State of Utah

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Department of
Environmental Quality

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DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-IN122720011-20

November 6, 2020

Mark Greenwood
Granite Construction Company
1000 North Warm Springs Rd.
Salt Lake City, UT 84116

Dear Mr. Greenwood:

Re: Intent to Approve:
Modification to Approval Order DAQE-AN122720010-18 to Replace Equipment and Adjust Asphalt Plant Operations
Project Number: N122720011

The attached document is the Intent to Approve (ITA) for the above-referenced project. The ITA is subject to public review. Any comments received shall be considered before an Approval Order (AO) 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 AO. An invoice will follow upon issuance of the final AO.

Future correspondence on this ITA should include the engineer's name, **Mr. Enqiang He,** as well as the DAQE number as shown on the upper right-hand corner of this letter. Mr. Enqiang He, can be reached at (801) 556-1580 or ehe@utah.gov, if you have any questions.

Sincerely,

Alan D. Humpherys, Manager
New Source Review Section

ADH:EH:sa

cc: Weber-Morgan Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

INTENT TO APPROVE
DAQE-IN122720011-20
Modification to Approval Order DAQE-AN122720010-18 to Replace Equipment and Adjust Asphalt Plant Operations

Prepared By
Mr. Enqiang He, Engineer
(801) 556-1580
ehe@utah.gov

Issued to
Granite Construction Company - West Haven Asphalt Plant

Issued On
November 6, 2020

New Source Review Section Manager
Alan D. Humpherys

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GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Granite Construction Company

Source Name
Granite Construction Company - West Haven Asphalt Plant

Mailing Address
1000 North Warm Springs Rd.
Salt Lake City, UT 84116

Physical Address
1550 South 1900 West
West Haven City, UT 84401

Source Contact
Name Mark Greenwood
Phone (801) 526-6051
Email mark.greenwood@gcinc.com

UTM Coordinates
413,878 m Easting
4,565,704 m Northing
Datum NAD83
UTM Zone 12

SIC code 1442 (Construction Sand & Gravel)

SOURCE INFORMATION

General Description
Granite Construction Company (Granite) operates an aggregate processing and asphalt plant at its West Haven site located in West Haven City, Weber County. Granite operates a recycled asphalt plant at the West Haven site. Raw aggregate is trucked to the site, screened, and mixed with lime. Recycled asphalt is also trucked to the site, crushed, and sized with a horizontal impact crusher, cone crusher, and screen. The virgin materials, recycled asphalt pavement and oil are mixed and dried in the drum. Asphalt is then conveyed to storage silos, and gravity-dropped to delivery trucks. A baghouse and water sprays are used to control the asphalt plant emissions. Granite produces up to 675,000 tons a year of asphalt and 426,000 tons a year of aggregate.

NSR Classification
Minor Modification at Minor Source

Source Classification
Located in Northern Wasatch Front O3 NAA, Salt Lake City UT $PM_{2.5}$ NAA
Weber County
Airs Source Size: SM

Applicable Federal Standards
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
Title V (Part 70) Area Source

Project Description
Granite has requested a modification to its AO to accommodate the following:

1. Replacement of the hot oil heater with a 3.75 MMbtu/hr rated unit;
2. Replacement of the asphalt drum with an Astec 400 tons per hour drum;
3. Replacement of the asphalt drum heater with an Astec Whisper Jet 125 MMBtu/hr heater;
4. Remove the 6,000 tons per day limit of asphalt production;
5. Remove the 16 hour per day production limit of asphalt production;
6. Remove fuel oil and used oil as a fuel source for the asphalt plant;
7. Add asphalt production limit of 5,000 tons per day from December 1 to February 28; and
8. Add Recycled Asphalt Production limit of 3,780 tons per day from December 1 to February 28.

SUMMARY OF EMISSIONS

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

Criteria Pollutant	Change (TPY)	Total (TPY)
CO_2 Equivalent	3132	11828.00
Carbon Monoxide	17.70	45.21
Nitrogen Oxides	-9.27	9.01
Particulate Matter - PM_{10}	-2.58	12.39
Particulate Matter - $PM_{2.5}$	-6.45	8.52
Sulfur Dioxide	-4.93	1.56
Volatile Organic Compounds	-14.16	13.36

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
2,2,4-Trimethylpentane (CAS #540841)		27
2-METHYLNAPHTHALENE (CAS #91576)		64
Benzene (Including Benzene From Gasoline) (CAS #71432)		267
Formaldehyde (CAS #50000)		2149
Generic HAPs (CAS #GHAPS)		251
Hexane (CAS #110543)		646
Methyl Chloroform (1,1,1-Trichloroethane) (CAS #71556)		32
Naphthalene (CAS #91203)		67
Nickel (CAS #7440020)		43
Toluene (CAS #108883)		112
Xylenes (Isomers And Mixture) (CAS #1330207)		168
	Change (TPY)	**Total (TPY)**
Total HAPs	+0.90	1.91

PUBLIC NOTICE STATEMENT

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 Director.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the ITA will be published in the Ogden Standard Examiner on November 10, 2020. 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 within 15 days of publication, 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.

