



## State of Utah

GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

## Department of Environmental Quality

L. Scott Baird  
*Executive Director*

DIVISION OF AIR QUALITY  
Bryce C. Bird  
*Director*

DAQE-IN159600002-20

March 13, 2020

Jordache Wardell  
Wardell Brothers Construction, Inc.  
P.O. Box 827  
427 East 100 North  
Morgan, UT 84050

Dear Mr. Wardell:

Re: Intent to Approve:  
New Approval Order for the Devils Hollow Pit  
Project Number: N159600002

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) 536-4010 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-IN159600002-20**  
**New Approval Order for the Devils Hollow Pit**

**Prepared By**  
**Mr. Enqiang He, Engineer**  
**(801) 536-4010**  
**ehe@utah.gov**

**Issued to**  
**Wardell Brothers Construction, Inc. - Devils Hollow Pit**

**New Source Review Section Manager**  
**Alan D. Humpherys**

**Date: March 13, 2020**



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## **GENERAL INFORMATION**

### **CONTACT/LOCATION INFORMATION**

**Owner Name**

Wardell Brothers Construction, Inc.

**Source Name**

Wardell Brothers Construction, Inc. - Devils Hollow Pit

**Mailing Address**

P.O. Box 827  
427 East 100 North  
Morgan, UT 84050

**Physical Address**

2401 West Old Highway Road  
Morgan, UT

**Source Contact**

Name Jordache Wardell  
Phone (801) 829-4999  
Email jwardell@wardellbrothers.com

**UTM Coordinates**

439,593 m Easting  
4,549,411 m Northing  
Datum NAD83  
UTM Zone 12

**SIC code** 1442 (Construction Sand & Gravel)

### **SOURCE INFORMATION**

**General Description**

Wardell Brothers Construction, Inc. operates an aggregate processing plant called the Devils Hollow Pit in Morgan County. The equipment onsite includes crushers, a screen, conveyors, feeders, a generator engine, and fuel storage tanks. Annual aggregate production will not exceed 100,000 tons.

**NSR Classification**

New Minor Source

**Source Classification**

Located in Attainment Area  
Morgan County  
Airs Source Size: B

**Applicable Federal Standards**

NSPS (Part 60), A: General Provisions  
NSPS (Part 60), OOO: Standards of Performance for Nonmetallic Mineral Processing Plants  
NSPS (Part 60), IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines  
MACT (Part 63), A: General Provisions  
MACT (Part 63), ZZZZ: NESHAP for Stationary Reciprocating Internal Combustion Engines  
Title V (Part 70) Area Source

Project Description

Wardell Brothers Construction, Inc. has proposed to operate the following equipment at its Devils Hollow Pit:

One (1) jaw crusher manufactured in 1987  
 One (1) cone crusher manufactured in 1995  
 One (1) screen manufactured in 1996  
 Various conveyors/stackers, and feeders  
 One (1) diesel-fired generator engine rated at 589 kW (790 hp)  
 One (1) diesel storage tank rated at 20,000 gallons, and  
 One (1) propane fuel storage tank rated at 500 gallons

The company will produce 100,000 tons of aggregate per year.

**SUMMARY OF EMISSIONS**

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

<b>Criteria Pollutant</b>	<b>Change (TPY)</b>	<b>Total (TPY)</b>
CO <sub>2</sub> Equivalent		1402.00
Carbon Monoxide		6.73
Nitrogen Oxides		7.01
Particulate Matter - PM <sub>10</sub>		5.12
Particulate Matter - PM <sub>2.5</sub>		2.59
Sulfur Dioxide		0.01
Volatile Organic Compounds		0.88

<b>Hazardous Air Pollutant</b>	<b>Change (lbs/yr)</b>	<b>Total (lbs/yr)</b>
Generic HAPs (CAS #GHAPS)		20
	<b>Change (TPY)</b>	<b>Total (TPY)</b>
Total HAPs		0.01

**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 intent to approve will be published in the Ogden Standard Examiner on March 17, 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	<b>The Devils Hollow Pit</b> Aggregate Processing Operations
II.A.2	<b>Bulldozing Activities</b>



II.A.3	<b>One (1) Primary Jaw Crusher</b> Manufacture Date: 1987 Rated Capacity: 150 tons/hr NSPS Subpart OOO equipment
II.A.4	<b>One (1) Secondary Cone Crusher</b> Manufacture Date: 1995 Rated Capacity: 150 tons/hr NSPS Subpart OOO equipment
II.A.5	<b>One (1) Triple-Deck Screen</b> Manufacture Date: 1996 Size: 6' x 20' NSPS Subpart OOO equipment
II.A.6	<b>Various Conveyors/Stackers and Feeders</b> NSPS Subpart OOO equipment
II.A.7	<b>One (1) 589 kW (790 hp) Generator Engine</b> Fuel: Diesel Manufacture Date: 2012 NSPS Subpart IIII and MACT Subpart ZZZZ equipment
II.A.8	<b>One (1) Diesel Storage Tank</b> Maximum capacity: 20,000 gallons
II.A.9	<b>One (1) Propane Fuel Storage Tank</b> Maximum Capacity: 500 gallons
II.A.10	<b>Various Mobile Equipment</b> Including loaders, dozers, water trucks, haul trucks, etc. For information only

## 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	<b>The aggregate processing facility shall be subject to the following:</b>
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]
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. [R307-201-3]
II.B.2	<b>Bulldozing operations shall be subject to the following:</b>
II.B.2.a	The owner/operator shall not exceed 600 hours for bulldozing operations 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 bulldozing operations shall be kept for all periods when the plant is in operation. The records shall be kept on a daily basis. [R307-401-8]
II.B.3	<b>The Aggregate Processing Plant and Associated Equipment on site shall be subject to the following:</b>
II.B.3.a	The owner/operator shall not produce more than 100,000 tons of aggregate material 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 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, scale house records, or bucket scale records. The records of production shall be kept on a daily basis. [R307-401-8]
II.B.3.a.2	The owner/operator shall weigh and account for all aggregate material prior to the aggregate material leaving the site. [R307-401-8]
II.B.4	<b>All Haul Roads associated with aggregate operations on site shall be subject to the following:</b>
II.B.4.a	The unpaved haul roads onsite shall not exceed the following lengths:  Main haul road for haul trucks - 0.59 miles Secondary haul road for haul trucks - 0.47 miles  [R307-401-8]
II.B.4.a.1	To determine compliance with the haul road lengths on site, the owner/operator shall use a handheld GPS, or aerial photographs, or other methods acceptable to the Director, to measure the lengths of haul roads. [R307-401-8]
II.B.4.b	The owner/operator shall cover all unpaved haul roads and loader operation areas with road base and shall water spray to control fugitive dust emissions. The treatment shall be of sufficient frequency and quantity to maintain the opacity limit specified in the AO, or unless it is below freezing. [R307-401-8]
II.B.4.b.1	Records of 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 and quantity of water applied  C. Rainfall amount received, if any  D. Records of temperature, if the temperature was below freezing  [R307-401-8]
II.B.5	<b>All Haul Roads and Fugitive Dust Sources associated with aggregate operations on site shall be subject to the following:</b>
II.B.5.a	The owner/operator shall not allow visible emissions from haul roads and fugitive dust sources on site to exceed 20% opacity at all times. [R307-205-4]

II.B.5.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.5.b	The combined area occupied by all storage piles on site associated with the aggregate processing plant shall not exceed 4.7 acres. [R307-401-8]
II.B.5.b.1	To determine compliance with the total acres of the storage piles, the owner/operator shall measure the total area of the storage piles at least once every six (6) months and shall maintain a record of the total acres of the storage piles. To determine the acres of the storage piles on site, the owner/operator shall use a handheld GPS, or aerial photographs, or other methods acceptable to the Director, to measure each of storage piles on site. Records of the total acres of the storage piles shall contain the following:  A. Date of measurements  B. Size of each storage pile on site  C. Total acres of all storage piles combined  [R307-401-8]
II.B.5.c	The owner/operator shall apply water to all storage piles on site to control fugitive emissions. Water shall be applied as required to maintain the opacity limit listed in this AO when the temperature is above freezing. [R307-401-8]
II.B.5.d	The combined disturbed areas associated with aggregate processing operations shall not exceed 3.5 acres. [R307-401-8]
II.B.5.d.1	To determine compliance with the total acres of the disturbed areas, the owner/operator shall measure the total disturbed areas at least once every six (6) months. To determine the acres of the disturbed areas onsite, the owner/operator shall use a handheld GPS, or aerial photographs, or other methods acceptable to the Director, to measure each of the disturbed areas on site. Records of the total acres of the disturbed areas shall contain the following:  A. Date of measurements  B. Size of each disturbed area on site  C. Total acres of all disturbed areas combined  [R307-401-8]
II.B.5.e	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.6	<b>Crushers, Screens, and Conveyors subject to NSPS Subpart OOO:</b>
II.B.6.a	The owner/operator shall conduct an initial performance test for all crushers, screens, and conveyor transfer points. Performance tests shall meet the limitations specified in Table 3 to Subpart OOO. [40 CFR 60 Subpart OOO]

II.B.6.a.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.6.a.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, R307-401-8]
II.B.7	<b>All Crushers on site shall be subject to the following:</b>
II.B.7.a	The owner/operator shall not allow visible emissions from any crusher on site to exceed 12% opacity. [40 CFR 60 Subpart OOO, R307-401-8]
II.B.7.b	The owner/operator shall maintain a water truck on site while the plant is in operation, to control fugitive dust emissions from crushing operations. The water truck spray shall be used as required to maintain the opacity limits listed in this AO when the temperature is above freezing. [R307-401-8]
II.B.8	<b>All Screens on site shall be subject to the following:</b>
II.B.8.a	The owner/operator shall not allow visible emissions from any screen on site to exceed 7% opacity. [40 CFR 60 Subpart OOO, R307-401-8]
II.B.8.b	The owner/operator shall control fugitive emissions on all screens on site. This will be done by means of material moisture carryover from the application of water to storage piles using the on-site water truck. [R307-401-8]
II.B.9	<b>All Conveyors on site shall be subject to the following:</b>
II.B.9.a	The owner/operator shall not allow visible emissions at the transfer point from any conveyor onsite to exceed 7% opacity. [40 CFR 60 Subpart OOO, R307-401-8]
II.B.9.b	The owner/operator shall not allow visible emissions from any conveyor drop point on site to exceed 20% opacity. [R307-205-4, R307-401-8]
II.B.9.c	The owner/operator shall control fugitive emissions on all unenclosed conveyor transfer and drop points on site to control fugitive emissions. This will be done by means of material moisture carryover from the feed storage piles using the water truck. [R307-401-8]
II.B.10	<b>The generator engine shall be subject to the following requirements</b>
II.B.10.a	The owner/operator shall install and operate a generator engine that is certified to meet NO <sub>x</sub> emission rate of 2.6 g/hp-hr, particulate emission rate of 0.075 g/hp-hr, and hydrocarbon emission rate of 0.3 g/hp-hr. [R307-401-8]
II.B.10.a.1	To demonstrate compliance with the emission rates, the owner/operator shall keep a record of the manufacturer's certification of the emission rates. The record shall be kept for the life of the equipment. [R307-401-8]
II.B.10.b	The owner/operator shall not operate the generator engine on site more than 3,100 hours per rolling 12-month period. [R307-401-8]
II.B.10.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 hours of operation shall be kept for all periods when the plant is in operation. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log. The records of hours of operation shall be kept on a daily basis. [R307-401-8]

II.B.10.c	The owner/operator shall only use diesel fuel (fuel oil #1, #2, or diesel fuel oil additives) in the generator engine. [R307-401-8]
II.B.10.c.1	The owner/operator shall only combust diesel fuel that meets the definition of ultra-low sulfur diesel (ULSD), which has a sulfur content of 15 ppm or less. [R307-401-8]
II.B.10.c.2	To demonstrate compliance with the ULSD fuel requirement, the owner/operator shall maintain records of diesel fuel purchase invoices or obtain certification of sulfur content from the diesel fuel supplier. The diesel fuel purchase invoices shall indicate the diesel fuel meets the ULSD requirements. [R307-401-8]

## PERMIT HISTORY

This Approval Order shall be based on the following documents:

Is Derived From	NOI dated October 23, 2018
Incorporates	Additional information dated October 25, 2018
Incorporates	Additional information dated February 1, 2019
Incorporates	Additional information dated March 8, 2019
Incorporates	Additional information dated April 16, 2019
Incorporates	Additional information dated April 24, 2019
Incorporates	Additional information dated April 30, 2019
Incorporates	Additional information dated July 23, 2019
Incorporates	Additional information dated October 23, 2019
Incorporates	Additional information dated December 23, 2019
Incorporates	Additional information dated February 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 <sub>2</sub>	Carbon Dioxide
CO <sub>2e</sub>	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 <sub>x</sub>	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM <sub>10</sub>	Particulate matter less than 10 microns in size
PM <sub>2.5</sub>	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 <sub>2</sub>	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