12, CO + 4.79, VOC + 2.88, HAPs + 0.01

The changes in emissions will result in the following, in tons per year, potential to emit totals: PM₁₀ = 10.32, NO_x = 21.14, SO₂ = 3.23, CO = 27.02, VOC = 5.58, HAPs = 0.26

The project has been evaluated and found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). A public comment period was held in accordance with UAC R307-401-7 (2) (b) and comments were received. All comments were considered and no comment was found to affect the proposed AO. This air quality Approval Order (AO) authorizes the project with the following conditions, and failure to comply with the conditions may constitute a violation of the order. This AO is issued to, and applies to the following:

Name of Permittee:

Allen Gravel LLC
1139 East 12700 North
Cove, UT 84320

Permitted Location:

Cove Aggregate Processing Plant
1600 East 12200 North
Cove, UT 84320

UTM coordinates: 434,000 m Easting, 4,644,800 m Northing

SIC code: 1442 (Construction Sand & Gravel)

Section I: GENERAL PROVISIONS

- I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]

- I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
- I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401]
- I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
- I.6 The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring. [R307-150]
- I.7 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

Section II: SPECIAL PROVISIONS

- II.A The approved installations shall consist of the following equipment:**
- II.A.1 **Cove Aggregate Processing Plant**
- II.A.2 **Two (2) Triple Deck Screens**
Rated Capacity: 350 tons per hour each
- II.A.3 **One (1) Cone Crusher**
Rated Capacity: 150 tons per hour
- II.A.4 **Various Aggregate Processing Equipment**
Conveyors, Feeders, & Stackers
- II.A.5 **One (1) Diesel Generator**
Rating: 750 kW
- II.A.6 **One (1) Gasoline Fuel Storage Tank**
Capacity: 250 gallons

II.A.7 **One (1) Diesel Fuel Storage Tank**

Capacity: 6,000 gallons

II.A.8 **Various Mobile Equipment**

Front-end Loaders, Bulldozers, & Excavators

II.B Requirements and Limitations

II.B.1 **The Cove Aggregate Processing Plant shall be subject to the following**

II.B.1.a Allen Gravel LLC shall notify the Executive Secretary in writing when the installation of the generator has been completed and is operational. To ensure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the owner/operator has not notified the Executive Secretary in writing within 18 months from the date of this AO on the status of the construction and/or installation, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation. If a continuous program of construction and/or installation is not proceeding, the Executive Secretary may revoke the AO. [R307-401-18]

II.B.1.b The owner/operator shall not exceed the following production limits:

- A. 600,000 tons of sized aggregate produced per rolling 12-month period
- B. 200,000 tons of aggregate removed from bank run and sold without processing per rolling 12-month period. [R307-401-8]

II.B.1.b.1 To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Bank run and sized aggregate production shall be determined by weighing haul trucks when both empty and full. All aggregate material shall be weighed and accounted for prior to leaving the site. The records of production shall be kept on a daily basis. [R307-401-8]

II.B.1.c Unless otherwise specified in this AO, the owner/operator shall not allow visible emissions from any source on site to exceed 20 percent opacity. [R307-201-3]

II.B.1.c.1 Unless otherwise specified in this AO, opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-201-3]

II.B.2 **All Crushers, Screens, and Conveyors on site shall be subject to the following**

II.B.2.a The owner/operator shall not allow visible emissions from any crusher on site to exceed 15 percent opacity. [40 CFR 60 Subpart OOO]

- II.B.2.b The owner/operator shall not allow visible emissions from any screen on site to exceed 10 percent opacity. [40 CFR 60 Subpart OOO]
- II.B.2.c The owner/operator shall not allow visible emissions from any conveyor transfer point on site to exceed 10 percent opacity. [40 CFR 60 Subpart OOO]
- II.B.2.d The owner/operator shall not allow visible emissions from any conveyor drop point on site to exceed 20 percent opacity. [R307-401-8]
- II.B.2.e The owner/operator shall conduct an initial performance test for all crushers, screens, and conveyor transfer points on site within 60 days after achieving the maximum production rate but not later than 180 days after initial startup. Performance tests shall meet the limitations specified in Table 2 to Subpart OOO or Table 3 to Subpart OOO. Records of initial performance tests shall be kept and maintained on site for the life of the equipment. [40 CFR 60 Subpart OOO]
- II.B.2.e.1 Initial performance tests for stack emissions limits shall be conducted according to 40 CFR 60.675(b), and initial performance tests for fugitive emissions limits shall be conducted according to 40 CFR 60.675(c). The owner or operator may use methods and procedures specified in 40 CFR 60.675(e) as alternatives to the reference methods and procedures specified in 40 CFR 60.675(b) and 60.675(c). [40 CFR 60 Subpart OOO]

II.B.3 **All Haul Roads and Fugitive Dust Sources on site shall be subject to the following**

- II.B.3.a The owner/operator shall not allow visible emissions from all paved in-plant haul roads to exceed 10 percent opacity and shall not allow visible emissions from all unpaved haul roads and fugitive dust sources on site to exceed 20 percent opacity. [R307-401-8]
- II.B.3.a.1 Visible emission determinations for fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Visible emissions shall be measured at the densest point of the plume but at a point not less than 1/2 vehicle length behind the vehicle and not less than 1/2 the height of the vehicle. [R307-205-4]
- II.B.3.b Allen Gravel, LLC shall comply with a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Cove Pit. Allen Gravel, LLC shall comply with the most current fugitive dust control plan approved by the Executive Secretary. This plan shall contain sufficient controls to prevent an increase in PM₁₀ emissions above those modeled for this AO. The limitations and conditions in the fugitive dust control plan shall not be changed.

The paved haul road lengths (200 feet and 1,400 feet), speed (15 miles per hour) or any other parameter used to calculate emissions shall not be increased above the limits established in the fugitive dust control plan. The haul road speed shall be posted. [R307-401-8]

II.B.3.c The paved in-plant roads used by haul trucks, in addition to affected areas of paved public roads shall be swept or sprayed clean as conditions warrant, such as to maintain the opacity limits listed in this AO. [R307-401-8]

II.B.3.d The owner/operator shall comply with all applicable requirements of R307-205 for Fugitive Emission and Fugitive Dust sources on site. [R307-205]

II.B.4 **All Engines on site shall be subject to the following**

II.B.4.a The owner/operator shall not consume more than 132,000 gallons of diesel fuel per rolling 12-month period and 3,000 gallons of gasoline per rolling 12-month period in all equipment on site. [R307-401-8]

II.B.4.a.1 To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of consumption shall be kept for all periods when the plant is in operation. Diesel fuel and gasoline consumption shall be determined by examination of fuel supplier billing records. The records of consumption shall be kept on a daily basis. [R307-401-8]

II.B.4.b The owner/operator shall not allow visible emissions from any engine on site to exceed 20 percent opacity. [R307-201-3]

II.B.4.c The sulfur content of any diesel fuel burned on site shall not exceed 15 ppm by weight. [R307-401-8]

II.B.4.c.1 The sulfur content shall be determined by ASTM Method D2880-71, D4294-89, or approved equivalent. Certification of diesel fuel shall be either by the owner/operator's own testing or by test reports from the diesel fuel marketer. [R307-203]

II.B.4.d Emissions to the atmosphere from the Diesel Generator Exhaust Stack shall not exceed the following rates and concentrations:

Pollutant

NO _x	16.43 lb/hr	585 ppmdv (15% O ₂ dry)
CO	20.24 lb/hr	1,288 ppmdv (15% O ₂ dry)
PM ₁₀	0.95 lb/hr	0.055 grain/dscf (68 degrees F, 29.92 in Hg)
VOC	2.38 lb/hr	96 ppmdv (15% O ₂ dry). [R307-401-8]

II.B.4.d.1 Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

Emission Point: Diesel Generator Exhaust Stack

Pollutant	Testing Status	Test Frequency
NO _x	*	#
CO	*	#
PM ₁₀	*	#
VOC	*	#

- * Initial compliance testing is required for each pollutant. The initial test date shall be performed as soon as possible and in no case later than 180 days after the start up of a new emission source, an existing source without an AO, or the granting of an AO to an existing emission source that is modified. A compliance test is required on the modified emission point that has an emission rate limit.
- # Test every five years or sooner if directed by the Executive Secretary. Tests may be required if the source is suspected to be in violation with other conditions of this AO. [R307-165]

II.B.4.d.2 Notification:

At least 30 days prior to conducting any emission testing required under any part of UAC, R307, the owner or operator shall notify the Executive Secretary of the date, time and place of such testing and, if determined necessary by the Executive Secretary, the owner or operator shall attend a pretest conference. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary. The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary. The pretest conference shall include representation from the owner/operator, the tester, and the Executive Secretary. [R307-165]

II.B.4.d.3 Sample Location:

The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location. [R307-401]

II.B.4.d.4 Volumetric Flow Rate:

40 CFR 60, Appendix A, Method 2 or other testing methods approved by the Executive Secretary. [R307-401]

II.B.4.d.5 PM₁₀:

For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201 or 201a. The back half condensables shall also be tested using the method specified by the Executive Secretary. All particulate captured shall be considered PM₁₀.

For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate. The back half condensables shall also be tested using the method specified by the Executive Secretary. The portion of the front half of the catch considered PM₁₀ shall be based on information in Appendix B of the fifth addition of AP-42 or other data acceptable to the Executive Secretary.

The back half condensables shall not be used for compliance demonstration but shall be used for inventory purposes. [R307-401]

II.B.4.d.6 NO_x

40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other testing methods approved by the Executive Secretary. [R307-401]

II.B.4.d.7 VOCs

40 CFR 60, Appendix A, Method 25, 25A, or, other testing methods approved by the Executive Secretary. [R307-401]

II.B.4.d.8 CO

40 CFR 60, Appendix A, Method 10, or other testing methods approved by the Executive Secretary. [R307-401]

II.B.4.d.9 Calculations:

To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation. [R307-401]

II.B.4.d.10 New Source Operation:

For a new source/emission point, the production rate during all method-testing shall be no less than 90% of the production rate listed in this AO. If the production rate listed in this AO has not been achieved at the time of the test, then method-testing shall be conducted at no less than 90% of the maximum production rate achieved as of the date of the test. [R307-401]

II.B.4.d.11 Existing Source Operation:

For an existing source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. [R307-401]

II.B.4.d.12 Portable testing analyzers may be used to test IC engines. If portable analyzer testing is employed, a correlation must be established during the initial tests between the portable testing analyzer and Method 7, 7A, 7B, 7C, 7D, 7E for NO_x, and Method 10 for CO. The portable analyzer must be calibrated as per the manufacturer's specification prior to each test. Notification of each annual portable test must be provided to the Executive Secretary. [R307-401]

Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

- NSPS (Part 60), IIII: Stationary Comp/Ignit R.I.C.E.
- NSPS (Part 60), OOO: Nonmetallic Mineral Processing Plants
- MACT (Part 63), A: General Provisions
- NSPS (Part 60), A: General Provisions
- MACT (Part 63), ZZZZ: Recipro. Int. Comb Engine (RICE)

PERMIT HISTORY

This AO is based on the following documents:

Is Derived From	Additional Information dated September 10, 2009
Is Derived From	Additional Information dated August 27, 2009
Is Derived From	NOI dated August 24, 2009
Supersedes	DAQE-556-01 dated July 31, 2001
Replaces	DAQE-1220-97 dated December 29, 1997
Replaces	DAQE-809-97 dated August 22, 1997
Replaces	DAQE-1186-95 dated December 19, 1995

ACRONYMS

The following lists commonly used acronyms and their associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM ₁₀	Particulate matter less than 10 microns in size
PM _{2.5}	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO ₂	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds