



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-IN0121080005-09

October 27, 2009

Rob Reynolds
Reynolds Sand & Gravel
6891 S 700 W
Suite 200
Midvale, UT 84047

Dear Mr. Reynolds:

Re: Intent to Approve: Modification to Approval Order DAQE-006-99 to Change Equipment and Increase Production; Salt Lake County; CDS B; MACT (Part 63), NSPS (Part 60), Nonattainment and Maintenance Area
Project Number: N012108-0005

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an Approval Order. An invoice will follow upon issuance of the final Approval Order.

Future correspondence on this Intent to Approve 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,

Timothy R. Andrus, Manager
Minor New Source Review Section

TRA:AH:sa

cc: Salt Lake Valley Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**INTENT TO APPROVE: Modification to Approval Order
DAQE-006-99 to Change Equipment
and Increase Production**

**Prepared By: Mr. Alan Humpherys, Engineer
Phone: (801) 536-4142
Email: ahumpherys@utah.gov**

INTENT TO APPROVE NUMBER

DAQE-IN0121080005-09

Date: October 27, 2009

**Reynolds Sand & Gravel
Bacchus Sand & Gravel Pit #1**

**Source Contact:
Mr. Rob Reynolds
Phone: (801) 566-2110**

**Timothy R. Andrus, Manager
Minor New Source Review Section
Utah Division of Air Quality**

ABSTRACT

Reynolds Sand & Gravel has requested a modification to their AO DAQE-006-99 for the Bacchus Pit #1. Aggregate processing equipment at the facility will be replaced with new aggregate processing equipment. The production at the facility will be increased from 630,000 tons of processed aggregate per rolling 12-month period to 1,080,000 tons of aggregate per rolling 12-month period with no more than 750,000 tons of that being processed. Several generators were listed in the previous AO. These generators will be removed because primary power will be supplied by the local utility company. One generator will be kept on site to provide for the smaller power requirements on site. A limit on the amount of fuel consumed by the generator will control emissions.

The Pit is located in Salt Lake County, which is a nonattainment area of the NAAQS for PM₁₀ and SO₂, and is a maintenance area for Ozone. 40 CFR 60 Subparts A (General Provisions), OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), and IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) regulations; and 40 CFR 63 Subparts A (General Provisions) and ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) regulations 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 increased production and removal of generators, the potential to emit totals, in tons per year, will change as follows: PM₁₀ + 4.78, NO_x - 10.45, SO₂ - 0.86, CO - 3.42, VOC - 0.80

The changes in emissions will result in the following, in tons per year, potential to emit totals: PM₁₀ = 16.35, NO_x = 0.87, SO₂ = 0.06, CO = 0.19, VOC = 0.07

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in the Salt Lake Tribune and Deseret News on October 31, 2009. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

Name of Permittee:

Reynolds Sand & Gravel
6891 S 700 W
Suite 200
Midvale, UT 84047

Permitted Location:

Bacchus Sand & Gravel Pit #1
8300 S Baccus Hwy
West Jordan, UT 84044

UTM coordinates: 410,000 m Easting, 4,494,700 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 **Bacchus Sand & Gravel Pit #1**
- II.A.2 **One (1) Jaw Crusher/Screen Plant**
Model: Pioneer/Mesabi 3042
- II.A.3 **One (1) Cone Crusher**
Model: JCI K300
- II.A.4 **One (1) 7' x 20' Screen**
Manufacturer: Cedarapids

- II.A.5 **One (1) 6' x 20' Screen**
Manufacturer: Cedarapids
- II.A.6 **One (1) Portable Screen**
Manufacturer: Kolberg
- II.A.7 **One (1) Portable Grizzly Feeder**
Manufacturer: Kolberg
- II.A.8 **Various Associated Conveyors**
- II.A.9 **One (1) 80 kW Gen Set**
Manufacturer: John Deere
Fuel: Diesel Fuel

II.B Requirements and Limitations

II.B.1 **The Bacchus Sand and Gravel Pit shall be subject to the following**

II.B.1.a Reynolds Sand & Gravel shall notify the Executive Secretary in writing when the installation of the equipment listed in this AO 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 produce more than 1,080,000 tons of aggregate material, including bankrun, per rolling 12-month period, with no more than 750,000 tons of aggregate being processed in the main aggregate plant. [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. Production shall be determined by belt scale records, scale house records, and/or truck scale records. The records of production shall be kept on a daily basis. [R307-401-8]

II.B.1.b.2 The owner/operator shall weigh and account for all aggregate material prior to the aggregate material leaving the site or being used in another process on site. [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. [R307-305-3]

