

ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE BOARD

1675 Broadway, Suite 1400
Denver, Colorado 80202-4606
www.rmlwb.us

Telephone (303) 825-1912
Facsimile (303) 892-3882
Email board@rmlwb.us

NOTICE

Receipt of Application to Amend the Designation of the Clean Harbors Deer Trail Regional Facility

The Rocky Mountain Low-Level Radioactive Waste Board (Board) has received an application from the State of Colorado to amend the regional facility designation of the Clean Harbors Deer Trail facility in Colorado. The application requests that the Board's designation be amended to authorize the facility to accept the same wastes as authorized in the Radioactive Materials License issued by the Colorado Department of Public Health and Environment.

In summary, the wastes for which designation is requested consist of naturally-occurring radioactive material (NORM) and technologically-enhanced naturally-occurring radioactive material (TENORM) with a total activity not exceeding 2,000 picocuries per gram (pCi/g) and Radium-226 activity not exceeding 400 pCi/g.

The application will be considered by the Board at a Meeting on May 9, 2006 at the Denver Airport Marriott at Gateway Park at 16455 E. 40th Circle, Aurora, Colorado, beginning at 10:00 a.m. An opportunity for public input will be provided.

According to the Rocky Mountain Low-Level Radioactive Waste Compact, the Board shall consider the following criteria in its decision to approve or disapprove the State of Colorado's application to amend the designation of the regional facility: (1) There will be for the foreseeable future sufficient demand to render the operation of the proposed facility economically feasible without endangering the economic feasibility of the operation of any other regional facility; and (2) that the proposed facility will have sufficient capacity to serve the needs of the region for a reasonable period of years. Please be aware that the Board does not have the authority to regulate the health and safety aspects of radioactive waste facilities.

The application and further information about the Board is available on the Board's web page (www.rmlwb.us) or by contacting the Board via email (vgreen@rmlwb.us), voice 303-825-1912, or at the address listed above

MEMBER STATES: COLORADO, NEVADA, NEW MEXICO
EXECUTIVE DIRECTOR: LEONARD C. SLOSKY

STATE OF COLORADO

Bill Owens, Governor
Dennis E. Ellis, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado

Laboratory Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

April 13, 2006

Leonard C. Slosky, Executive Director
Rocky Mountain Low-Level Radioactive Waste Compact
1675 Broadway, Suite 1400
Denver, CO 80202-4614

Amended Application For Rocky Mountain Low-Level Radioactive Waste
Compact Approval of a Low Level Radioactive Waste Disposal Facility

Dear Mr. Slosky:

The Colorado Department of Public Health and Environment (Department) is amending its April 18, 2005 application for designation of the Clean Harbors Deer Trail facility for the disposal of certain radioactive materials from Colorado, New Mexico and Nevada. As required by the Rocky Mountain Low-Level Radioactive Waste Compact (Compact) rules, CRS 24-60-2202 Article 4, and 42 USC 2021b Article IV, we are requesting Board approval of the facility as a Regional Disposal Facility for wastes authorized in Radioactive Materials License Number 1102-01, as amended.

For your inspection, we have included the Amended Application for a Regional Facility and the Radioactive Materials License Number 1102-01 for the Clean Harbors Deer Trail facility. The Department issued the license to Clean Harbors December 21, 2005 and amended it on January 20, 2006. Information related to the license is documented on our web site at <http://www.cdphe.state.co.us/hm/hwy36.htm>.

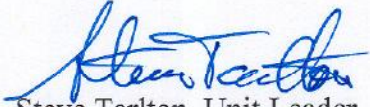
The Colorado Board of Health has reviewed and approved the final rate schedules, as required by our statute and regulations. Following the Board's approval, the final rates were provided to the Compact Board for final approval. Consistent with the original application a year ago, we do not expect to implement a Host State Surcharge at the facility consistent with CRS 24-60-2208.

The Department requests that the Compact Board waive exclusivity and Compact surcharges for in-region materials disposed at this facility under the license regulated as solid waste pursuant to CRS 25-11-201 and 30-20-101. The Department also requests the Compact Board to consider our proposed approach to management of such materials detailed in the Department's draft *Policy and Implementing Guidance for Control and Disposition of Drinking Water Treatment Residuals Containing Technologically Enhanced Naturally Occurring Radioactive Material (TENORM)*, January 2006.

Leonard C. Slosky, Executive Director
April 13, 2006
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We understand that no additional fee for the Board review will be required for this amended application. Additional comments or questions can be directed to me at 303-692-3423 (steve.tarlton@state.co.us) or to Jennifer Opila at 303-692-3403 (Jennifer.opila@state.co.us).

Sincerely,



Steve Tarlton, Unit Leader
Radiation Management Unit

cc: Phillip G. Retallick, Clean Harbors

att: (2)

AMENDED APPLICATION FOR DESIGNATION OF REGIONAL FACILITY BY THE STATE OF COLORADO

ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT

The State of Colorado, by and through the Colorado Department of Public Health and Environment (CDPHE), requests that the Rocky Mountain Low-level Radioactive Waste Compact (Compact) amend its designation of the Clean Harbors' Deer Trail facility as a regional facility so as to conform to the authorizations contained in the radioactive materials license issued to Clean Harbors by CDPHE. In accordance with Compact Rule 3, CDPHE states as follows:

- CDPHE incorporates by reference items A, B, C, F, G, I and J from CDPHE's previous application for designation of the Clean Harbors facility.
- Item D, types of wastes to be managed at the facility: reference is made to License Condition # 6 of Radioactive Materials License Number 1102-01, as amended.
- Item E, projected capacity and number of years that the proposed facility will be operational: The volume authorized in the license is for 510,000 cubic yards. This total volume is intended to accommodate receipt of both hazardous waste and radioactive materials. The license is good for five years and then it will be subject to renewal.
- Item H, description of the need for and a projection of the demand for the proposed facility: Based upon projections from the Clean Harbors' Deer Trail facility, there is an expected demand for the disposal of up to 180,000 cubic yards of radioactive material over the next five years.

RADIOACTIVE MATERIALS LICENSE

Pursuant to the *Radiation Control Act* Title 25, Article 11, *Colorado Revised Statutes*, and the State of Colorado *Rules and Regulations Pertaining to Radiation Control*, Part 3, and in reliance on statements and representations heretofore made by the licensee designated below; a license is hereby issued authorizing such licensee to receive, possess, analyze, store, process and dispose the radioactive material(s) designated below; and to use such radioactive material(s) for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of the Colorado Department of Public Health and Environment (CDPHE) and to any conditions specified below.

1. Licensee: Clean Harbors Deer Trail, LLC
 2. Address: 108555 East US Highway 36, Deer Trail, CO 80105-9611
 3. License Number Colo. 1102-01, Amendment Number 01
 4. Expiration date: December 31, 2010
 5. Reference Number: Fee Category: 4.A
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6. Authorized Radioactive Material and Uses

- A. The licensee is authorized to receive, possess, analyze, store, process, and dispose of waste materials containing naturally occurring radioactive material (NORM) and technologically enhanced naturally occurring radioactive material (TENORM). The specific radionuclides are limited to K-40 and all of the radionuclides in the decay series for U-238, U-235 and Th-232. The summed activity of all radionuclides per gram contained in such waste materials shall not exceed 2000 pCi (74 Bq). Additionally, the Ra-226 activity per gram shall not exceed 400 pCi (14.8 Bq). The physical form of the material includes but is not limited to soils, sludges, process residues, resins, and filters that are compatible with the design and operational criteria required by the CHWA permit.
 - B. In addition to the limits established in items 6.A the total uranium and thorium content shall be less than 0.05% by weight (500 µg per gram) of the materials received for disposal.
 - C. In addition to the limits established in items 6.A and 6.B the licensee shall limit the total of all waste materials containing radioactive material to a total volume not to exceed 510,440 cubic yards. Of this amount, at least 16,000 cubic yards shall be set aside for radium processing wastes.
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RADIOACTIVE MATERIALS LICENSE

Conditions

7. The licensee shall comply with the provisions of the State of Colorado *Rules and Regulations Pertaining to Radiation Control*: Part 3, "Licensing of Radioactive Material"; Part 4, "Standards for Protection Against Radiation"; Part 10, "Notices, Instructions and Reports to Workers: Inspections"; Part 11, "Special Land Ownership Requirements"; Part 14, "Licensing Requirements for Land Disposal of Low Level Radioactive Wastes"; Part 15, "Colorado Low-Level Radioactive Waste Rate Regulations"; and Part 17, "Transportation of Radioactive Material."
8. Radioactive materials may be received, stored, handled, processed and disposed only at the Clean Harbors Deer Trail facility, 108555 East US Highway 36, Deer Trail, CO 80105-9611.
9. The licensee is prohibited from receiving low-level wastes, as defined by the Rocky Mountain Low Level Waste Compact Board, from outside the Compact Region without written authorization from the Rocky Mountain Low Level Waste Compact Board.
10. For the purposes of this license and as used in the application, regulated waste refers to any waste received, handled, processed or disposed of at the site containing radioactive material including: a) NORM/TENORM radionuclides in solid waste; b) NORM/TENORM radionuclides in material licensed by CDPHE; c) NORM/TENORM radionuclides mixed with Colorado Hazardous Waste Act (CHWA) hazardous wastes; and d) radium processing wastes.
11. Pursuant to its authority over all radioactive materials at the facility, the Department may at any time impose additional requirements and/or license conditions regarding the receipt, processing, analysis, storage or disposal of these materials as may be necessary to ensure health and safety of workers, protection of the environment and compliance with any applicable rules, regulations and statutes.
12. Should the licensee become aware of radioactive materials that were not identified in any waste characterization or manifest that are present in waste materials received or buried at the site, the licensee shall maintain a record of these and shall provide immediate notification to the Department for any materials that are not specifically authorized on the license.
13. The designated Radiation Safety Officer (RSO) is Tracy A. Ikenberry, CHP.
14. The Radiation Safety Officer shall be on-site sufficient to ensure protection of workers and compliance with this license and the Rules and Regulations.
15. Radioactive material authorized in License Conditions 6.A. through 6.C. shall only be received, stored, handled, analyzed, processed or disposed by or under the supervision of John Kehoe, Michael Webb, Ismael Hernandez, Randall Musgrave, Daniel O'Brien, Leresa Wilson, Joseph Sanchez, or Terry Musgrave.

RADIOACTIVE MATERIALS LICENSE

16. One or more authorized users identified in Condition 15 of this license shall be physically present at the facility at all times when radioactive materials are being received, stored, handled, analyzed, processed or disposed. The number of authorized users present on site at any one time shall be sufficient to ensure adequate supervision of all persons within the restricted area.
17. Temporary contract laborers and members of the public shall be escorted throughout the restricted area under the direct supervision and in the physical presence of an authorized user listed in License Condition 15. Temporary contract laborers shall sign in and out of the facility each day. The sign-in, sign-out logs for the facility shall be maintained in the Operating Record.
18. Contract laborers and consultants who have successfully completed the radiation safety training as described in the Radiation Protection Program may work throughout the restricted area without continuous direct supervision by Clean Harbors personnel.
19. The Radiation Safety Officer designated on this license, or persons specifically listed in License Condition 15 shall physically observe the day-to-day activities of contract laborers and consultants who work without constant supervision. The extent of these observations shall be sufficient to ensure that contract laborers and consultants are complying with established procedures and the requirements of this license.
20. Each person receiving an occupational dose at the facility is deemed to require monitoring pursuant to RH 4.18 of the Regulations.
21. The Radiation Safety Officer shall maintain training and dose monitoring records for each worker at the site who receives an occupational dose. These records shall show the initial hire date, the specific training received, the date training was successfully completed, the date when dose monitoring was initiated, the date when employment terminated, and a copy of the annual total dose assessment for each year the individual works at the site.
22. The licensee shall determine occupational doses on a quarterly basis, with the final determination being completed within 60 days from the end of each quarter.
23. The licensee shall determine occupational doses (total effective dose equivalent (TEDE), committed effective dose equivalent (CEDE), and deep dose equivalent (DDE)) within 90 days from the end of each calendar year.

