



GUIDELINE 42 - OIL FIELD EXPLORATION AND PRODUCTION ASSOCIATED WASTE ACTIVITIES

North Dakota Department of Health - Division of Waste Management
918 E. Divide Ave., 3rd Fl., Bismarck, ND 58501-1947

Telephone: 701.328.5166 • Fax: 701.328.5200 • Website: www.ndhealth.gov/wm

Revised: 03-2012

Solid waste management facilities, transporters and waste generators in North Dakota must be in compliance with state law, rules and permits as administered by the North Dakota Department of Health, Division of Waste Management (Department). Waste generated by oil field exploration and production activities and associated industrial, service, commercial, and construction activities may pose challenges for solid waste facilities, waste haulers and recyclers. Properly characterizing, segregating and managing wastes will help stressed solid waste facility staff and help avoid accidents, environmental impacts and waste being rejected by facilities. Cooperation between waste generators, waste haulers and facilities is essential to ensure efficient operation. Repeat problems may result in additional inspection requirements, increased handling and expense, and if necessary, enforcement. Some segregated materials may be recycled. Waste Haulers must have a permit issued by the Department (**see Links on last page**).

SPECIAL WASTE: Most waste from crude oil and natural gas exploration and production such as drilling cuttings, water, spills, and similar waste that is not managed at a drill site or injection well but is shipped off-site is classified as “Special Waste.” Fly ash and Coal Combustion Waste is also “Special Waste.” Most special waste is disposed or treated at permitted special or industrial waste facilities. Permitted Special Waste facilities have procedures approved for management of various materials and can provide guidance to waste generators (**see Links**).

Waste from crude oil handling and storage may be processed to recover oil at crude processing plants regulated by the **North Dakota Oil and Gas Division**.

INDUSTRIAL WASTE AND SPECIAL WASTE cannot be disposed or mixed with other waste destined for a **Municipal Solid Waste Landfill** without coordination and approval by the solid waste facility operators who must also coordinate approval with the Department. With proper characterization, segregation and handling, some waste may be managed at Municipal Solid Waste or Inert Waste landfills or may be recycled. Careful waste handling is essential to expedite orderly operations, hold down costs, reduce waste, and protect human health. **Poorly separated waste may be rejected or be subject to additional disposal costs as Industrial, Hazardous or Radioactive Waste (see Links).**

Haulers whose waste is rejected must file a report with the Department within five days of the rejected load. Contact Derek Hall at 701-328-5166, or fill out the SFN 60120 Rejected Waste Reporting form on line (see Links).

Solid Waste Facilities who reject a waste must also notify the Solid Waste program at 701-328-5166.

SPILLS, LEAKS, RELEASES, DUMPING, UNPERMITTED STORAGE REPORTING:

Environmental incidents involving oilfield materials, chemicals, fuels, coal combustion materials, fly ash, solidifying agents, other waste materials, etc. that may impact human health or the environment must be promptly cleaned up and reported to the state. For emergencies, contact the local emergency manager. **Complete an environmental Incident form online (see Links).**

WASTE SEGREGATION REQUIREMENTS: Wastes should be carefully separated into categories described below and properly managed at approved recycling, processing or disposal facilities in accordance with state, federal and local requirements. Keep records on the amount removed from each facility or unit, how it is segregated and eventually managed, recycled or disposed.

HAZARDOUS (IGNITABLE, CORROSIVE, REACTIVE, TOXIC, LISTED) OR PCB WASTE including, but not limited to: unused chemicals or additives, paints, solvents, varnishes, stains, cleaners, degreasers, and similar ignitable products; aerosol cans, and compressed gas containers or cylinders; ammunition including unused shells, lead shot, bullets, powder-loading supplies, etc.; oils, fluids (transmission, hydraulic, brake, etc.); fuels, automotive additives, batteries (including lead, mercury, nickel-cadmium, etc.); acids and bases – often labeled corrosive (store acids separately from bases and do not mix!); toxics, poisons, pesticides (includes insect, rodent and weed killers); antifreeze; fertilizers; and other ignitable, corrosive, reactive, toxic, PCB, problem or unknown wastes. Separate and label wastes by type. Do not dispose or mix hazardous waste with non – hazardous waste. **Do not mix unlike materials. Use a Hazardous Waste Contractor (see Links).**

UNUSED CHEMICALS, ADDITIVES, UNUSED PRODUCTS, EXCESS RESIDUES AND PARTIALLY FULL CONTAINERS: Bulk, bags, buckets or containers of unused products or containing excess residue, including chemicals, additives, paints, potentially toxic materials, unknowns, or materials that may be toxic, cause injury or cause ignition are industrial wastes and may be hazardous. They may not be disposed or mixed with other waste materials unless approved by the solid waste facility operators. If unused product cannot be used for the intended purpose, the materials must be properly managed as industrial or hazardous waste. Antifreeze may be recycled. Unused chemical products or industrial waste may be managed by permitted industrial waste facilities **(see Links).**

ELECTRONIC WASTE (E-WASTE), LIGHTING AND UNIVERSAL WASTE includes batteries (all types), monitors, TV's, computers, light ballasts, mercury devices (thermostats, mercury switches, fluorescent bulbs, mercury bulbs, thermometers, etc.); light ballasts, transformers; circuitry, stereos, and similar materials. Please package fluorescent devices and bulbs and other fragile materials to avoid breaking. **These**

materials are generally hazardous and should be recycled (see Links).

LEAD BATTERIES ARE PROHIBITED FROM DISPOSAL in North Dakota landfills and must be segregated for recycling. Lead batteries should not be mixed with other materials and cannot be disposed. Please manage lead batteries carefully to ensure they are not broken. Use a scrap metal recycler or universal waste facility. (See Links)

USED OIL IS PROHIBITED FROM DISPOSAL. Lubricating oil, fluids (transmission, gear lube, hydraulic, brake, etc.) from vehicles and equipment must be recycled. Used oil must be separated in properly labeled containers. Any spillage must be promptly cleaned up. **Work with an oil recycler (see Links).**

OIL FILTERS can often be recycled as scrap metal if they are hot-drained and either crushed or punctured. Crushed or punctured and well-drained filters should be placed in labeled, leak proof containers which should be monitored to make sure free oil is removed. Well-drained, crushed and/or punctured filters may be recyclable. Landfills may not accept oil filters from commercial or industrial sources without approved Industrial Waste Procedures. Work with your local scrap metal recycler **(see Links).**

APPLIANCES ARE PROHIBITED FROM DISPOSAL. Freon-containing appliances such as refrigerators, freezers, dehumidifiers, air conditioners, must have the refrigerant removed by licensed technicians at a processing site. Handle these carefully to avoid damage to the refrigeration units. Capacitors and other electronic equipment may need to be removed. Remove food from appliances. **Remove or secure doors of large appliances and manage as Scrap Metal (see Links).**

RECYCLABLE METALS ARE PROHIBITED FROM DISPOSAL in North Dakota landfills. Generators should separate metals in labeled containers or piles and do not mix with waste. Power equipment, metal parts, ducting, pipes, structural steel, stoves, water heaters, metal furniture, heaters, furnaces, and other metal items can be managed to recover metal. **Oil, fuel and fluids may need to be removed** from some equipment for proper management. **Work with your local scrap metal recycler and local recycling programs. Aluminum and beverage cans are encouraged to be recycled (see Links).**

Recyclable metal commingled in waste containers, trucks or waste rollofs should not be picked up or disposed. Scrap metal in a landfill can damage equipment, cause injury and cause the facility to be out of compliance. Some metal needs to be screened for radioactive materials to determine if it is acceptable for recycling. North Dakota promotes recycling of valuable scrap metals that are properly handled.

POTENTIALLY RADIOACTIVE WASTE AND TECHNOLOGICALLY ENHANCED RADIOACTIVE MATERIALS (TENORM). The following natural gas and crude oil production and transportation wastes (and wastes that may have been contaminated by such materials) shall not be delivered to a municipal or inert waste landfill or be commingled with other waste destined for such disposal. Generators should segregate

these wastes, store them in secure containers, and have them analyzed for Naturally Occurring Radioactive Material (NORM), specifically, Ra-226 and Ra-228 concentrations and Lead-210 by a state-approved analytical procedure or screening process. Materials of concern include, but may not be limited to:

- a. Accumulated materials, including: solids, scale, sediment, production sand, emulsion, sludges, and other tank bottoms from storage facilities, separators, heater-treaters, vessels, tanks, and production impoundments that hold product or exempt waste;
- b. Pipe scale, hydrocarbon solids, hydrates, and other deposits removed from tubular goods, piping, casing, filters, filter bags, clean-out traps and other equipment;
- c. Pigging wastes from gathering lines;
- d. Filter Socks and Proppant from oil field exploration, production and deep well injection activities; and
- e. **Any other waste material** suspected to contain TENORM or likely to have accumulated NORM or TENORM in concentrations equal to or greater than 5 picoCuries/gram (pCi/gm).

If the total laboratory-measured Ra-226 plus Ra-228 or Lead-210 activities are equal or greater than 5 pCi/gm, the waste will need to be shipped out of state to a facility acceptable for receiving such waste. There is no adjustment made for the background of the blending material. The 5 pCi/gm limit is for the waste stream as measured using a Department-approved analytical method and procedures. Waste below 5 pCi/gm may be disposed at an approved industrial or special waste facility (**see Links**).

ASBESTOS-CONTAINING MATERIAL may include asbestos pipe wrap, boiler coatings, loose insulation, transite (older cement type siding and electrical backing), vermiculite (light, platy insulating material) and other materials. **Notification, Inspection and Manifest requirements must be followed.** Label all bags or containers "Asbestos Waste." REGULATED Asbestos Waste must be specially handled and disposed at approved solid waste facilities with prior notification and approval. Asbestos cannot be disposed with inert waste. (See other North Dakota Department of Health guidance on asbestos (**see Links**).

LIQUIDS MAY NOT BE DISPOSED (OTHER THAN HOUSEHOLD QUANTITIES).