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. [R307-305-3]

- 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 12 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 7 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 7 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. [R307-309-5]
- II.B.2.e The owner/operator shall install water sprays on all crushers, all screens, and all unenclosed conveyor transfer points on site to control fugitive emissions. Sprays shall operate as required to maintain the opacity limits listed in this AO when the temperature is above freezing. [R307-401-8]
- II.B.2.f 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 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.f.1 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(c). [40 CFR 60 Subpart OOO]
- II.B.2.f.2 The owner/operator shall submit written reports to the Executive Secretary of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR 60.672. [40 CFR 60 Subpart OOO]
- II.B.2.g The owner/operator shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system associated with the aggregate processing plant. If the owner/operator finds that water is not flowing properly during an inspection of the water spray nozzles, the owner/operator shall initiate corrective action within 24 hours and complete corrective action as expeditiously as practical. [40 CFR 60 Subpart OOO]
- II.B.2.g.1 Records of the wet suppression system inspections shall be kept and maintained in a logbook for all periods when the plant is in operation. The records shall include the following items:
- A. Date the inspections were made
 - B. Any corrective actions taken
 - C. Control mechanism used if sprays are not operating. [40 CFR 60 Subpart OOO]

II.B.3 **The 80 kW Generator shall be subject to the following**

II.B.3.a The 80 kW Generator shall not consume more than 2,875 gallons of diesel fuel per rolling 12-month period. [R307-401-8]

II.B.3.a.1 To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total for each day of the previous month by the twentieth day of each month using data from the previous 12 months. Fuel consumption shall be determined by fuel bill and supervisor maintaining an operations log. The records shall be kept on a daily basis. [R307-401-8]

II.B.3.b The owner/operator shall not allow visible emissions from any stationary diesel engine on site to exceed 20 percent opacity. [R307-305-3]

II.B.3.c The sulfur content of any diesel fuel burned in the 80 kW Generator shall not exceed 0.05 percent by weight. [R307-401-8]

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

II.B.4.a The owner/operator shall use chemical suppressants on all haul roads and operational areas on site. The owner/operator shall use water application between chemical suppressant applications to maintain opacity limits listed in this AO when the temperature is above freezing. [R307-401-8]

II.B.4.a.1 Records of chemical suppressant and water application shall be kept for all periods when the plant is in operation. The records shall include the following items:

- A. Date and time treatments were made
- B. Number of treatments made, dilution ratio, and quantity applied
- C. Rainfall amount received, if any
- D. Records of temperature, if the temperature is below freezing. [R307-401-8]

II.B.4.b The owner/operator shall not allow visible emissions from haul roads and fugitive dust sources to exceed 20 percent opacity on site and 10 percent opacity at the property boundary. [R307-309-5]

II.B.4.b.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. [R307-309-5]

- II.B.4.c The speed of all haul trucks and operational vehicles on site shall not exceed 15 miles per hour. The haul road speed shall be posted on site. [R307-401-8]
- II.B.4.d The hours of operation for all bulldozers at the facility shall not exceed 1,700 hours combined per rolling 12-month. [R307-401-8]
- II.B.4.d.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. The hours of operation of each bulldozer shall be added together to determine the total hours. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log. The records of operation shall be kept on a daily basis. [R307-401-8]
- II.B.4.e The moisture content of the fine product (product passing a #40 sieve) shall be maintained at a minimum of 4.0% by weight. The moisture content shall be tested if directed by the Executive Secretary using the appropriate American Society of Testing and Methods (ASTM) method. [R307-401-8]
- II.B.4.f The owner/operator shall apply water to all storage piles on site to control fugitive emissions. Sprays shall operate as required to maintain the opacity limits listed in this AO when the temperature is above freezing. [R307-401-8]
- II.B.4.g The combined area occupied by all storage piles on site shall not exceed 2.0 acres. [R307-401-8]
- II.B.4.h The open or disturbed area on site shall not exceed 20 acres. [R307-401-8]
- II.B.4.i The owner/operator shall comply with all applicable requirements of R307-309 for Fugitive Emission and Fugitive Dust sources on site. [R307-309]

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.

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

PERMIT HISTORY

The final AO will be based on the following documents:

Is Derived From	Additional Information dated October 12, 2009
Is Derived From	Additional Information dated September 29, 2009
Is Derived From	Additional Information dated August 6, 2009
Is Derived From	NOI dated May 28, 2009
Supersedes	DAQE-006-99 dated January 14, 1999

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