



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN158520001-18

November 29, 2018

Lee Ware
Kilgore Contracting, LLC
P.O. Box 869
Magna, UT 84044

Dear Mr. Ware:

Re: Approval Order: New Benjamin Aggregate and Hot Mix Asphalt Production Facility
Project Number: N15852-0001

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 Sarah Foran, who may be reached at (801) 536-4233.

Sincerely,

Signed by Bryce C. Bird on November 29, 2018

Bryce C. Bird
Director

BCB:SF:sa

cc: Patrick Wauters, EPA Region VIII
Utah County Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**APPROVAL ORDER: New Benjamin Aggregate and Hot Mix
Asphalt Production Facility**

**Prepared By: Sarah Foran, Engineer
Phone: (801) 536-4233
Email: sforan@utah.gov**

APPROVAL ORDER NUMBER

DAQE-AN158520001-18

Date: November 29, 2018

**Kilgore Contracting, LLC
Benjamin Aggregate & Asphalt Plant**

Source Contact:

**Lee Ware, Environmental Manager
Phone: (801) 250-0132 Ext 1412
Email: lee.ware@kilgorecompanies.com**

Signed by Bryce C. Bird on November 29, 2018

**Bryce C. Bird
Director**

Abstract

Kilgore Contracting, LLC (Kilgore) has requested a new AO for the Benjamin Pit in Utah County. The site will operate an asphalt and aggregate processing plant. Aggregate will be crushed, screened, and stored on location before being trucked off site or to the asphalt plant. The asphalt plant will mix aggregate, asphalt oil, lime, and fly ash to produce asphalt. The facility will produce up to 600,000 tons of aggregate and 210,000 tons of asphalt per year.

This site is located in Utah County, a NAA for PM₁₀ and PM_{2.5}, and an attainment area for all other criteria pollutants under the NAAQS. NSPS 40 CFR 60 Subparts A, I and OOO regulations apply to this source. NESHAP 40 CFR 61 and MACT 40 CFR 63 regulations do not apply to this source. This site is a Title V area source.

The annual PTE, in TPY, will be as follows: PM₁₀ = 12.80, PM_{2.5} (a subset of PM₁₀) = 5.43, NO_x = 6.41, SO₂ = 4.95, CO = 16.29, VOC = 5.17, HAPs = 1.15, CO_{2e} = 5,241.

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

Name of Permittee:

Kilgore Contracting, LLC
P.O. Box 869
Magna, UT 84044

Permitted Location:

Benjamin Aggregate & Asphalt Plant
7200 South 5600 West
Benjamin, UT 84660

UTM coordinates: 431,360 m Easting, 4,439,030 m Northing, UTM Zone 12
UTM Datum: NAD83

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 Director or Director's representative upon request, and the records shall include the two (2)-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. [R307-401-8]
- I.5 At all times, including periods of start-up, 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 Director 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 UAC R307-107. General Requirements: Breakdowns. [R307-107]
- I.7 The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]
- I.8 The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

- II.A.1 **Benjamin Aggregate & Asphalt Plant**
- II.A.2 **Aggregate Plant**
Crushing, screening, hauling, conveying, and storing
- II.A.3 **One (1) Jaw Crusher**
Capacity: 400 TPH
NSPS Applicability: Subpart OOO
- II.A.4 **One (1) Cone Crusher**
Capacity: 400 TPH
NSPS Applicability: Subpart OOO
- II.A.5 **One (1) Vertical Shaft Impactor Crusher**
Capacity: 400 TPH
NSPS Applicability: Subpart OOO
- II.A.6 **Three (3) Triple-Deck Screen**
Size: 8' x 20'
Capacity: 400 TPH Each
NSPS Applicability: Subpart OOO
- II.A.7 **Aggregate Conveyor**
NSPS Applicability: Subpart OOO
- II.A.8 **Miscellaneous Equipment**
Feeders, conveyors, stackers, wash screws, wash screens, etc.
- II.A.9 **Asphalt Plant**
Production of Hot Mix Asphalt
- II.A.10 **One (1) Asphalt Mix Drum**
Capacity: 400 TPY
Control: Baghouse
NSPS Applicability: Subpart I
- II.A.11 **One (1) Scalping Screen**
Size: 6' x 20'
Capacity: 400 TPH
NSPS Applicability: Subpart OOO

- II.A.12 **One (1) Hot Oil Heater**
Rating: < 0.25 MMBtu/hr
Control: Low NO_x Burner
- II.A.13 **One (1) Waste Oil Storage Tank**
Maximum Capacity: 15,000 gallons
- II.A.14 **Three (3) Asphalt Oil Storage Tanks**
Maximum Capacity: 30,000 gallons Each
NSPS Applicability: Subpart I
- II.A.15 **One (1) Lime Silo**
Maximum Capacity: 40 Tons
Control: Bin Vent
NSPS Applicability: Subpart I
- II.A.16 **Three (3) Asphalt Storage Silos**
Maximum Capacity: 300 Tons Each
NSPS Applicability: Subpart I
- II.A.17 **Five (5) Diesel Storage Tanks**
Maximum Capacity: 6,000 Gallons Total

II.B Requirements and Limitations

II.B.1 Site-wide Requirements

- II.B.1.a Unless otherwise specified in this AO, the owner/operator shall not allow visible emissions from any source on site to exceed 20% opacity. [R307-201-3, R307-401-8]
- II.B.1.b Unless otherwise specified in this AO, opacity observations of visible emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-201-3]
- II.B.1.c Within 60 days of issuance of this AO, the owner/operator shall have removed any on-site stationary engines not listed within II.A. [R307-401-8]

II.B.2 Aggregate Pit Requirements

- II.B.2.a The owner/operator shall not produce more than 600,000 tons of processed aggregate material per rolling 12-month period. [R307-401-8]
- II.B.2.a.1 To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the 20th 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 scale house records or vendor receipts. The records of production shall be kept on a daily basis. Production shall be determined by supervisor monitoring and maintaining of an operations log. [R307-401-8]

- II.B.2.b Visible emissions from the following emission points shall not exceed the following values:
- A. Crushers - 12% opacity
 - B. Screens - 7% opacity
 - C. All Conveyor Transfer Points - 7% opacity
- [R307-312, R307-401-8]
- II.B.2.c The owner/operator shall install water sprays on all crushers, all screens, all conveyor transfer points, and all conveyor drop points to control emissions. Sprays shall operate as required to ensure the opacity limits in this AO are not exceeded. [R307-401-8]
- II.B.2.d The owner/operator shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles associated with each crusher, screen, and conveyor. 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 expediently as practical. [40 CFR 60 Subpart OOO, R307-401-8]
- II.B.2.d.1 Records of the water sprays 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, 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 maximum production rate but not later than 180 days after initial start-up. Performance tests shall meet the limitations specified in Table 3 of Subpart OOO. Records of initial performance tests shall be kept and maintained on site for the lifetime of the equipment. [40 CFR 60 Subpart OOO, R307-401-8]
- II.B.2.e.1 Initial performance tests for fugitive emission limits shall be conducted according to 40 CFR 60.675(c). The owner/operator may use methods and procedures specified in 40 CFR 60.675(e) as an alternative. [40 CFR 60 Subpart OOO, R307-401-8]
- II.B.2.e.2 The owner/operator shall submit written reports of the results of all performance tests conducted to demonstrate compliance with 40 CFR 60.672 to the Director, attn.: Compliance Section. The submission shall be postmarked no later than 180 days from the date of this AO or no later than 180 days from equipment start-up, whichever is later. [40 CFR 60 Subpart OOO, R307-401-8]
- II.B.2.f The owner/operator shall not exceed 139,392 square feet of blasted area per rolling 12-month period. [R307-401-8]
- II.B.2.f.1 Records of blasts shall be kept for all periods when the plant is in operation. The records shall include the date and area of each blast. [R307-401-8]

II.B.3 **All Haul Roads and Fugitive Dust Sources Requirements**

II.B.3.a The owner/operator shall not exceed the following:

- A. 12.00 acres of storage pile and disturbed ground combined
- C. 6,700 feet (1.27 miles) of unpaved haul roads

[R307-401-8]

II.B.3.a.1 Compliance shall be determined through Global Positioning System (GPS) measurements or aerial photographs. Reclaimed areas such as those with emerged vegetation or hydro-seeded do not contribute to the acreage totals. [R307-401-8]

II.B.3.a.2 The paved road length shall be determined through source records or GPS measurements. [R307-401-8]

II.B.3.b The owner/operator shall ensure the entry haul road is paved for no less than 3,000 feet (0.57 miles) in length. [R307-401-8]

II.B.3.c The owner/operator shall not allow visible emissions to exceed the following:

