

**UPDATED
WASTE IDENTIFICATION PLAN
For
CONSERVATION SERVICES, INC.**

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ERRATA - FOR INTERIM UPDATES

**CONSERVATION SERVICES, INC.
UPDATED WASTE IDENTIFICATION PLAN**

DATE	DESCRIPTION OF CHANGE
NOTE: The Plan must be approved by CDPHE (6 CCR 1007-2, Section 2.1.2). See Section 7.0 of the Plan for guidance.	
May 2006	Updated per CDPHE letter dated February 17, 2006

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**UPDATED
WASTE IDENTIFICATION PLAN
FOR
CONSERVATION SERVICES, INC.**

1 PURPOSE

This Updated Waste Identification Plan (Plan) modifies the waste acceptance criteria contained in the Revised Design and Operations Plan dated February 5, 1996 for Conservation Services, Inc. (CSI). The procedures described in this updated Plan provide enhanced waste acceptance protocol for safely managing naturally occurring radioactive material (NORM) and technically enhanced naturally occurring radioactive material (TENORM) and industrial solid waste with small amounts of NORM and TENORM. Industrial solid waste with small amounts of NORM/TENORM up to the approved maximum as specified in this Plan, are considered solid waste and regulated under the Regulations Pertaining to Solid Waste Disposal Sites and Facilities, (6 CCR 1007-2). The industrial solid waste with small amounts of NORM/TENORM are exempt from specific licensing requirements of the Colorado Rules and Regulations Pertaining to Radiation Control C.C.R. 1007-1. Furthermore, this Plan is designed to meet the waste acceptance criteria contained in the Draft Policy and Implementation Guidance for Control and Disposition of Drinking Water Treatment Residuals Containing Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) when it is promulgated by the Colorado Department of Public Health and Environment (CDPHE).

The primary purpose of this Plan is to establish procedures that protect employees, public health and the environment when managing industrial solid waste with small amounts of NORM/TENORM at CSI. This Plan provides an effective and enhanced screening mechanism to detect and prevent prohibited waste, such as hazardous waste, polychlorinated biphenyl (PCB), licensed radioactive waste (Definitions, Appendix A), source material (natural uranium or thorium greater than 0.05% by weight), nuclear reactor and man-made radionuclides from entering the facility. Accordingly, this Plan includes special procedures for screening, receipt, surveys, temporary storage, handling/placement, training, environmental monitoring and record keeping as well as a procedure for notification to the CDPHE Hazardous Material and Waste Management Division (HMWMD) and Adams County Planning Department prior to CSI receiving NORM/TENORM and/or industrial solid waste containing NORM/TENORM.

2 WASTE ACCEPTANCE PROCEDURE

The waste streams accepted at CSI are non-hazardous solid and liquid industrial and commercial wastes and non-regulated PCB containing wastes. CSI has also been approved to accept municipal solid waste (MSW) however the MSW cell has not been constructed. Industrial solid wastes accepted at CSI are managed through direct burial, or may be applied to the facility's Prepared-Bed Biological Treatment (PBBT) units as appropriate. Suitable industrial solid wastes received at the facility may also be used in the site mixing basin(s) as a supplemental solidification agent. Liquid industrial wastes are either solidified prior to land disposal, or, if appropriate, are applied on the bio-treatment beds. CSI also accepts asbestos waste for disposal, with friable asbestos managed exclusively in the facility's asbestos monofill. This updated Plan provides for enhanced waste acceptance procedures for the receipt of NORM/TENORM and industrial solid waste containing NORM/TENORM.

The primary sources of NORM/TENORM and industrial solid waste containing NORM/TENORM managed at CSI are anticipated to be oil and gas exploration and refining wastes, water treatment residuals, geothermal exploration and production wastes, mining wastes, exploration and production wastes and NORM. Examples of these wastes are as follows:

Examples of Potential Industrial Waste with Small Amounts of NORM/TENORM

Water treatment plant residuals	Wastewater treatment plant residuals
Indigenous NORM that will be removed prior to residential or commercial development	Oil exploration and production wastes (e.g. pipescale, brines, scrap)
Excavated earth from various construction projects	Appropriate mining wastes
Gas exploration and production wastes	Drill cuttings and groundwater
Geothermal exploration and production wastes	Demolition debris
Gas exploration and production wastes	UMPTRA groundwater treatment residuals
Appropriate mining wastes	Title II Site groundwater treatment residuals
Geothermal exploration and production wastes	Phosphate and elemental phosphorous wastes
Various environmental media samples	Phosphate fertilizers

This list illustrates examples and is not exhaustive or meant to be restrictive of waste suitable for disposal at CSI.

The design of this Plan including waste acceptance criteria and the corresponding approved maximum concentrations of radionuclides was based on extensive site characterization. The characterization included geotechnical information, certified by a Professional Engineer and Professional Geologist, and risk assessments, radioactivity modeling and safety and health protocol which were reviewed and approved by a Radiation Health Physicist (Ph.D.), certified NORM Safety Officer and Certified Hazardous Material Manager. The information in the risk assessment report and this Plan was used to develop the maximum concentrations of radionuclides in industrial waste with small amounts of NORM/TENORM found in Table 2. The maximum concentrations of radionuclides in industrial waste with small amounts of NORM/TENORM when managed by CSI will meet the acceptable dose based standard of 25 mrem/yr derived from C.C.R. 1007-1 and 4.6.2 for post-closure care and exposure to the general public. The acceptable dose based risk standard of 25 mrem/yr is a goal during operations for the workers. Actual dose based risks will be evaluated after a five year period to demonstrate that the methods outlined in this Updated WIP are protective to workers. ALARA will be practiced when any industrial waste with small amounts of NORM/TENORM is delivered. Risk assessment modeling of industrial waste with small amounts

of NORM/TENORM at CSI show that external exposure to gamma radiation and inhalation hazards from radon are minimized with increased cover depth. Attention will be placed on covering the NORM/TENORM materials as expeditiously as possible to a minimum depth of two to three feet of soil cover within a six-month period.

2.1 Pre-acceptance Screening for Industrial Waste

Although it is the Generator's responsibility to accurately characterize its waste, CSI's technical staff reviews each waste stream for which disposal or bio-treatment has been requested to ensure the material is appropriate for management at CSI.

The pre-acceptance screening process begins when CSI receives a completed Generator's Waste Profile Sheet from the Generator or it's Authorized Representative. A sample profile is included in Appendix B. The completed profile provides information about the waste including the waste name and the process generating the waste. The Generator must also provide specific information regarding the chemical and physical waste properties and regulatory status of the waste material and must answer specific questions to ensure all necessary information has been provided. As part of this process, the Generator may also provide laboratory analysis and/or other information about the waste¹ to assist in the accurate characterization of the waste proposed for management.

2.2 Pre-acceptance Screening for Industrial Waste with Small Amounts of NORM/TENORM

The pre-acceptance screening process for industrial solid waste containing NORM/TENORM * in excess of background levels uses the same procedures for industrial waste as described in 2.1 above with the addition of an addendum questionnaire and enhanced laboratory analysis specific to NORM/TENORM radionuclides.

All industrial solid waste containing NORM/TENORM must be tested for radionuclides as described in Section 3.1 of this Plan. The generator must also answer additional questions as listed in Appendix C. An individual familiar with industrial solid waste containing NORM/TENORM and the Colorado Rules and Regulations Pertaining to Radiation Control and Regulations Pertaining to Solid Waste Disposal Sites and Facilities, (6 CCR 1007-2) must answer the additional questions. The information received in this questionnaire in conjunction with the Generator Waste Profile Sheet and supporting technical information are used to evaluate the waste for acceptance. Any incorrect or missing information may delay the review and approval process. CSI's technical staff will review the analysis and supporting information and a determination of acceptability will be made. Once the waste is determined acceptable, the generator will be notified and informed of limitations and conditions of acceptance. Additionally, CSI will send (via e-mail, fax or mail) copies of the Generator Waste Profile Sheet, Waste Questionnaire and supporting technical information to the CDPHE, Adams County and Tri-County Health Department

¹ Analytical data provided with a waste profile must meet CDPHE protocols. Sampling and analysis of a waste must be conducted in accordance with Subpart C of Part 261, CCR 1007-3 or equivalent method approved by the CDPHE under Section 260.21. CSI's technical personnel evaluate the waste profile using analytical data provided by the Generator and/or equivalent information (i.e. Subpart B of Part 261.10(ii) allowing the Generator to apply his or her knowledge of the hazard characteristic of the waste in light of the materials or processes used) to ensure that CSI is not accepting prohibited wastes.

prior to accepting NORM/TENORM and industrial waste containing NORM/TENORM at the facility.