SECTION I: GENERAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

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-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 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 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: PERMITTED EQUIPMENT

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.A THE APPROVED EQUIPMENT

II.A.1	**Granite Construction Company** West Haven Asphalt Operation
II.A.2	**One (1) Hot Mix Asphalt Plant** Control: Baghouse Manufacture Date: 2019 Maximum Production Rate: 400 tph Burner Rating: 125 MMBtu/hr NSPS Applicability: Subpart I The drum and burner are new.
II.A.3	**One (1) Pug Mill** NSPS Applicability: Subpart I
II.A.4	**One (1) Lime Silo** Control: Baghouse Size: 12' x 44' 10" NSPS Applicability: Subpart I
II.A.5	**One (1) Horizontal Impact Crusher** Maximum Capacity Rating: 220 tph NSPS Applicability: Subpart OOO
II.A.6	**One (1) Cone Crusher** Maximum Capacity Rating: 220 tph NSPS Applicability: Subpart OOO
II.A.7	**Two (2) Screens** Size: 6' x 20' NSPS Applicability: Subpart OOO
II.A.8	**Five (5) Asphalt Storage Silos** Maximum Capacity: 150 tons (each)
II.A.9	**One (1) Hot Oil Heater (New)** Maximum Rated Capacity: 3.75 MMBtu/hr Fuel: Natural Gas
II.A.10	**Three (3) Double-Compartment Asphalt Oil Tanks** Maximum Capacity: Six (6) tanks total - 20,593 gallons (each)
II.A.11	**One (1) Asphalt Tack Tank** Maximum Capacity: 10,043 gallons
II.A.12	**Miscellaneous Operations** Includes: associated feeders, conveyors, and silos

SECTION II: SPECIAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	**Source-Wide Requirements and Limitations**
II.B.1.a	Unless otherwise specified in this AO, the owner/operator shall not allow visible emissions from any stationary point or fugitive emission source on site to exceed 20% opacity. [R307-401-8]
II.B.1.a.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. [R307-401-8]
II.B.2	**Asphalt Plant Requirements**
II.B.2.a	The owner/operator shall not operate the asphalt plant for more than 3,100 hours per rolling 12-month period. [R307-401-8, R307-410]
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. The owner/operator shall record hours of operation on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log. [R307-401-8]
II.B.2.b	The owner/operator shall not exceed the following production and operational limitations for the asphalt plant: A. 675,000 tons of asphalt per rolling 12-month period B. 5,000 tons of asphalt per calendar day from December 1 through February 28 C. 3,780 tons of recycled asphalt per calendar day from December 1 through February 28 [R307-401-8, R307-410]
II.B.2.b.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 belt scale records and/or vendor receipts and shall be kept on a daily basis. [R307-401-8]
II.B.2.c	The owner/operator shall use natural gas or propane as fuel in the asphalt plant. [R307-401-8]
II.B.2.d	The owner/operator shall use a baghouse to control particulate emissions from the asphalt plant. [R307-401-8]
II.B.2.e	The owner/operator shall install a manometer or magnehelic pressure gauge to measure the differential pressure across the baghouse. The static pressure differential across the baghouse shall be between 2.0 to 6.0 inches of water column. [R307-401-8]
II.B.2.e.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-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.2.e.2	The owner/operator shall record the reading of the pressure gauge at least once per operating day. [R307-401-8]
II.B.2.f	Each storage silo associated with an asphalt plant shall be equipped 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.2.g	The owner/operator shall not allow visible emissions from any baghouse, bin vent, dust collector or fabric filter associated with an asphalt plant to exceed 10% opacity. [R307-401-8]
II.B.2.h	The owner/operator shall not emit more than the following rate and concentration from the asphalt plant baghouse: Pollutant — lbs/hr — grains/dscf (68°F, 29.92 in Hg) PM (virgin and/or RAP) — 5.55 — 0.030 PM_{10} and $PM_{2.5}$ (virgin and/or RAP) — 5.55 — 0.024 RAP means recycled asphalt pavement. [R307-401-8]
II.B.2.h.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 PM — * — # PM_{10} and $PM_{2.5}$ — ** — @ * Initial compliance testing is required for the plant. The initial test date shall be performed as soon as possible and in no case later than 180 days from the startup of the asphalt plant. 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 PM_{10} and $PM_{2.5}$. @ 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.2.h.2	A. Notification: At least 30 days prior to conducting any emission testing required under any part of UAC, R307, the owner/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 be approved by the Director prior to performing the tests. 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: The owner/operator shall submit a written copy of the test report signed by the person conducting the test to the DAQ within 60 days of completion of the test. The test report shall contain, at a minimum, the information specified in 40 CFR §60.8(f)(2).
	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 testing methods approved by the Director
	E.	PM: The following methods shall be used to measure PM emissions: 40 CFR 60, Appendix A, Method 5 or other EPA-approved testing method, as acceptable to the Director
	F.	PM_{10} and $PM_{2.5}$: The following methods shall be used to measure filterable particulate emissions: 40 CFR 51, Appendix M, Method 201 for PM_{10} or Method 201A for PM_{10} and $PM_{2.5}$, or other EPA-approved testing method, as acceptable to the Director. If other approved testing methods are used which cannot measure the PM_{10} or $PM_{2.5}$ fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM_{10} or $PM_{2.5}$. The following methods shall be used to measure condensable particulate emissions: 40 CFR 51, Appendix M, Method 202 for PM_{10} and $PM_{2.5}$, 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.
	G.	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.
	H.	Test Conditions: All tests shall be conducted in accordance with R307-165-4.
	I.	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 source. If the production rate has not been achieved at the time of the test, compliance testing shall be