INFECTIOUS WASTE AND MEDICATIONS, including needles, sharps, human blood or tissue, soaked dressings, isolation waste, pathological waste, infectious human or animal waste, pills, medicines, etc., may not be mixed with other waste but may be properly containerized and treated. **Household quantities** in labeled containers may be disposed with municipal waste (garbage) but **may not** be mixed with inert waste. **Do**

not flush or dispose medications in a sewer or septic system (see Links).

SCRAP TIRES: Scrap tires should be separated. Many landfills will not accept scrap tires that are mixed with loads of other wastes. Keep scrap tires separate so they can be more easily managed by solid waste facilities. Use an approved Scrap Tire facility **(see Links)**.

OTHER WASTES. Solid waste facilities may specify other waste restrictions or procedures at their discretion. Some facilities may have restrictions on potentially windblown materials (plastic, cardboard, excess paper, etc.), bulky wastes (cardboard, pallets, trees, yard waste, etc.), compostable material (grass, leaves, straw, etc.), scrap tires, and other restrictions. Some facilities may process or bale waste before disposal.

ADDITIONAL WASTE PROHIBITED FOR INERT WASTE LANDFILLS:

GARBAGE AND PUTRESCIBLE WASTE (liable to spoil, decay or become putrid) including discarded food, bagged garbage, paper, packaging, lunch waste, sanitary products, small animal carcasses, and similar waste cannot be mixed with inert waste or the entire load must be managed as municipal waste. These wastes should be placed in plastic bags and collected by a permitted hauler for management at a municipal solid waste landfill or transfer station **(see Links)**.

WOOD PALLETS, LUMBER AND VEGETATIVE MATERIAL includes tree limbs, branches, leaves, logs, and plants which may be used as firewood or fuel or shredded to make mulch. Vegetative/tree materials may be separately managed and processed on-site, at a local solid waste facility or appropriate processing site. **Open burning of waste and trade waste is prohibited** as it may create local air quality and safety issues and may violate Clean Air Act provisions. Use a wood recycler **(see Links)**.

CONCRETE AND ASPHALT, if properly segregated from other waste, may be recycled at a local processing site or it may be disposed as inert waste **(see Links)**.

CARDBOARD, PAPER, PLASTICS, Etc. may be recycled if properly segregated and handled. Super sacks may be recycled if liners and frac materials are removed. Contact a recycling company or broker **(see Links)**.

INERT WASTE including Construction and Demolition waste which is properly screened as described above to remove restricted and non-inert waste materials outlined above can be disposed at inert waste landfills. Inert waste includes drywall, lumber, carpet, wood/upholstered furniture (non-metal), clean plastic, non-asbestos insulation (fiberglass, foam, Styrofoam and cellulose), plastic toys, and similar materials that do not readily contaminate water, air or be a food for vectors. Screened inert waste may be managed at approved inert waste facilities, typically at lower cost **(see Links)**.

Thank you for your cooperation. Should you have any questions regarding these issues, contact the Department at 701-328-5166. Solid Waste Program: Steve Tillotson

(email stillots@nd.gov); Brad Torgerson (email btorgers@nd.gov); Ted Poppke (email tpoppke@nd.gov) or Jill Nannenga (email jnannenga@nd.gov); Hazardous Waste Program: Curt Erickson (email cerickso@nd.gov); Derek Hall (email dahall@nd.gov).

North Dakota Solid Waste and Recycling Association: www.ndswra.org .

LINKS:

North Dakota Department of Health Solid Waste, Recycling and Hazardous Waste Publications, Applications and Lists, including:

Waste Transportation, Special Waste, Industrial Waste, Hazardous Waste, Antifreeze Recyclers, Scrap Metal Recycling,	Electronic Recyclers, Universal Waste, Used Oil, Mercury/Lighting Recyclers, Infectious/Medical Waste, Scrap Tire Management,	Municipal Solid Waste, Wood Waste Management, Transfer Stations, Concrete and Asphalt, Inert Waste, Recycling Companies.
---	--	---

See: <http://www.ndhealth.gov/wm/Publications>

SFN 60120 Waste Rejection Report:

<http://www.ndhealth.gov/WM/Forms/WasteRejectionReport.pdf>

Environmental Incident Report Form:

www.ndhealth.gov/wm/EnvironmentalIncidentReporting.htm

Waste Transporter Information and Permits: www.ndhealth.gov/wm/Transportation.htm

Asbestos Information: www.ndhealth.gov/AQ/IAQ/ASB/

Radioactive Material Information

U.S. EPA – TENORM: <http://www.epa.gov/radiation/tenorm/index.html>

U.S.EPA oil and gas production waste: <http://epa.gov/radiation/tenorm/oilandgas.html>

North Dakota Department of Health - NORM: www.ndhealth.gov/AQ/RAD/norm.htm

US EPA Oil & Gas Exempt Waste: epa.gov/osw/nonhaz/industrial/special/oil/oil-gas.pdf

North Dakota Solid Waste and Recycling Association: www.ndswra.org

North Dakota Oil and Gas Division: <https://www.dmr.nd.gov/oilgas/>