



State of Utah

GARY R. HERBERT
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Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

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JUL 26 2011

DAQE-AN0119790001-11

July 19, 2011

Neil Schwendiman
Washington Cty Solid Waste Spcl Svc Dist
325 N Landfill Road
Washington, UT 84780

Dear Mr. Schwendiman:

Re: Approval Order: Installation of a Gas Collection and Control System and Landfill Gas Flare
Project Number: N011979-0001

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 John Jenks, who may be reached at (801) 536-4459.

Sincerely,

Bryce C. Bird, Executive Secretary
Utah Air Quality Board

BCB:JJ:dn

cc: Mike Owens
Southwest Utah Public Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**APPROVAL ORDER: Installation of a Gas Collection
and Control System and Landfill Gas Flare**

Prepared By: John Jenks, Engineer
Phone: (801) 536-4459
Email: jjenks@utah.gov

APPROVAL ORDER NUMBER

DAQE-AN0119790001-11

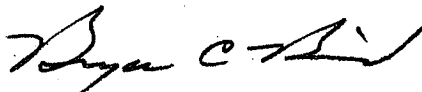
Date: July 19, 2011

**Washington Cty Solid Waste Spcl Svc Dist
Washington County Sanitary Landfill**

Source Contact:

Mr. Neil Schwendiman, District Manager

Phone: (435) 673-2813



**Bryce C. Bird
Executive Secretary
Utah Air Quality Board**

Abstract

On January 5, 2011 Washington County Solid Waste Special Services District (the County) submitted a NOI to install and operate a landfill gas (LFG) flare at their existing landfill in Washington County; an attainment area of the NAAQS for all pollutants. The landfill is subject to the provisions of 40 CFR 60 (NSPS) Subpart WWW and 40 CFR 63 (NESHAP) Subpart AAAA. It is also defined as a Major Title V source under 40 CFR 60 Subpart WWW. The existing Title V Operating Permit shall be modified to incorporate the requirements of this AO change. Tier 2 sampling performed in accordance with the NSPS has indicated that the landfill exceeded the non-methane organic compound (NMOC) emission threshold starting in 2009. As required by the NSPS, the County prepared and submitted a gas collection and control system (GCCS) design plan. The landfill is required to install and operate the GCCS by December 10, 2011. The GCCS uses a utility flare for best available control of LFG emissions. Although the flare is sized for 700 scfm, the flare will be limited to a maximum flow rate of 295 scfm.

Emissions from operation of the new flare are estimated at the following tons per year values: PM₁₀ 0.7, PM_{2.5} (a subset of PM₁₀) 0.7, NO_x 3.0, SO₂ 38.8, CO 16.0, and VOC 0.36. Total HAP emissions are estimated at 0.35 tons per year, with the largest single HAP being HCl at 0.31 tons per year. GHG emissions are estimated at 4,545 tons per year as CO_{2e}.

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:

Permitted Location:

Washington Cty Solid Waste Spcl Svc Dist
325 N Landfill Road
Washington, UT 84780

Washington County Sanitary Landfill
330 N Landfill Rd
Washington, UT 84780

UTM coordinates: 272,624 m Easting, 4,136,587 m Northing, UTM Zone 12
SIC code: 4953 (Refuse Systems)

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 five (5) 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 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 UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

I.7 The owner/operator shall comply with UAC R307-150 Series. Inventories, Testing and Monitoring. [R307-150]

Section II: SPECIAL PROVISIONS

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

II.A.1 **Washington County Landfill**
Municipal solid waste landfill

II.A.2 **Landfill Gas Collection System**

II.A.3 **LFG Utility Flare**
LFG Specialties, Inc. skid-mounted utility flare process limited to 295 scfm (700 scfm maximum flow)

II.B Requirements and Limitations

II.B.1 **Conditions on Permitted Source**

II.B.1.a In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, New Source Performance Standards (NSPS) Subpart WWW, found at 40 CFR 60.750 through 60.759 (Standards of Performance for Municipal Solid Waste Landfills) and 40 CFR 63 National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart AAAA, found at 40 CFR 63.1930 through 40 CFR 63.1990 (National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills) apply to this installation. [40 CFR 60 Subpart WWW, 40 CFR 63 Subpart AAAA]

II.B.1.b A visual opacity survey of each affected emission unit shall be performed on a quarterly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. If visible emissions other than steam are observed from an emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial survey. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9 for point sources, and in accordance with 58 FR 61640 Method 203C for fugitive emission sources. The permittee shall record the date of each visual opacity survey and keep a list of the emission points checked during the visual opacity survey. The permittee shall also keep a log of the following information for each observed visual emission: date and time visual emissions observed, emission point location and description, time and date of opacity test, and percent opacity. The permittee shall maintain the records required by this provision and all data required by 40 CFR 60, Appendix A, Method 9. [R307-401-8]

II.B.1.c Washington County Solid Waste Special Service District shall notify the Executive Secretary in writing when the installation of the equipment listed in II.A.2 and II.A.3 is complete and operational. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation is not complete within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation. If a continuous program of construction, installation, modification, relocation, or establishment is not proceeding, the Executive Secretary may revoke the AO. [R307-401-18]

II.B.2 **Conditions on the Utility Flare**

II.B.2.a In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, NSPS Subpart A, found at 40 CFR 60.1 to 60.18 (General Provisions) shall apply to this installation. [40 CFR 60 Subpart A]

II.B.2.b Gas flow to the utility flare shall not exceed 295 scfm. Gas flow shall be determined by use of a flow meter. Flow measurement shall occur at least once each day. The accuracy of the monitoring device must be certified by the manufacturer. The monitoring device shall be accurate within plus or minus five percent of the maximum gas flow rate (700 scfm) and must be calibrated on an annual basis according to the manufacturer's instructions. [R307-401-8]

II.B.2.c The H₂S content of the LFG going to the flare shall be monitored no less than once every three (3) months. The results of the H₂S monitoring shall be submitted to the Executive Secretary once per year in conjunction with the emission inventory submittal. [R307-150-7, R307-401]

Section III: APPLICABLE FEDERAL REQUIREMENTS

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

MACT (Part 63), AAAA: Municipal Solid Waste Landfills
NSPS (Part 60), A: General Provisions
NESHAP (Part 61), M: Asbestos
NSPS (Part 60), WWW: Municipal Solid Waste Landfills

PERMIT HISTORY

This AO is based on the following documents:

Incorporates	Additional Information Submitted dated February 24, 2011
Incorporates	Additional Information Submitted dated January 31, 2011
Is Derived From	Source Submitted NOI dated January 5, 2011

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Washington County

CDS C

Attainment Area, MACT (Part 63), NESHAP (Part 61), NSPS (Part 60), Title V (Part 70) Major source

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
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	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
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
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds