

Fact Sheet

Hazardous Waste Permit and Radioactive Materials License

Clean Harbors Deer Trail Highway 36 Hazardous Waste Treatment, Storage and Disposal Facility

December 2005



Colorado Department
of Public Health
and Environment

- The Colorado Department of Public Health and Environment has issued two documents to the Clean Harbors Deer Trail Facility:
 - A Colorado Hazardous Waste Act Permit Renewal, and
 - A Radioactive Materials License.
- The permit renewal authorizes continued hazardous waste treatment, storage and disposal at the facility for another five years.
 - There are two significant additions included in the permit. They are:
 1. Polychlorinated biphenyl (PCB) wastes from remediation and clean-up projects, and
 2. Wastes contaminated with limited concentrations of naturally occurring radioactive materials (NORM).
- The license authorizes the receipt, possession, processing and disposal of naturally occurring radioactive material for five years. The types of wastes to be accepted include:
 1. Contaminated soils and debris containing naturally occurring radioactive materials (NORM) from clean-up projects, and
 2. Industrial by-products that contain technologically enhanced naturally occurring radioactive materials (TENORM).

The documents can be reviewed:

On the Web at

<http://www.cdphe.state.co.us/hm/hwy36.htm>

Or at the following location:

Colorado Department of Public Health and
Environment Records Center

during normal business hours call
Diana Huber at 1-888-569-1831,
extension 3331.

4300 Cherry Creek Drive South
Denver, CO 80246-1530

Email: Tanell.Roberts@state.co.us

Denver Metro: 303-692-3355

Toll Free: 1-888-569-1831, Ext. 3355

Background

The Clean Harbors Deer Trail facility, sometimes referred to as “Last Chance” or “Highway 36,” is a hazardous waste treatment, storage and disposal site in rural eastern Adams County (see map this page). The facility was first permitted in April 1987 and began accepting waste in July 1991. The hazardous waste permit for this facility was renewed in 1998 and is being renewed again.

As a hazardous waste disposal site, this facility has been specifically designed to accept and dispose of hazardous waste in a manner that will prevent exposure to people who may live near the site and to the environment. Waste is analyzed either at an off-site, or the on-site, laboratory before and after acceptance to determine the type and level of treatment needed before burial in the disposal cells.

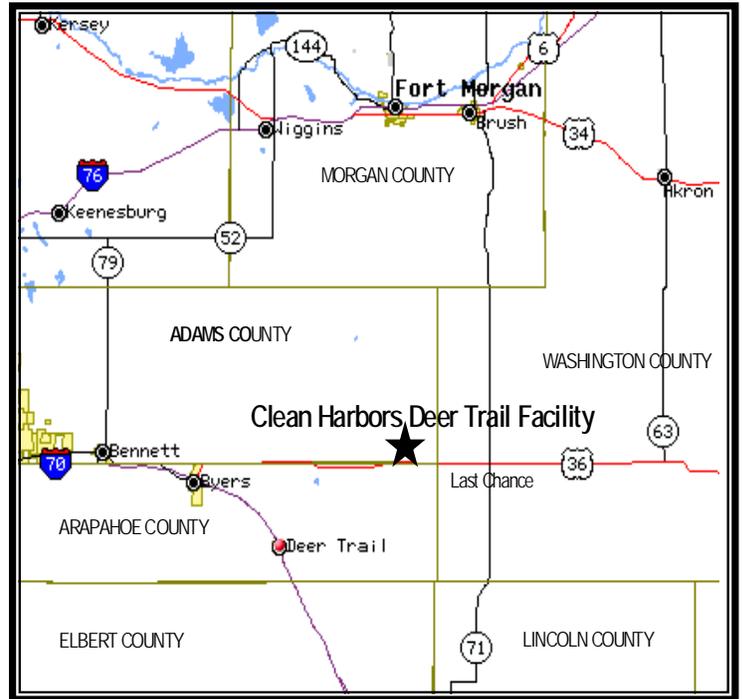
The facility’s renewed permit continues to require ground water monitoring, management and treatment of storm water, and establishing protocols for disposal of waste only below certain wind speeds to minimize any windblown contamination moving off the site. In addition, other permit and operating requirements are in place to protect workers and comply with all state and federal regulations.

Type and Quantity of Wastes to Be Handled

The facility’s renewed permit continues to allow acceptance of a wide range of hazardous waste. Each operating unit at the facility has specific quantity and waste type parameters. Wastes that are restricted from acceptance at the facility are:

- shock sensitive materials;
- infectious, explosive and ignitable wastes.

The facility must meet all applicable land disposal restrictions prior to disposal in the Secure Disposal Cells. Liquids are not permitted in the cells.



Map 1: Location of Clean Harbors Deer Trail, Inc. (Last Chance) Facility

A waste analysis plan is required by existing and proposed permit conditions to analyze waste compatibility and treatment parameters for waste acceptance in each operating unit.

The renewed permit authorizes acceptance and management of off-site and on-site generated hazardous and solid waste in the following units:

- Container Storage – three units with a total capacity of 35,000 gallons and 1980 cubic yards;
- Tank Storage –
 - Two Contaminated Water Tanks with a total capacity of 500,000 gallons,
 - Two Operations and Maintenance Accumulation Tanks with a total capacity of 8,000 gallons;
 - Two Truck Wash Recycle System Tanks with a total of 3,300 gallons;
- Treatment Building contained within a surface impoundment with a maximum treatment capacity of 2400 cubic yards per day; and

Facts About Clean Harbors Deer Trail Facility

EPA ID No: COD991300484

Physical Address:

108555 E. U.S. Highway 36
Deer Trail, Colorado 80105-9611

Physical Location:

(See map on page 2)

- 70 miles east of Denver, Colorado
- 40 miles northeast of Deer Trail, Colorado, on E. U.S. Highway 36
- 7 miles west of Last Chance, Colorado

Type of Facility:

Hazardous Waste Treatment, Storage, and Disposal

Hazardous Waste Permit Issued: April 1987

First Started Accepting Waste: July 1991

Permit Renewed: March 1998

Permit Renewed: December 2005

Site Ownership History:

- Highway 36 Land Development Company (Browning Ferris Industries [BFI] was the parent company.)
- Concord Resources, Inc. (1991)
- Rollins Environmental Services (1994)
- Laidlaw Environmental Services (1996)
- Safety Kleen, Inc. (1998)
- Clean Harbors Environmental Services (2003)

- Disposal into seven double-lined Secure Disposal Cells with a total capacity of 2,528,000 cubic yards.

In this permit renewal, the facility will be allowed to accept wastes that historically have not been accepted for disposal at this facility. These include low-concentration polychlorinated biphenyl (PCB) wastes, and waste contaminated with limited concentrations of naturally occurring radioactive materials, in addition to the hazardous wastes the site has been accepting.

Radioactive Materials License

The department has issued a license that sets operational procedures for the management of radioactive materials that:

- Ensure safe handling, safe disposal and minimal worker exposure, and
- Sets clear limits as to the types and amounts of radioactive materials that are authorized.

What kinds of material would this radioactive waste be in?

The types of radioactive wastes the facility would take are:

1. Contaminated soils and debris containing naturally occurring radioactive materials (NORM) from clean-up projects, and
2. Industrial by-products that contain technologically enhanced naturally occurring radioactive materials (TENORM).

The facility will not be allowed to dispose of man-made radionuclides, such as those used in research, medicine, weapons or nuclear power plants.

Wastes containing TENORM are generally large-volume, low-specific-activity by-products of industrial processes. One of the most common types of these wastes is residual material from municipal drinking water treatment plants.

What is the expected radiation exposure to the workers and the public from these disposal activities?

The annual radiation exposure to workers from these materials is estimated to be less than **100 millirem per year (mR/year)**. Colorado regulations require Clean Harbors to keep the annual radiation exposure to the public to less than **100 mR/year**.

- This is less than the **approximately 350 mR/year** of background exposure that each of us receives from the natural radioactivity that is in the state's environment.

Additionally, Colorado regulations require Clean Harbors to implement operating procedures that keep exposures to workers and the public as low as reasonably achievable (ALARA).

What is the expected impact to the environment from these disposal activities?

Clean Harbors is required to minimize the potential for release to the environment by instituting operating procedures such as daily cover of the wastes to prevent the spread of

contamination. Additionally, Clean Harbors is required to perform environmental monitoring to check for potential releases to the environment.

Description of the Area/Community

The Clean Harbors Deer Trail facility is located in the southeastern corner of Adams County, Colorado. The Adams County population was 363,457 in 2000. However, the area closest to the facility is sparsely populated, with Deer Trail 40 miles southwest of the site being the closest significantly populated town (462 people /2000 Census data). The residence nearest to the facility is approximately .5 mile east of the facility.

The Highway 36 facility is adjacent to two other counties – Arapahoe and Washington. These counties have populations estimated at 516,060 and 4813, respectively. However, Arapahoe county's population is largely concentrated in its western section, which is part of the Denver metropolitan area.

The Adams County area where the facility is located is primarily a ranching and farming community. Per capita income in 2000 dollars in Adams County was \$47,323; Arapahoe County was \$53,570; Washington County was \$32,431; and Lincoln County was \$31,914.

Geological Characteristics

Geology of the site consists of the following:

- 9-to-35 foot thick layer of unconsolidated sediments consisting of clayey silt & silty clay
- 15-to-35 foot thick layer of weathered Pierre Shale
- 4300-foot thick layer of unweathered Pierre Shale.

The top of the unweathered Pierre Shale occurs at about 40-to-55 feet below the ground surface. There is a sand lens contained in the silty clay beneath the eastern portion of the facility. The sand lens trends north-northeast/south-southwest across the facility, is typically 3-to-5 feet thick, and varies in width from 350-to-700 feet in width.

What levels of radioactivity will be allowed for disposal?

Material accepted for disposal will have to meet all four of the following criteria:

- Waste contaminated with uranium and thorium decay series naturally occurring radioactive materials;
- Maximum total concentrations less than 2000 picoCuries per gram (pCi/g);
- Specific Radium-226 concentrations less than 400 pCi/g;
- Total Uranium and Thorium content less than 0.05 percent by weight (500 µg per gram).

• Wastes at these concentrations are similar in radioactivity to the uranium mill tailings that have been cleaned up around homes and businesses in Grand Junction and other western communities for the past 25 years.

• Risk to public health and the environment is being decreased by disposing of such waste in lined, capped disposal cells.

All secure disposal cells extend down to the unweathered Pierre Shale. Each cell has a double-composite liner composed of clay and geomembranes, with leak detection systems under each liner and a leachate collection system on top of the uppermost liner system.

Community Involvement Process

Licensing regulations do not formalize significant opportunity for public input, and the hazardous waste regulations require only certain public opportunities for comment. However, the department has implemented an extensive public involvement process for this activity. In all, seven public meetings, and a 60-day comment period and public hearing were conducted to provide accurate information and continuous updates about the process to the community.

Additionally, the Environmental Protection Agency's (EPA) Technical Outreach Services for Communities Program conducted a public workshop on August 3, 2005. Community Involvement Plan interviews were conducted by the Department of Public Health and Environment staff June 1-3, 2005. The department maintained a mailing list and email list to facilitate communication with interested parties.

The documents can be reviewed:

On the Web at

<http://www.cdphe.state.co.us/hm/hwy36.htm>

Or at the following locations:

Woodlin School
15400 County Road L
Woodrow, Colorado

Colorado Department of Public Health and Environment
Records Center, during normal business hours:
Call Diana Huber at 1-888-569-1831, extension 3331.

For More Information, Please Contact:

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