

**Davis County Municipal Waste Incinerator
Fact Sheet
Utah Department of Environmental Quality**

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Facility Identification:

A municipal waste incinerator located at 650 East Highway 193, Layton Utah, operated by Wasatch Energy System (WES) in and for the County of Davis.

Pollution Standards and Regulations:

Approval Orders (permits):

Air pollution from a variety of sources, including municipal waste incinerators, is regulated in Utah through Approval Orders. The Davis County incinerator has been operated under ***eight sequential approval orders*** beginning in 1984.

Dioxin/Furan Limit:

The current Approval Order for WES was issued September 6, 2000 and sets a dioxin limit of 360 ***ng/dscm***. New ***federal rules***, to be generally applicable to facilities such as WES in 2005, have a dioxin/furan limitation of 60 ng/dscm.

First Stipulation and Consent Order (September 16, 1998):

WES and the Utah Air Quality Board entered into a Stipulation and Consent Agreement that effectively resolved penalties previously assessed for violations of pollution limits. Dioxin testing of soil and goat's milk was carried out as partial fulfillment of this Order.

Second Stipulation and Consent Order (March 27, 2000):

In September 1999 WES conducted tests which measured dioxin/furans levels of 1101.1 ng/dscm. WES was assessed a penalty of \$38,000 for this and other violations. In settlement of those violations WES and the Utah Air Quality Board entered into a Stipulation and Consent Order in which WES agreed to implement the new federal dioxin/furan limits by October 6, 2002 - about three years ahead of the EPA time-table.

Summary of State Regulatory Actions:

Records at the Division of Air Quality show *seven Notice of Violations* issued between 1989 and 1999, and eleven since the facility began operations in 1984.

Review of health impact from dioxin/furans

A multi pathway risk assessment was performed for WES by a consulting firm Rigo and Rigo in 1996. The results of that study failed to show likely harm from dioxin/furans released from the facility if it operated within the conditions of the Approval Order. EPA is now reviewing that study and may determine that the study alone is insufficient to prove that the facility is safe.

As a hedge against the questionable validity of the risk study the state required dioxin testing in soil and goat's milk collected near the facility as part of the first Stipulation and Consent Order. All but one of those samples showed dioxin levels below what is considered background; i.e., 50 parts-per-trillion in soil.

Current Issue of a Dioxin Variance:

On or around September 26, 2000, the EPA, pursuant to provisions in Section 114 of the Clean Air Act, advised WES that EPA would require dioxin testing every five weeks until "...the EPA notifies WES that test may cease." The objective of this requirement, as stated by the EPA is "...to determine compliance by WES with provisions of the Clean Air Act..." including the conditions of the current Utah Approval Order.

WES has taken two actions in parallel; they have challenged the EPA '114' request and they have petitioned the Utah Air Quality Board for a variance of the 360 ng/dscm condition of the Approval Order. The Board may be reluctant to grant such a variance given the toxic nature and environmental persistency of dioxin/furans. but would like to have confirmation that the facility is operating in compliance with its Approval Order. In this matter, the State is not convinced that direct dioxin/furan testing is the only way to establish that compliance, and the State is working with EPA and WES to resolve these varying points of view.

Both EPA and the State want to be assured that the lowest possible emissions of dioxin are achieved and maintained between now and the accelerated implementation of the federal dioxin/furan limits, a time period of about 18 months. The State believes this can best be accomplished through verifying *good combustion practices* at WES. The State intends to propose monitoring and controlling post-combustion CO levels as a means of enhancing and verifying good combustion practices thus reducing the need for so frequent dioxin tests. At issue is 1) how many dioxin/furan tests need to be performed to confirm the effectiveness of good combustion practices and 2) the nature of assessing penalties in the event that additional dioxin/furan tests show the facility out of compliance.

Contacts for Further Information

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LINKED GLOSSARY OF TERMS

Approval Orders (permits). Facilities obtains “approval” to operate contingent on meeting certain specific requirements designed to limit pollution and protect the environment. State Approval Orders are drafted and approved following public review and comment. Approval Orders will always include applicable federal standards. In the absence of federal standards the state establishes conditions of approved operation based on environmental, health and economic considerations. Municipal waste incinerators will be regulated by federal standards beginning in 2005.

eight sequential approval orders: The facility was built per notices of intent submitted on 2/17/1983, 10/25/1984, 12/9/1986, 6/10/1988/ and 10/26/1993. It has operated under conditions of eight sequential Approval Orders issued on the following dates:

02/24/1984
12/18/1984
06/03/1986
10/13/1986
02/26/1987
10/07/1988
07/15/1996
09/06/2000

Dioxin/Furan Limit: The dioxin/furan limit in effect at the facility now (and since 1993) is 360 ng/dscm. This limit was based on results of dioxin/furan tests conducted in 1993 while the unit was operating under **good combustion practice**.

ng/dscm: The term ng/dscm is an expression of concentration; i.e., **nanograms** (1/1,000,000,000 of a gram) of dioxin/furans in one **dry standard cubic meter**.

federal rules: EPA proposed regulations (Federal Register, Vol. 64, No. 167, Subpart BBBB, August 30, 1999, pp 47234-47274) which requires facilities such as WES to meet a new dioxin/furan limit of 60 ng/dscm by 2005.

seven Notice of Violations:

- (1) July 1989 (lime injection problems), a penalty was assessed.
- (2) January 1990 (system audit found strip-chart records missing), a penalty was assessed
- (3) February 1991 (hydrogen chloride, CO, and SO₂ exceedances), a penalty was assessed
- (4) May 1991 (CO and SO₂ exceedances), a penalty was assessed
- (5) June 1997 (hydrogen chloride exceedance and failure to test for dioxin) resolved through the first Stipulation and Consent Order
- (6) October 1997 (hydrogen fluoride and dioxin exceedances), resolved through the first Stipulation and

Consent Order

(7) September 1999 (cadmium and dioxin exceedances), resolved through the second Stipulation and Consent Order

good combustion practices: Dioxin/Furan formation in incinerator, waste heat boiler and controls will be minimized through good combustion practice. Good combustion practice as defined by the EPA includes limits on steam production, carbon monoxide emissions and inlet temperature to particulate matter control device. The current Approval Order establishes limits on each of the good combustion practice parameters. Dioxin/furan emissions will be minimized by enforcement of the current permit limits.