	conducted at no less than 90% of the maximum production rate achieved as of the date of the test. J. 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. If an existing source/emission point has not operated in the previous three (3) years, the production rate during all compliance testing shall be no less than 90% of the maximum production rate (rated capacity) of the source. If the production rate has not been achieved at the time of the test, compliance testing shall be conducted at no less than 90% of the maximum production rate achieved as of the date of the test. [R307-401-8]
II.B.3	**Aggregate Processing Plant Requirements**
II.B.3.a	The owner/operator shall not produce more than 426,000 tons of aggregate material per rolling 12-month period for the West Haven Operation aggregate plant. [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 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 belt scale records and/or vendor receipts and shall be kept on a daily basis. [R307-401-8]
II.B.3.b	The owner/operator shall not allow visible emissions from the following emission points to exceed the following values: A. All crushers – 12% opacity B. All screens – 7% opacity C. All conveyor transfer points – 7% opacity D. All conveyor drop points – 20% opacity [R307-309, R307-312]
II.B.3.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. Water sprays are not required for recycled asphalt pavement conveyor transfer points. [R307-401-8]
II.B.3.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.3.e	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.3.f	The owner/operator shall conduct an initial performance test for all crushers, screens, and conveyor transfer points subject to NSPS Subpart OOO. Performance tests shall meet the limitations specified in Table 3 to Subpart OOO. [40 CFR 60 Subpart OOO]
II.B.3.f.1	Initial performance tests for fugitive emissions 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 alternatives to the reference methods and procedures specified in 40 CFR 60.675(c). [40 CFR 60 Subpart OOO]
II.B.3.f.2	The owner/operator shall keep and maintain records of the initial performance test for each crusher, screen, and conveyor for the life of the equipment. The record of the initial performance test must be made available to the Director or the Director's representative upon request. [40 CFR 60 Subpart OOO]
II.B.4	**Haul Roads and Fugitive Dust Sources Requirements**
II.B.4.a	The owner/operator shall comply with a FDCP consistent with R307-309-6. The FDCP shall address the control of all fugitive dust sources at the plant. [R307-309-6, 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% opacity on site and 10% at the property boundary. [R307-309-5, R307-401-8]
II.B.4.b.1	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-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, R307-401-8]
II.B.4.c	The owner/operator shall use water application or other control options contained in R307-309 to minimize emissions from fugitive dust and fugitive emissions sources, including unpaved haul roads, storage piles, and disturbed areas. Controls shall be applied to ensure the opacity limits in this AO are not exceeded. [R307-309, R307-401-8]
II.B.4.c.1	The owner/operator shall maintain records of water application or other control options for all periods when the plant is in operation. [R307-401-8]
II.B.4.d	The owner/operator shall pave all haul roads used for asphalt and aggregate hauling. [R307-401-8]
II.B.4.e	The owner/operator shall clean all paved plant roads with periodic sweeping or spray-cleaning to ensure the opacity limits in this AO are not exceeded. [R307-401-8]
II.B.4.e.1	The owner/operator shall maintain records of cleaning the paved roads for all periods when the plant is in operation. [R307-401-8]

PERMIT HISTORY

This Approval Order shall supersede or will be based on the following documents:

Supersedes	AO DAQE-AN122720010-18 dated December 14, 2018
Incorporates	NOI dated May 18, 2020
Incorporates	Additional information dated August 6, 2020
Incorporates	Modeling Memo DAQE-MN122720011A-20 dated August 28, 2020
Incorporates	Additional information dated September 10, 2020

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 Environmental Protection Agency 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_2e	Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations 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 Division of Air Quality use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i)
GWP	Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/YR	Pounds per year
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