- A. Haul roads -- 20% opacity
- B. Storage Piles -- 10% opacity
- C. All other fugitive dust sources -- 20% opacity
- D. All sources at the property boundary -- 10% opacity

[R307-309-5]

II.B.3.d Visible emission determinations for fugitive dust from haul roads and operational areas shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six (6)-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.3.e The owner/operator shall comply with a FDCP consistent with R307-309-6. [R307-309-6, R307-401-8]

II.B.3.f The owner/ operator shall sweep and apply water to the on-site paved roads as necessary to maintain the listed opacity requirements. [R307-401-8]

II.B.3.g The owner/operator shall use a chemical suppressant and water application on unpaved haul roads to maintain the opacity limits listed in this AO. [R307-401-8]

II.B.3.h The owner/operator shall install and maintain water sprays on all storage piles to control emissions. Sprays shall operate as required to ensure the opacity limits in this AO are not exceeded. [R307-401-8]

- II.B.3.h.1 Records of treatments to haul roads and storage piles shall include:
 - A. The date, time, and location of applications
 - B. The volume of chemical suppressant applied (as applicable)
 - C. The volume of water applied[R307-401-8]
- II.B.3.h.2 Records of water application shall be kept for all periods when the plant is in operation. [R307-401-8]
- II.B.3.i The owner/operator shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles associated with each storage pile. 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 expediently as practical. [R307-401-8]
- II.B.3.i.1 Records of the storage pile water sprays 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[R307-401-8]
- II.B.3.j The owner/operator shall not exceed 1,800 bulldozing hours per rolling 12-month period. [R307-401-8]
- II.B.3.j.1 The owner/operator shall keep records of bulldozing hours in a log for all periods when the plant is in operation. [R307-401-8]
- II.B.4 **Hot Mix Asphalt Plant Operating Requirements**
- II.B.4.a The owner/operator shall not produce more than 210,000 tons of hot mix asphalt per rolling 12-month period. [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 20th 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 the belt scale on the initial feeder, vendor receipts, or other methods approved by the Director. The records of production shall be kept on a monthly basis. [R307-401-8]
- II.B.4.b During the months of December, January, and February, the owner/operator shall only operate the hot mix asphalt plant between 5:00 AM and 3:00 PM each day. There are no other time restrictions during the other months of the year. [R307-401-8]
- II.B.4.b.1 Records of operation shall be kept for all periods when the plant is in operation. Supervisor monitoring and maintaining of an operations log shall determine hours of operation. [R307-312, R307-401-8]

- II.B.4.c The owner/operator shall use natural gas, propane, fuel oil, or on-specification used oil as defined in R315-15, or any combination thereof as fuel in the hot mix asphalt plant. [R307-401-8]
- II.B.4.d The sulfur content of any fuel oil burned in the hot mix asphalt plant shall not exceed 15 ppm by weight. [R307-401-8]
 - II.B.4.d.1 The sulfur content shall be determined by ASTM Method D2880-71, D4294-89, or approved equivalent. Certification of fuel oil shall be either by the owner/operator's own testing or by test reports from the fuel oil marketer. [R307-203-1, R307-401-8]
 - II.B.4.d.2 The owner/operator shall keep and maintain records of the test certification of sulfur content in fuel oil. Records of the test certifications shall be kept for all periods when the plant is in operation. [R307-203-1, R307-401-8]
- II.B.4.e The owner/operator shall use a baghouse to control process streams from the asphalt plant drum. The baghouse shall be sized to handle at least 69,000 ACFM. All exhaust air from the drum shall be routed through the baghouse before being vented to the atmosphere. [R307-401-8]
- II.B.4.f The owner/operator shall install a manometer or magnehelic pressure gauge to measure the differential pressure across each baghouse. The static pressure differential across each baghouse shall be between 2.0 to 6.0 inches of water column. [R307-401-8]
 - II.B.4.f.1 The pressure gauge shall be located such that an inspector/operator can safely read the indicator at any time. The pressure gauge shall measure the pressure drop in one (1)-inch water column increments or less. The pressure gauge shall be calibrated according to the manufacturer's instructions at least once every 12 months. [R307-401-8]
 - II.B.4.f.2 The owner/operator shall record the reading of the pressure gauge at least once per operating day. [R307-401-8]
- II.B.4.g The owner/operator shall equip the lime silo with a fabric filter, a baghouse, a bin vent, or a dust collector to control particulate emissions generated during filling of the silos. [R307-401-8]
- II.B.4.h The owner/operator shall not allow visible emissions from any baghouse, bin vent, dust collector or fabric filter to exceed 10% opacity. [R307-401-8]
- II.B.4.i PM₁₀ and PM_{2.5} emissions from the asphalt plant baghouse shall not exceed 0.024 grains/dscf (0.030 grains/dscf for TSP). [40 CFR 60 Subpart I, R307-312, R307-401-8]
 - II.B.4.i.1 Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