2.3 Screening at the Site

All waste delivered to the facility is accompanied with a non-hazardous waste manifest. Upon arrival at CSI, the waste material, profile and manifests are reviewed to ensure the waste being received matches the waste approved by CSI. Documentation is checked for completeness and correct information. Screening at the gate includes the following:

2.4 Load Checking and Sampling

New waste streams are generally sampled upon arrival. However, physical properties of some waste delivered to the facility may make it impractical to perform sampling i.e. concrete, construction material etc. Existing waste streams may also be sampled periodically to ensure waste remains consistent with the original profile. Sampling may include, but is not limited to:

Visually inspecting the load to ensure it matches the waste profile and manifest;
Obtaining a sample of the waste and testing it for characteristics such as ignitability and corrosivity utilizing the laboratory inspection form in Appendix D.

2.5 Surveying for industrial wastes with small amounts of NORM/TENORM

All industrial waste with small amounts of NORM/TENORM is screened when they arrive. The screening is a combination of the stationary gate monitors that all incoming waste deliveries must pass and specific screening using hand held meters by trained personnel. Additional samples may also be taken to ensure waste remains consistent with the chemical and physical properties of the original profile. Screening will include, but is not limited to:

2.5.1 Stationary Detector

A gate monitor using scintillation type radiation monitoring equipment designed specifically for the purposes of detecting both man-made and natural radiation. The gate monitor will be capable of discerning between man-made and natural radiation. The sensitivity of the gate monitor will be sufficient to detect industrial waste with small amounts of NORM/TENORM above the levels listed in Table 2. The gate monitor will include an alarm. The set point on the alarm will be set up to maximize sensitivity and minimize false positives. The design objective of the set point is to have less than one false positive in 1000 vehicles passing. A reference point of 50 microRoentgens per hour ($\mu\text{R/hr}$), excluding background² will be used to assist with the set point placement. The alarm set point may be adjusted based upon manufacturer recommendations and on site-specific data collected after installation.

2.5.2 Portable Radiation Survey

Incoming waste with small amounts of NORM/TENORM may be screened for unacceptable levels of radiation using portable radiation survey equipment. The scintillation type of survey meters will be used according to manufacturer specifications and the generally accepted methods used to measure radioactivity.

² Based on background measurements performed by Radiant Energy Management (REM) at CSI in 1995, the REM study showed background external radiation exposure at the facility between 8-10 $\mu\text{R/hr}$.

Personnel will be trained in the proper use of the monitoring equipment. Meters are calibrated based on the manufacturer recommendations. The portable survey instrument to be used is a Ludlum Model 3, or similar make with a sodium iodide gamma scintillation detector 44-2 or equivalent, and alpha scintillation detector 43-1, or equivalent. Personnel will survey the exterior of the vehicle according to the procedure in Appendix E.

Large volumes (>10,000 cubic yards) of industrial waste with small amounts of NORM/TENORM will be sampled on a pre-established schedule to ensure the waste being shipped continues to comply with the profiled waste description.

Results of sampling, testing and inspections are documented using the CSI Laboratory/Load Inspection/Rejection Form. A copy of this form is included as Appendix D. Waste that does not meet the description on the profile or exceeds allowable limits for ignitability, and corrosivity will be rejected at the gate pursuant to Section 3.0 of this Plan. Waste that triggers the alarm on the gate monitor will be redirected past the detector for confirmation that the alarm continues to be triggered. Procedures for responding to the confirmed alarm exceedance are found in Appendix E including further evaluation utilizing a portable radioactivity meter.

2.5.3 Review of Shipping Papers

Use of CSI manifests, or equivalent, are required with all industrial waste streams accepted at CSI. Manifests will be reviewed for accuracy and completeness any discrepancies will be noted on the manifest. If the manifest does not have correct information and signatures, the waste will not be accepted into the facility pursuant to Section 4.0 of this Plan.

2.5.4 Review of Special Handling Conditions or Limitations

CSI personnel will ensure that the waste being accepted meets any conditions or limitations included on the waste profile. Waste that does not meet these criteria will not be accepted pursuant to Section 4.0 of this Plan.

3 ANALYSIS OF WASTES

CSI will evaluate the waste profile and related analytical information to ensure CSI is not accepting prohibited wastes. Analytical data provided with the waste profile to aid in accurate characterization must meet Environmental Protection Agency (EPA) protocols. Sampling and analysis should be conducted by the generator following EPA publications SW-846 titled "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" or equivalent approved test methods appropriate for the wastes analyzed.

3.1 Radiochemical Analytical Testing

The radiochemical analysis must be completed by an analytical laboratory with a Certification from the State of Colorado to analyze for drinking water standards or the U.S. Department of Energy, or can demonstrate proficiency in performing radiochemical analysis using available EPA test methods or recognized alternative test methods. Radiochemical analysis should include the analytes listed in Table 1 and use method detection limits with sensitivity to detect less than 1.5 pCi/g. The results shall be reported in picocuries per gram or picocuries per liter concentrations as appropriate.

3.2 Maximum Radionuclide Concentration of NORM/TENORM

Industrial waste with small amounts of NORM/TENORM received at CSI shall have concentrations of radionuclides that do not exceed the maximum concentrations listed in Table 1:

Table 1

Maximum Concentrations	
Isotope	Maximum Concentration in pico Curies per gram
Radium 226	50.00
Radium 228	12.50
Thorium 228 ³	150.00
Thorium 230 ³	150.00
Thorium 232 ³	55.00
Uranium – nat	300.00
Uranium 234	300.00
Uranium 238 ³	150.00
Lead 210	150.00

³ Maximum concentrations for uranium and thorium at these levels will ensure limits for source material is not exceeded. Uranium measurements may be reported as, or converted to, parts (ppm) and then converted to percent by dividing by 10,000. Source material means material, in any physical or chemical form, including ores, that contains by weight one-twentieth of 1 percent (0.05 percent) or more uranium, thorium or any combination thereof.) 0.05% by weight means 500 micrograms of uranium and or thorium per gram of material. Expressed in terms of activity for single isotopes (each having a different mass): 500 ug of U-nat=339 pCi/g, 500 ug of U-238=170 pCi/g, 500 ug of Th-232=55 pCi/g

4 CONTINGENCY PLAN: LOAD REJECTION PROCEDURES

If prohibited wastes are identified at the facility during the on-site screening process described in Section 2.2, the waste load will be rejected and the Generator notified. Documentation of the rejection will be noted on the Laboratory/Load Inspection/Rejection Form included in Appendix D. A copy will also be maintained in the site Operating Record.

In the event that prohibited waste materials are identified after a load has been accepted, but before it has been managed at the site, the waste will be secured away from the active portion of the facility until removed by the Generator or their Authorized Representative. An incident report will be completed and all required notifications made pursuant to regulatory, permit, and operational guidelines. All documentation will be maintained with the associated profile and in the site Operating Record. An example Incident Report is included in Appendix F.

5 OPERATIONAL REQUIREMENTS

Incoming wastes that have passed the gate monitor screening, document review process and testing as appropriate are directed to either the facility mixing basin, the active face of the landfill, asbestos monofill or the bio-treatment beds as indicated on the profile. CSI gate personnel will notify site operators regarding incoming wastes that have special handling conditions or limitations that may impact personnel or site operations.

Materials placed in the CSI mixing basin are solidified using cement kiln dust or other solidification agents. A visual inspection of the solidified material is conducted prior to the waste being placed in the disposal cell to determine whether free liquids exist. A paint filter test may be performed to verify physical conditions of the solidified waste. Solidified wastes that do not pass the paint filter test will be mixed with additional solidification material prior to the waste being sent to the disposal cell.

Prior to acceptance of industrial solid waste with small amounts of NORM/TENORM an area within the disposal cell will be designated for placement and access controlled. Upon arrival at the site the driver will be directed by facility personnel to the designated area for disposal. Only authorized persons will be allowed during disposal. The waste will be managed through direct burial and covered with at least six inches of an operational layer of solidified waste, unspecified onsite soils or other suitable cover to prevent wind dispersion, tracking and minimize exposure to workers. A total of 3 feet of cover material will be placed over the waste within six months of disposal to maintain consistency with the Risk Assessment Report and the practice of ALARA. CSI will employ dust control measures on an as needed basis and may include application of water or other dust suppressants. Operators will utilize equipment that is designed with enclosed cabs and air filtration systems to mitigate inhalation of dust. Drivers will wear appropriate personnel protective equipment (PPE) during placement of the waste. The designated disposal area receiving industrial waste with small amounts of NORM/TENORM will be surveyed by or under the supervision of a land surveyor licensed in the State of Colorado to document location and thickness of the cover to ensure compliance with the Risk Assessment Report and ALARA practices. Liquid industrial waste with small amounts of NORM/TENORM will be placed in the mixing basin and solidified then managed following the same protocol as described above for direct burial. All disposal information will be placed in the customer file for record keeping purposes.

6 TRAINING

All employees responsible for approving waste streams for disposal or bio-treatment at CSI will receive training in applicable regulations (Federal, State, and local), company requirements, and specifications of the Design and Operations Plan and the Updated Waste Identification Plan for the facility.

Employees responsible for site screening of wastes will be trained, at a minimum, to recognize and properly respond to all prohibited wastes. These employees will receive training in the CSI screening process, manifesting requirements, ensuring handling conditions and limitations are met, load rejection procedures, and operational requirements.

Site operators responsible for working with the waste will be trained, at a minimum, to recognize and properly respond to all prohibited wastes, and how to segregate a waste that requires removal from the site. Site operators will receive training in environmental health and safety related to the waste received and in ensuring handling and limitation conditions are met. Site operators managing industrial waste with small amounts of NORM/TENORM will receive appropriate radiological safety training. A typical training syllabus is included in Appendix G.

Employees will be trained at the time of hire and will be provided refresher training on an annual basis. Training will be documented in site personnel files.

7 PLAN REVIEW AND RECORDKEEPING

This Updated Waste Identification Plan will be reviewed at least annually and amended as necessary. If major changes are made then the Plan will be submitted to CDPHE for review and approval pursuant to Section 2.1.2 (c) of 6 CCR 1007-2 and copied to Adams County. Minor modifications to the Plan will be filed with the CDPHE and Adams County. An Errata Page, located at the front of this Plan, will be used for tracking minor changes.

Generator Waste Profiles will be reviewed on a periodic basis, at the time of profile expiration, or if the process generating the waste changes. Any changes made to the profile will be initialed and dated by the person authorizing the changes. All changes will be communicated to the Generator in writing. Facsimile changes are acceptable.

Records will be maintained in accordance with applicable regulations. Select records i.e. waste manifests, laboratory/load/rejection/inspection forms, and profile approval reports will be maintained at the facility. All other waste information including generator waste profiles, laboratory analytical results, related technical information and any other supporting documentation are kept at Waste Management's Industrial Waste Office located at 7780 E. 96th Avenue, Henderson Colorado 80640.

8 ENVIRONMENTAL MONITORING

Environmental monitoring for leachate and groundwater is conducted in accordance with the approved Monitoring and Reporting Program prepared by BE&K/Terranext dated November 8, 1999. Leachate (if present) is sampled and analyzed semi-annually. In addition to the parameters listed in the monitoring plan, CSI will enhance the parameter list for leachate to include an annual analysis for gross alpha, gross beta, combined Ra-226/228 and U-nat. Results will be submitted to CDPHE, Adams County and Tri county Health Department in accordance with the approved monitoring plan.

All sampling results are placed in the site's operating record.

9 HEALTH AND SAFETY

CSI has implemented health, safety and transportation programs to meet regulatory requirements as well as company health and safety policies. The safety and health programs are designed to prevent accidents, emergency situations and unsafe conditions. These programs include but not limited to the following:

Incident recording and reporting	Medical and first aid	Spill/release response
Employee exposure determination	Hazard communication	Confined space entry
Fire prevention and detection	Visitor Safety	Lockout/tagout
Flammable and combustible liquids	Contractor Safety	Fall protection
Emergency planning	SPCC	

These programs are supported by monthly safety training meetings to ensure employees have an understanding of health and safety requirements. Furthermore, there are certain health and safety concerns when dealing with industrial waste with small amounts of NORM/TENORM. Radiological hazards are different than typical hazards associated with other industrial wastes delivered to the facility. Therefore, monthly safety meetings are used to train personnel in the importance of radiological health and safety. A typical training syllabus is included in Appendix G. Periodic reviews and training will be completed to ensure employees have a full understanding of issues, PPE and proper procedures for management industrial waste with small amounts of NORM/TENORM. Training of employees are documented and maintained at the facility.

APPENDIX A

DEFINITIONS

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DEFINITIONS

NOTE: Definitions are from 6 CCR 1007-2, Regulations Pertaining to Solid Waste Disposal Sites and Facilities, Revised September 1, 2000, unless otherwise indicated.

"ALARA"	ALARA means as low as reasonably achievable
"Asbestos Waste"	Means any asbestos material whether it contains friable or non-friable asbestos that is not intended for further use and that is accepted at a solid waste disposal site and facility for disposal. This term includes but is not limited to asbestos mill tailings, asbestos from pollution control devices, and bags or containers that contained any of these at any time prior to disposal.
"Commercial Wastes"	Means all solid wastes generated by stores, hotels, markets, offices, restaurants, warehouse, construction and demolition debris and other non-manufacturing activities, excluding community and industrial wastes.
"Hazardous Waste"	Means those substances and materials defined or classified as such by the Hazardous Waste Commission pursuant to 25-15-302, CRS, as amended.
"Industrial Wastes"	Means all solid wastes, including mill tailings and mining wastes, resulting from the manufacture of products or goods by mechanical or chemical processes that are not a hazardous waste regulated under 6 CCR 1007-3, the Colorado Hazardous Waste Regulations. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilization/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include oil and gas wastes regulated by the Colorado Oil and Gas Conservation Commission.
"Licensed Radioactive Waste"	Means any waste that requires a radioactive materials license, issued pursuant to a state or federal radioactive materials license program, for disposal.
"Liquid Waste"	Means any waste material that is determined to contain "free liquid".
"Local Requirements"	Means all zoning, laws, resolutions or ordinances related to or enforced on solid waste disposal promulgated by counties, municipalities or other political subdivisions of the state and the specifications and requirements identified as part of a certificate of designation.
"Monofill"	Means a landfill or section of landfill at which only one type of waste is

accepted for disposal.

“Municipal Solid Waste (MSW)”

Means solid waste from household, community, commercial and industrial sources that does not contain hazardous wastes as defined in Section 25-15-101(9) of the Colorado Hazardous Waste Act unless otherwise regulated by the Department.

"Paint Filter Test"

Refers to the EPA prescribed method to test for free liquids in a sample.

“Solid Waste”

Means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, air pollution control facility, or other discarded material; including solid, liquid, semisolid, or contained gaseous material resulting from industrial operations, commercial operations or community activities. “Solid Waste” does not include any solid or dissolved materials in domestic sewage, or agricultural wastes, or solid or dissolved materials in irrigation return flows, or industrial discharges which are point sources subject to permits under the provisions of the “Colorado Water Quality Control Act”, Title 25, Article 11, CRS “Solid Waste” does not include: (a) Materials handled at facilities licensed pursuant to the provisions of radiation control in Article 11 of Title 25, CRS; or (b) Excluded scrap metal that is being recycled; or (c) Shredded circuit boards that are being recycled.

“Waste Stream”

Means a relatively uniform solid waste, produced by the same or a similar process or generator over time. Different waste streams are distinguished by significantly larger or smaller concentrations of one or more constituents as determined by standard test methods or inspections.

APPENDIX B
GENERATOR'S WASTE PROFILE SHEET



Generator's Non-Hazardous Waste Profile Sheet

Requested Disposal Facility _____ Profile Number YB575560
 Renewal for Profile Number _____ Waste Approval Expiration Date _____

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

- 1. Generator Name: _____
- 2. Site Address: _____
- 3. City/ZIP: _____
- 4. State: _____
- 5. County: _____
- 6. Contact Name/Title: _____
- 7. Email Address: _____
- 8. Phone: () _____
- 9. FAX: () _____
- 10. NAICS Code: _____
- 11. Generator USEPA ID #: _____
- 12. State ID# (if applicable): _____

B. Customer Information same as above

- 1. Customer Name: _____
- 2. Billing Address: _____
- 3. City, State and ZIP: _____
- 4. Contact Name: _____
- 5. Contact Email: _____
- 6. Phone: () _____ FAX: () _____
- 7. Transporter Name: _____
- 8. Transporter ID # (if appl.): _____
- 9. Transporter Address: _____
- 10. City, State and ZIP: _____

C. Waste Stream Information

1. DESCRIPTION
- a. Common Waste Name: _____ State Waste Code(s): _____
 - b. Describe Process Generating Waste or Source of Contamination:

 - c. Typical Color(s): _____
 - d. Strong Odor? Yes No Describe: _____
 - e. Physical State at 70°F: Solid Liquid Powder Semi-Solid or Sludge Other: _____
 - f. Layers? Single layer Multi-layer NA
 - g. Water Reactive? Yes No If Yes, Describe: _____
 - h. Free Liquid Range (%): _____ to _____ NA(solid)
 - i. pH Range: ≤2 2.1-12.4 ≥12.5 NA(solid) Actual: _____
 - j. Liquid Flash Point: < 140°F ≥ 140°F NA(solid) Actual: _____
 - k. Flammable Solid: Yes No
 - l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): (See Attached)

Constituents (Total Composition Must be ≥ 100%)	Concentration %	Constituents (Total Composition Must be ≥ 100%)	Concentration %
1. _____	_____	4. _____	_____
2. _____	_____	5. _____	_____
3. _____	_____	6. _____	_____

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
- a. Event Base/Ongoing (Check One)
 - b. Estimated Annual Quantity: _____ Tons Cubic Yards Drums Gallons Other (specify): _____
 - c. Shipping Frequency: _____ Units per Month Quarter Year One Time Other
 - d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) Yes No
 - e. USDOT Shipping Description (if applicable): _____
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): _____



Generator's Non-Hazardous Waste Profile Sheet

Profile Number _____

D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. Yes No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. Yes No
 - Delisted Hazardous Waste Excluded Wastes Under 40 CFR 261.4
 - Treated Hazardous Waste Debris Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. Yes No
4. Does the waste represented by this waste profile sheet contain radioactive material? Yes No
 - a. If yes, is disposal regulated by the Nuclear Regulatory Commission? Yes No
 - b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? Yes No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? Yes No
 - a. If yes, is disposal regulated under TSCA? Yes No
6. Does the waste contain untreated, regulated, medical or infectious waste? Yes No
7. Does the waste contain asbestos? Yes No If Yes, Friable Non Friable
- h. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHP, 40 CFR 63 subpart GGGGG)? Yes No
 If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? Yes No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable).
5. Check all that apply:
 - Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: _____ # Pages: _____
 - Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
 - Additional information necessary to characterize the profiled waste has been attached (other than analytical). Indicate the number of attached pages: _____
 - I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
 - By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

Certification Signature: _____ Title: _____
 Name (Print): _____ Company Name: _____
 Date: _____

FOR WM USE ONLY

Management Method: Landfill Bioremediation Approval Decision: Approved Not Approved
 Non-hazardous solidification Other: _____ Waste Approval Expiration Date: _____
 Management Facility Precautions, Special Handling Procedures or Limitation on approval: _____ Shall not contain free liquid
 _____ Shipment must be scheduled into disposal facility
 _____ Approval Number must accompany each shipment
 _____ Waste Manifest must accompany load
 WM Authorization Name / Title: _____ Date: _____
 State Authorization (if Required): _____ Date: _____

APPENDIX C

SUPPLEMENTAL WASTE QUESTIONNAIRE

SUPPLEMENTAL WASTE QUESTIONNAIRE

Please circle the answer to the following seven questions concerning NORM/TENORM and industrial waste with NORM/TENORM:

1. Is the waste generated from a program operated under the United States Nuclear Regulatory Commission (NRC)? **Yes / No**
2. Is the waste generated from a program operated under the United States Department of Energy (DOE)? **Yes / No**
3. Is the waste generated from a program operated under the United States Department of Defense (DOD)? **Yes / No**
4. Is the waste generated from a Voluntary Cleanup under the State of Colorado Voluntary Cleanup Act or a similar act in another State? **Yes / No** If so, was the waste included in the Voluntary Cleanup plans? **Yes / No**
5. Is the waste "source material", "special nuclear material", or "byproduct material" as defined in the Colorado Rules and Regulations pertaining to Radiation Control (6 CCR 1007-1)? **Yes / No**
6. Is the waste "low level radioactive waste" as defined under Part 14 of the Colorado Rules and Regulations pertaining to Radiation Control (6 CCR 1007-1)? **Yes / No**
7. Does the waste require a radioactive materials license for disposal? **Yes / No**

Print name _____

Signature _____

Title _____

Date _____

APPENDIX D
LABORATORY
INSPECTION / REJECTION
FORM

CONSERVATION SERVICES, INC.
LABORATORY/LOAD INSPECTION/REJECTION FORM

Date:

Generator Name:

Customer Name

(if different from Generator)

Waste Name:

Profile Number:

Manifest Number:

LOAD ACCEPTED **Ticket #** _____

LOAD REJECTED (specify reason in 'Comments' section, below)

Ignitability: Liquids: Closed Cup Flash Point Greater than 150°F **OR** °F

Corrosivity: pH (liquids only):

Reactivity: Reacts with the following (Check all that apply):

Air Water Kiln Dust Other (specify)

Acid (HCl) Adjust: About 20 mLs of sample required:

Less than 10 mLs 10 mLs or more

Note any reactions:

Base (NaOH) Adjust: About 20 mLs of sample required:

Less than 10 mLs 10 mLs or more

Note any reactions:

COMMENTS:

Signature: _____

Date: _____

APPENDIX E

RESPONSE PROCEDURES

CONSERVATION SERVICES, INC.

RADIATION RESPONSE PROCEDURES

The following procedures are to be followed on the event a vehicle passing the gate radiation monitor triggers.

Waste deliveries that trigger the alarm on the stationary radioactivity detector will be redirected past the detector in order to confirm the actual measurement of the waste. The gate attendant familiar with the detector operations will observe the monitor to determine any obvious malfunctions and reset the monitor and require the vehicle to pass through the gate monitor a second time. If the vehicle triggers the alarm again, direct the vehicle to the area near the gate to the asbestos cell and the contact the Site Manager.

If the vehicle leaves before the Site Manager is contacted or the situation sufficiently evaluated, the attendant should contact the State and local law enforcement authorities and provide them information on the vehicle and any additional information concerning the direction and time the vehicle left the site. The attendant should also contact CDPHE and Adams County concerning the incident. The purpose of the notification is to ensure the driver does not possibly dispose of the waste illegally or take it to another facility that is not authorized to receive the waste.

Direct the driver to walk through the stationary detectors and/or scan the driver using the onsite portable survey meter. Scanning the driver will determine whether the driver is the possible source triggering the meter. Treatments for cancer and other diseases utilize radiation sources sufficient in concentration to trigger a detector.

Using the onsite portable survey meter, survey the exterior of the vehicle no more than two to three inches from the vehicle surfaces. Mark all surfaces where meter readings for radiation levels are above the average concentration of the entire vehicle. This will determine whether there is a possible source in a specific area of the load.

False positives are expected at a frequency of approximately one false alarm per 1000 vehicles surveyed. Precipitation events and other atmospheric conditions can contribute to false positives. Manufacturer representatives of the survey equipment will assist with setting the alarm to minimize false positives while maximizing sensitivity.

If a load continues to trigger an alarm and the source of the radioactivity cannot be readily identified, the load will be rejected and the appropriate agencies contacted. The generator of the load will be notified immediately and recommend that the load be segregated and investigated by surveying and sampling to determine how the material was identified to be acceptable at the CSI facility.

APPENDIX F

INCIDENT REPORT FORM

INCIDENT REPORT

GENERAL INFORMATION

Prepared By

Date

Facility Name

Facility Address

INCIDENT SPECIFIC INFORMATION

Location of incident

Date of incident

Time of incident

Type of incident (Fire, Spill, Threat, etc.)

Extent of injuries (if any)

Actual or potential hazards to health or the environment

Chronological description of the incident and response actions (use
extra pages as needed)

INCIDENT REPORT, Continued

Names and title/position of witnesses

Causes of incident

Identify steps taken to prevent recurrence

Summarize media coverage and attach copies

List regulatory and government agencies contacted. Attach copies of reports.

APPENDIX G

TYPICAL TRAINING AGENDA

TYPICAL TRAINING TOPICS FOR NORM/TENORM AND INDUSTRIAL SOLID WASTE CONTAINING SMALL AMOUNTS OF RADIOACTIVITY

1. **Ionizing Radiation**
 - Gamma
 - Beta
 - Alpha

2. **Types of Radioactivity**
 - Naturally occurring radioactive material (NORM)
 - Technically enhanced naturally occurring radioactive material (TENORM)
 - Man-made radioactive materials
 - Bulk volumetric
 - Fixed & Removable

3. **Radiation Hazards and Pathways**
 - External
 - Internal
 - Inhalation
 - Ingestion

4. **Potential Effects of Radiation Exposure**
 - Somatic
 - Genetic
 - Cancer

5. **Protective Procedures and Practices**
 - Time, distance, shielding
 - Personal Protective Equipment
 - Ventilation
 - Housekeeping / Personal Hygiene
 - Work Practices
 - Tools/equipment
 - Vehicles
 - Practicing ALARA

6. **Radiation Monitoring, Programs, Surveys**
 - Site Monitoring
 - Passive monitoring (TLDs)
 - Air Sampling
 - Direct Measurements
 - Other Sampling

7. **Effective Dose, Allowable Limits**
 - Background Dose
 - Dose From Site Operations
 - Public Dose Limits
 - Worker Dose Limits