RADIOACTIVE MATERIALS LICENSE

24. The licensee shall not make any substantial modification to the facility, equipment, process, or procedures used in the receipt, storage, handling, processing or disposal of waste containing radioactive materials without first evaluating and documenting the impact of such changes to workers, the environment, and members of the public. The licensee shall obtain written authorization from the Department, including a license amendment, if deemed necessary by the Department prior implementing the proposed changes. The Radiation Safety Officer shall maintain documentation of all such evaluations for review by the Department.
25. Characterization and approval of regulated waste streams shall be performed in accordance with the Waste Analysis Plan in the CHWA Subtitle C permit dated December 2005. All records of characterization and approval of regulated waste streams shall be maintained by the licensee for review by the department.
26. The licensee shall collect a random sample from 1 shipment out of every 20 shipments from each waste stream from each generator as described in the Waste Analysis Plan Appendix K of the CHWA Subtitle C permit. The random sample shall be sent to an off-site laboratory for analysis including: Gamma Spectrum, Gross Alpha Activity/g, Gross Beta Activity/g, Total Uranium Mass, Total Thorium Mass and Total Radium Activity/g. The results of this analysis shall be compared to the initial characterization data for the waste stream. If the results differ significantly from the profile, the RSO, general manager, compliance manager, or their designee shall contact the waste generator and attempt to resolve the discrepancy. If the results cannot be reconciled, the waste stream shall be deactivated until it can be resolved. All records from the random sampling program shall be maintained for review by the Department.
27. The licensee shall implement and maintain Department-approved controls for limiting the release of radon and radioactive particulates from all waste repositories and processing facilities.
28. The licensee shall conduct an air sampling program sufficient to demonstrate compliance with the public and occupational dose limits specified in Part 4 of the Regulations.
29. The licensee shall continue collecting monthly samples of groundwater, leachate and air for the purposes of establishing baseline environmental data for radionuclides until the Department approves an alternate sampling frequency.
30. Samples collected for the assessment of doses to members of the public, occupational doses, and samples collected for verification of characterization of wastes or environmental contamination levels shall be analyzed by radiochemistry laboratory that is appropriately licensed for the type of analysis being performed.
31. The licensee shall conduct sufficient radiation surveys on materials and equipment to ensure that contamination levels do not exceed Department-approved criteria prior to release to unrestricted areas or for unrestricted use. The results of each survey shall be recorded and maintained on file for review by the Department for three (3) years after the record is made in accordance with RH 4.42.

State of Colorado
Department of Public Health and Environment

RADIOACTIVE MATERIALS LICENSE

32. The licensee shall maintain all equipment and facilities, essential to operations governed by this license, in good working condition. This includes but is not limited to process equipment, process tanks, dust suppression equipment, air sampling equipment, water monitoring wells, radiation detection equipment, survey instruments, gates, fences, waste impoundments, security systems, safety equipment, and emergency systems and equipment.
33. The licensee's management and radiation safety officer shall take prompt and appropriate action to correct known deficiencies in the facility's procedures, processes, equipment, and site conditions. These deficiencies and the corrective actions shall be documented and records maintained for review by the Department for three (3) years.
34. The licensee shall document and implement a system of routine preventive maintenance so that safety equipment is checked for proper working order according to a regular schedule.
35. The licensee shall post individual areas of the facility and the entrances to each building or room that contains radioactive materials, with a conspicuous sign bearing the radiation symbol and the words, "Caution – Radioactive Materials".
36. The licensee shall maintain security measures to prevent unauthorized access to the site's facilities and radioactive materials.
37. Prior to closure of each landfill cell, the licensee shall submit an analysis of the adequacy of the cap design to the Department for approval. The cap design must provide reasonable assurance of control of radiological hazards to be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years. Additionally, the cap design must be sufficient such that the release of Radon-222 does not exceed 20 pCi per square meter per second averaged over the surface area of the cell. This analysis shall include radon flux measurements and an analysis of the amount and concentration of radon producing materials disposed in the cell.
38. Upon closure of each landfill cell containing radioactive material, the licensee shall record with the Adams County clerk and recorder a deed annotation as required in RH 11.3.5.
39. Following the construction of a new landfill liner system or a landfill final cover system, the licensee shall provide the Department with "as-built" drawings of the landfill liner system or final cover system.

RADIOACTIVE MATERIALS LICENSE

40. The licensee shall provide the Department with an annual report by April 1 of each calendar year. That report shall contain the following items:
- A. specification of each quantity of radioactive contaminants released to unrestricted areas in liquid and in airborne effluents;
 - B. the results of the environmental monitoring program;
 - C. a summary of licensee disposal unit radiation survey and maintenance activities;
 - D. a summary of activities and quantities of radionuclides disposed of;
 - E. any instances in which the observed site characteristics were significantly different from those described in the application for a license;
 - F. estimated doses to members of the public from the licensee's activities. This includes TEDE (total effective dose equivalent) and TODE (total organ dose equivalent) for both the nearest resident and the maximally exposed member of the public (if they are not the same person). The calculation of public doses shall be in accordance with Department approved methods, sampling frequencies, and dose modeling assumptions. Dose estimates shall be accompanied by appropriate supporting data including an electronic copy of the lab results, spreadsheets, computer model inputs, and modeling results/outputs;
 - G. a summary of Occupational Doses (total effective dose equivalent (TEDE), committed effective dose equivalent (CEDE), and deep dose equivalent (DDE));
 - H. a copy of the annual ALARA program audit;
 - I. a summary of anticipated activities for coming year;
 - J. an evaluation of the existing decommissioning warranty to ensure that the available funds are sufficient to account for inflation, current site conditions, and projected activities for the coming year; and
 - K. an evaluation of the existing decommissioning funding plan to ensure that the licensee will have sufficient funds for the licensee to complete site decommissioning activities.

RADIOACTIVE MATERIALS LICENSE

License conditions 41 and 42 only apply to wastes under the jurisdiction of the Rocky Mountain Low-Level Radioactive Waste Board

41. Two (2) years after the facility has been licensed, the licensee shall petition the Board of Health of the State of Colorado to determine the rates using a historic test period of no less than twelve (12) continuous months, adjusted for known and certain future expenditures that will be incurred by the licensee which are reasonable and necessary for the operation of the facility.
42. The licensee shall provide rate review documentation to the Department pursuant to RH 15.16, RH 15.17, RH 15.18 and RH 15.19.
 - A. Semiannual reports shall be submitted by June 30 and December 31 of each year.
 - B. Annual reports shall be submitted by April 1 of each year.
43. Records of waste disposal shall be maintained in accordance with RH 4.48.
44. The licensee's facility management and the radiation safety officer shall thoroughly review the content and requirements of this license. The licensee shall promptly notify the Department whenever it identifies an error in license authorizations or it has identified a specific license condition or technical requirement established in this license that is not achievable given the current state of technology or site conditions.
45. If statements in referenced documents conflict, the most recent document listed below shall prevail unless otherwise specified in this license.
46. The State of Colorado Rules and Regulations Pertaining to Radiation Control and the *Radiation Control Act* Title 25, Article 11, *Colorado Revised Statutes*, shall govern the licensee, unless the conditions of this license or the licensee's statements, representations, or procedures contained in applications or other documents submitted to the Department are more restrictive than the Regulations. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Item 6 of this license in accordance with statements, representations, and procedures contained in:
 - A. the application and attachments received January 31, 2005; and
 - B. the CHWA Subtitle C Permit dated December 2005; and
 - C. financial assurance arrangements for decommissioning and long term care (Steadfast Insurance Policy Number PLC 5264333 01); and
 - D. the decommissioning funding plan dated December 20, 2005; and

State of Colorado
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RADIOACTIVE MATERIALS LICENSE

- E. the Rocky Mountain Low-Level Radioactive Waste Board Designation as a Limited Regional Disposal Facility dated June 8, 2005; and
- F. the Radiation Protection Plan dated October 4, 2005; and
- G. the Standard Operating Procedures as follows:
- i. Standard Operating Procedure on Airborne Monitoring for Regulated Waste dated October 14, 2005;
 - ii. Standard Operating Procedure on Individual and Area Dosimetry dated October 4, 2005;
 - iii. Standard Operating Procedure on Routine Radiation Surveys dated October 4, 2005;
 - iv. Standard Operating Procedure on Personnel Surveys dated October 7, 2005;
 - v. Standard Operating Procedure on Equipment Surveys dated October 4, 2005;
 - vi. Standard Operating Procedure on Surveys Following Spills dated October 4, 2005;
 - vii. Standard Operating Procedure on Worker Radiation Protection Records dated October 4, 2005;
 - viii. Standard Operating Procedure on Use of the Gate Monitoring System dated October 4, 2005;
 - ix. Standard Operating Procedure on Gamma Spectra Analysis dated October 7, 2005;
 - x. Standard Operating Procedure on Treatment Operations dated October 14, 2005;
 - xi. Standard Operating Procedure on Regulated Waste Landfill Operations dated October 14, 2005;
 - xii. Standard Operating Procedure on Estimating Inhalation Doses dated June 23, 2005;
 - xiii. Standard Operating Procedure on Radiation Protection Training dated June 23, 2005;
 - xiv. Standard Operating Procedure on Use of the Alpha Beta Counter dated July 5, 2005;
 - xv. Standard Operating Procedure on Waste Tracking dated June 24, 2005; and
- H. the Decommissioning Plan dated December 21, 2005; and
- I. the Deer Trail facility environmental covenant by Clean Harbors dated January 5, 2006; and
- J. the correspondence and attachments dated April 7, 2005; May 2, 2005; May 24, 2005; July 7, 2005; July 26, 2005; July 28, 2005; August 10, 2005 (email); October 25, 2005; and October 26, 2005.

FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Date: 1/20/06 By: 