Emission Point: Drum Mixer exhaust passing through the baghouse

Pollutant	Testing Status	Test Frequency
TSP	*	#
PM ₁₀ and PM _{2.5}	**	@

- * Initial compliance testing is required for each plant. 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 or modified emission source. A compliance test is required on a modified emission point that has an emission rate limit.
- ** Initial test is not required unless specified by the Director.
- # Initial test is required. Subsequent tests shall only be performed for PM₁₀.
- @ Test every five (5) years or sooner if required by the Director. Tests may be required if the source is suspected to be in violation with other conditions of this AO.

[R307-165, R307-401-8]

II.B.4.i.2

A. 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 Director of the date, time and place of such testing and shall submit a source test protocol to the Director. The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. If directed by the Director, the owner/operator shall attend a pretest conference. The pretest conference shall include representation from the owner/operator, the tester, and the Director.

B. Reporting:

Upon completion of the DAQ-accepted testing methods, the owner/operator shall submit a copy of the results from each performance test as conducted to the Director within 60 days after the test has been completed.

C. 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 Director. An Occupational Safety and Health Administration (OSHA)- or Mine Safety and Health Administration (MSHA)-approved access shall be provided to the test location.

D. Volumetric Flow Rate:

40 CFR 60, Appendix A, Method 2 or other EPA-approved testing method, as acceptable to the Director.

E. Total Suspended Particulate (TSP)

TSP emissions shall be determined by 40 CFR 60, Appendix A, Method 5 or other EPA-approved testing method, as acceptable to the Director

F. PM₁₀

The following methods shall be used to measure filterable particulate emissions: 40 CFR 51, Appendix M, Method 201 or Method 201A, or other EPA-approved testing method, as acceptable to the Director. If other approved testing methods are used which cannot measure the PM₁₀ fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM₁₀.

G. $PM_{2.5}$

Filterable $PM_{2.5}$ emissions shall be determined by 40 CFR 51, Appendix M, Method 201A, or other EPA-approved testing method, as acceptable to the Director.

The following methods shall be used to measure condensable particulate emissions: 40 CFR 51, Appendix M, Method 202, or other EPA-approved testing method, as acceptable to the Director.

The condensable particulate emissions shall not be used for compliance demonstration, but shall be used for inventory purposes.

H. 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 Director, to give the results in the specified units of the emission limitation.

I. Test Conditions

All tests shall be conducted in accordance with R307-165-4.

[R307-165, R307-401-8]

II.B.4.i.3

New Source Operation

For a new source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production rate (rated capacity) of the plant. If the maximum AO-allowable production rate has not been achieved at the time of the test, the following procedure shall be followed:

- A. Testing shall be at no less than 90% of the production rate achieved to date.
- B. If the test is passed, the new maximum allowable production rate shall be 110% of the tested achieved rate. This new maximum allowable production rate shall be less than 90% of the allowed maximum production rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate.
- C. The owner/operator shall request a higher production rate when necessary. Testing at no less than 90% of the higher rate shall be conducted. A new maximum production rate (110% of the new rate) will then be allowed if the test is successful. This process may be repeated until the maximum AO production rate is achieved.

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.

[R307-401-8]

II.B.4.j

The owner/operator shall comply with the limitations and compliance requirements under R307-312-5 for burning a fuel other than natural gas or liquefied petroleum gas (LPG).
[R307-312]

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), A: General Provisions

NSPS (Part 60), I: Standards of Performance for Hot Mix Asphalt Facilities

NSPS (Part 60), OOO: Standards of Performance for Nonmetallic Mineral Processing Plants

PERMIT HISTORY

This AO is based on the following documents:

Is Derived From	NOI dated September 22, 2017
Incorporates	Additional Information dated January 4, 2017
Incorporates	Additional Information dated April 4, 2018

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Utah County
CDS SM
NSPS (Part 60), Nonattainment or Maintenance Area

ACRONYMS

The following lists commonly used acronyms and 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
CMS	Continuous monitoring system
CO	Carbon monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
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
PTE	Potential to Emit
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
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds