

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Hazardous Materials and Waste Management Division

SOLID WASTE DISPOSAL SITES AND FACILITIES

6 CCR 1007-2 Part 1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

PART 1 REGULATIONS PERTAINING TO SOLID WASTE SITES AND FACILITIES

PART A GENERAL REQUIREMENTS AND INFORMATION CONCERNING ALL SOLID WASTE DISPOSAL SITES AND FACILITIES IN THE STATE OF COLORADO

SECTION 1 ADMINISTRATIVE INFORMATION

Applicable to all existing or new solid waste facilities.

1.1 GENERAL INFORMATION

1.1.1 Authority These regulations are promulgated pursuant to the "Solid Wastes Disposal Sites and Facilities Act", Title 30, Article 20, Part 1, Colorado Revised Statutes (CRS), as amended. These regulations replace and supersede the "Solid Wastes Disposal Sites and Facilities Regulations", adopted February 16, 1972, and effective April 1, 1972.

1.1.2 Referenced materials This document may refer to documents produced by other agencies. All cited references are for that reference that is valid on the particular date of adoption of the pertinent section of these regulations and do not include later amendments or editions of the incorporated material. Copies of the referenced material may be reviewed during normal business hours at the Colorado Department of Public Health and Environment. Information on accessing the referenced documents may be obtained by contacting the:

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1.2 DEFINITIONS

"Abandoned facility" means facility in operation after the initial enactment of the Solid Waste Disposal Sites and Facilities Act in 1967 that has ceased operations without implementing a closure plan in accordance with the regulations that were in effect on the date of closure.

"Act" means the "Solid Wastes Disposal Sites and Facilities Act", Title 30, Article 20, Part 1, CRS, as amended.

"Active life" means the period of operation beginning with the initial receipt of solid waste, and ending at completion of closure activities in accordance with these regulations.

"Active operating area" means an area that includes all areas of unloading, bailing, compacting, storing and out loading.

"Active portion" means that part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with these regulations.

"Adequate cover" means:

- (a) Daily cover: At least six inches (6") of earthen material or other suitable material placed over the exposed solid waste at the end of each operating day, or at such frequencies as needed to prevent or minimize nuisance conditions, and
- (b) Intermediate cover: At least one foot (1') of earthen material or other suitable material placed over solid wastes in areas left temporarily unused for at least one month, but not finally closed; and
- (c) Final cover: Final cover design should be selected from alternatives presented in Subsection 3.5.3.

"Adequately wet" means sufficiently mix or penetrate with liquid to completely prevent the release of particulate material and fibers into the ambient air. If visible emissions are observed coming from asbestos-contaminated soil or asbestos-containing material, then the material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

"Agent of a wholesaler" as used in Section 16 of these Regulations mean a person who is authorized by the Wholesaler to act for or in place of the Wholesaler to transact the Wholesaler's business as it relates to the distribution of new tires, lubricating oil, or new lead-acid batteries to retailers and the transportation of waste tires, used oil, or used lead-acid batteries to a separate Wholesaler engaged in the business of recycling collection. *[Eff. 07/01/2007]*

"Agricultural wastes" means all solid wastes resulting from the raising of crops or animals on land zoned agricultural by local requirements, including animal manures, that are returned to the soils as fertilizer or soil conditioners.

"Air pollutant" means any fume, smoke, particulate matter, vapor, gas or any combination thereof which is emitted into or otherwise enters the atmosphere. "Air pollutant" includes, but is not limited to, any physical, chemical, biological, radioactive (including source material, special nuclear material, and by-product material) substance or matter. "Air pollutant" does not include water vapor or steam condensate.

"Air pollution" means any detectable concentration of one or more air pollutants in the ambient air that has caused, is causing, or if unabated may cause injury to human, plant or animal life, or injury to property, or which unreasonably interferes with the comfortable enjoyment of life or property.

"Airport" means an airport open to members of the public without prior permission and without restriction, within the physical capabilities of the facility.

"Amended application" means a document which proposes modifications to an existing facility that constitutes a change in operations to that existing site or facility.

"Ancillary equipment" means any device such as, but not limited to, piping, fittings, flanges, valves, and pumps that is used to distribute, meter, or control the flow of material from its point of generation or transport to a storage or treatment tank(s), between material storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal off-site.

“Animal material” means any material derived from animal products that are for consumption by humans or animals. The generators of these products include, but are not limited to, agriculture, food manufacturing and processing industries, restaurants, hospitals and food distributors. Animal material does not include manure.

"Application for a certificate of designation" means all documents, data and drawings which are submitted, for review, by an applicant to a governing body having jurisdiction. The application shall contain the site location, the type of facility, the engineering design and operations report which includes, but is not limited to, geological, hydrological, engineering and operational data for the design, operation, closure and post-closure of the facility. This information shall be prepared in accordance with these regulations and all local requirements.

"Approved site or facility" means a site or facility for which a certificate of designation has been obtained, pursuant to the Act.

"Aquifer" means a geologic formation, group of formations, portion of a formation or unit capable of yielding significant quantities of ground water of usable quantity to wells or springs.

"Areas susceptible to mass movement" means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at beneath, or adjacent to the facility because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil flexion, block sliding, and rock fall.

"Asbestos" means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), amosite (cummingtonite-grunerite), anthophyllite, and actinolite-tremolite.

"Asbestos-containing material" means any material that contains more than one percent (1%) asbestos by weight, area or volume.

“Asbestos-contaminated soil” means soil containing any amount of asbestos.

"Asbestos waste" means any asbestos-containing material whether it contains friable or non - friable asbestos, that is not intended for further use. This term includes but is not limited to asbestos mill tailings, asbestos from pollution control devices, and containers that contain asbestos.

"Asbestos waste disposal area" means an area approved for the disposal of asbestos waste at a solid waste facility, including, but not limited to, a trench or monofill.

"Ash" means the bottom ash, fly ash or air pollution control residues and other residues of the combustion process from the operation of an incinerator or energy recovery facility, including the combustion of any municipal, commercial or industrial solid waste.

"Autoclave" means a strong, pressurized, steam heated vessel used for sterilization. When used as a verb the term means the process of sterilization accomplished through the use of such a vessel.

"Barrier layer" means a continuous layer of material designed and constructed to restrict horizontal and/or vertical migration of leachate from the facility. A "barrier layer" may contain both manufactured and natural materials. The term is also used in cap construction to prevent fluids from migrating vertically through the cap.

"Base flood" means a flood that has a one percent chance of recurring in any year, or a flood of a magnitude equalled or exceeded once in 100 years, on the average over a significantly long period.

"Biohazardous wastes" means all wastes that would otherwise be an infectious wastes but are contaminated with a radioactive or listed hazardous waste.

"Biosolids" means the accumulated residual product resulting from a domestic wastewater treatment works. Biosolids does not include grit or screenings from a wastewater treatment works, commercial or industrial sludges (regardless of whether the sludges are combined with domestic sewage), sludge generated during treatment of drinking water, or domestic or industrial septage.

"Bird hazard" means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injuries to its occupants.

"Cashplus marketable securities" means all the cash plus marketable securities held by the local government on the last day of the fiscal year, excluding cash and marketable securities designated to satisfy past obligations such as pensions.

"Certificate of designation" means a document issued by the governing body having jurisdiction to a person authorizing the use of land for a solid waste disposal site and facility pursuant to the Act. The "certificate of designation", which incorporates all information as may be required by the Department and the governing body having jurisdiction, is then issued by the governing body having jurisdiction if the Department has determined that the minimum standards are met.

"Closed facility" means a solid waste site or facility that has been closed in accordance with provisions of the federal regulations pursuant to Subtitle D of the federal "Resource Conservation and Recovery Act of 1976", as amended, as published in 40 CFR Part 258.60 or in the manner specified in the approved certificate of designation application at the time of approval of the site or facility, or in a closure plan that has been approved by the Department or prior to the enactment of the Solid Waste Disposal Sites and Facilities Act (C.R.S. 30-20-100.5).

"Collect water volume" means to provide storage in channels or basins to allow for controlled discharge.

"Collection facility" as used in Section 16 of these Regulations means any facility that accepts, aggregates and stores used oil, used lead-acid batteries or waste tires generated elsewhere for transport to a location described in Sections 16.4, 16.5 or 16.6 of these Regulations. *[Eff. 07/01/2007]*

"Commercial wastes" means all solid wastes generated by stores, hotels, markets, offices, restaurants, warehouses, construction and demolition debris and other non-manufacturing activities, excluding community and industrial wastes.

"Community wastes" means all solid wastes generated by the noncommercial and nonindustrial activities of private individuals, including solid wastes from households, yards, streets, sidewalks and alleys.

"Compost" means the material or product which is developed under controlled conditions and which results from biological degradation processes by which organic wastes decompose.

"Composting" means the biological process of degrading organic materials that is facilitated and controlled through intentional and active manipulation of piles and windrows. These manipulations may include but are not limited to grinding, mixing of feed stocks and bulking materials, addition of liquids, turning of piles, or mechanical manipulation.

"Compost facility" means a site where compost is produced.

"Compost Feedstock" or **"Feedstock"** means any decomposable organic material used in the production of compost or chipped and ground material including, but not limited to, green wastes, animal

material, manure, biosolids, and solid waste.

"Composite liner" means a liner system consisting of two components: the upper component shall consist of a flexible membrane liner (FML) and the lower component shall consist of a compacted soil layer. The FML component must be installed in direct and uniform contact with the compacted soil component.

"Control water volume" means to discharge at a rate that will not exceed the discharge rate of historic flows at the discharge point or at an appropriate point in the receiving stream.

"Construction and demolition debris facility" means a discrete area of land or an excavation which is designed for the final disposal of solid waste which result from the construction or demolition of a building or structure, such as lumber, bricks, concrete, sheetrock and other similar materials.

"Consumer product" as used in Section 16 of these Regulations means any device that is primarily intended for personal or household use and is typically sold, distributed, or made available to the general population through retail or mail-order distribution. Such term does not include vehicles, motorcycles, wheelchairs, boats, or other forms of motive power. The term does include, but is not limited to, computers, games, telephones, radios, and similar electronic devices. *[Eff. 07/01/2007]*

"Custom mill" means an operation or facility for the extraction of metals or minerals from ores. Such a facility receives its raw materials from one or more sources off-site of the mill property.

"De minimis quantities of used oil" as used in Section 16 of these Regulations means small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations; except that the term shall not include used oil discarded as a result of abnormal operations resulting in substantial leaks, spills, or other releases. *[Eff. 07/01/2007]*

"Debt service" means the amount of principal and interest due on a loan in a given time period, typically the current year.

"Deficit" means the total annual revenues minus total annual expenditures.

"Department" means the Colorado Department of Public Health and Environment.

"Dewatered" means that the material has been subjected to a process that will remove free moisture from the material as determined by the paint filter test.

"Disease vector" means any animal, insect, bacterium or virus capable of transmitting disease, illness or harm to humans.

"Do-It-Yourselfer (DIY)" as used in Section 16 of these Regulations means an individual who residentially generates "do-it-yourselfer" used oil. *[Eff. 07/01/2007]*

"Do-It-Yourselfer used oil collection center" as used in Section 16 of these Regulations means any site or facility that accepts, aggregates and stores residentially generated used oil collected only from do-it-yourselfers. *[Eff. 07/01/2007]*

"DryWeight Basis" means weight calculated on the basis of material having been dried until reaching a constant mass, resulting in essentially a 100 percent solids content.

"Emergency" means an unexpected situation or sudden occurrence of a serious and urgent nature that demands immediate action and that constitutes a threat to life or health, or that may cause major damage to property.

"Emission" means the discharge or release into the atmosphere of one or more air pollutants.

"Engineering design" means the analysis and design work prepared for construction, operation and closure of a solid waste disposal site or facility which may contain a preliminary report of design specifications, maps and plans drawn to a convenient and common scale, provides site or facility operation plans and site or facility closure plans, and contains all information and data otherwise specified by these regulations.

"EP waste disposal facility" means a commercial solid wastes disposal site and facility that accepts the deposit of EP waste. *[Eff. 12/30/2008]*

"Excluded scrap metal" means processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.

"Exemption" means, for the purposes of these regulations, that a facility shall be free or largely free of some permitting obligation as specifically provided in the Colorado Revised Statutes, 30-20-102.

"Existing landfill" means any landfill that has received solid waste as of the effective date of these regulation.

"Exploration and production waste" or **"EP waste"** means exploration and production waste, as that term is defined in section 34-60-103, C.R.S. EP waste is currently defined as wastes that are generated during the drilling of and production from oil and gas wells or during primary field operations and that are exempt from regulation as hazardous wastes under subtitle C of the federal "Resource Conservation and Recovery Act of 1976", 42 U.S.C. sec. 6901 to 6934, as amended. *[Eff. 12/30/2008]*

"Explosive gas" means methane or other combustible gases, generated by decomposition in a facility for solid wastes disposal.

"Facility or solid waste disposal facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for solid waste disposal.

"Facility component" for purposes of Section 5.5, means any part of a facility including equipment. For the purpose of this definition, "facility" means (as defined in Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B):

"any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding: residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of the definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation or building that was previously subject to this subpart is not excluded, regardless of its current use or function."

"Facility structures" means any building, structure, or utility services trenches, temporary or permanent, at a facility for solid wastes disposal.

"Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to strata on the other side.

"Fault displacement" means the relative movement of any two sides of a fault measured in any direction.

"Favorable geologic conditions" means that a site selection shall emphasize tight soils, distance from

ground water, deep aquifers and similar natural features.

"Floodplain" means lowland areas adjacent to inland surface waters that are inundated by the base flood.

"Friable asbestos waste" means any asbestos waste that can be pulverized or reduced to powder by hand pressure when dry.

"Gas condensate" means the liquid generated as a result of gas recovery process[es].

"Governing body having jurisdiction" means the board of county commissioners if a site and facility is located in any unincorporated portion of a county and means the governing body of the appropriate municipality if a site and facility is located within an incorporated area.

"Green Waste" means any plant material that is either separated at the point of generation, or separated at a centralized facility. Green waste includes, but is not limited to, yard trimmings, plant wastes from the food processing industry, untreated wood wastes, paper products and pre-consumer vegetative food waste.

"Ground water" means any water below the land surface in a zone of saturation.

"Ground water protection standard" means those standards established by following 40 CFR 258.55(H) and (I) methodology or standards established by this Department (5 CCR 1002-8).

"Hazardous constituent" means the list of chemical parameters described in Appendix IB and II of these regulations and 6 CCR 1007-3, Part 261.3 Appendix VIII.

"Hazardous waste" means those substances and materials defined or classified as such by the Hazardous Waste Commission pursuant to 25-15-302, C.R.S., as amended.

"Health departments" means the Colorado Department of Public Health and Environment and a local health department if such entity exists.

"High wind warning" means that sustained winds of forty miles per hour (40 MPH) or greater, or gust of fifty five miles per hour (55 MPH) or greater, are expected to persist for one hour or longer, as defined by the National Weather Service.

"Holocene" means the most recent epoch of the quaternary period, extending from the end of the pleistocene epoch to the present.

"Home scrap metal" means scrap metal generated by steel mills, foundries, and refineries, including, but not limited to, turnings, cuttings, punchings, and borings.

"Household waste" means any solid waste generated by households, including single and multiple residences, and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day use recreation areas.

"Incineration" means the combustion of solid wastes in such a way as to:

- (a) Control the air mixture to maintain adequate temperature for efficient combustion; and
- (b) Contain the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and
- (c) Control the emission of combustion byproducts consistent with the standards, rules and regulations

promulgated by the Department's Air Quality Control Commission.

"Incompatible wastes" means wastes which, when mixed, produce heat, pressure, fire, explosion, violent reaction, toxic mist, fumes or gases, or flammable fumes or gases.

"Incorporated into the soil" means the insertion of solid waste beneath the surface of soil or the mixing of solid wastes with the surface soil.

"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 6CCR 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; fertilizer/agricultural chemicals, food and related products/byproducts, 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.

"Inert material" means non-watersoluble and non-putrescible solids together with such minor amounts and types of other materials as will not significantly affect the inert nature of such solids. The term includes, but is not limited to, earth, sand, gravel rock, concrete which has been in a hardened state for at least sixty days, masonry, asphalt paving fragments, and other inert solids.

"Inert material facility" means a site and facility that accepts for disposal exclusively those materials defined herein as inert material.

"Infectious waste" means waste containing pathogens or biologically active material which because of its type, concentration and quantity could present a potential hazard to human health when improperly handled, stored, processed, transported or disposed of.

"Intermediate processing facility" means a facility designed to remove recyclables from unprocessed municipal solid waste.

"Karst terrains" means areas that are characterized by surface and subterranean features, and that are developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include, but are not limited to sinkholes, sinking streams, caves, large springs, and blind valleys.

"Land application facility" means an area where solid wastes are applied onto or incorporated into the soil surface for the purposes of biological degradation, treatment, final disposal, or beneficial purposes.

"Land disposal" as used in Section 16 of these Regulations means placing, discarding, or otherwise disposing of residentially generated solid wastes: [Eff. 07/01/2007]

- (a) In any solid wastes disposal site and facility, transfer station, or treatment, storage or disposal facility operated by the state, a local government, or a private entity; [Eff. 07/01/2007]
- (b) In sewers, drainage systems, septic tanks, surface or ground waters, watercourses, or any body of water; or [Eff. 07/01/2007]
- (c) On the ground. [Eff. 07/01/2007]

"Landfill" means a discrete area of land or an excavation where solid wastes are placed for final

disposal, which is not a land application unit, waste impoundment, or waste pile. Landfills include, but are not limited to, ash monofills, construction and demolition landfills, industrial landfills, sanitary landfills, tire monofills and similar facilities where final disposal occurs.

"Landfill phase" means a subpart of a landfill.

"Lateral expansion" means any horizontal expansion of previously approved waste management unit boundaries for which the Department has not approved as-built construction documents.

"Leachate" means liquid that has passed through or had contact with solid wastes and may contain soluble, miscible, or suspended constituents removed from the wastes.

"Lead-acid battery" as used in Section 16 of these Regulations means a battery that: *[Eff. 07/01/2007]*

(a) Consists of lead and sulfuric acid; *[Eff. 07/01/2007]*

(b) Is used as a power source; and *[Eff. 07/01/2007]*

(c) Is not intended as a power source for consumer products. *[Eff. 07/01/2007]*

"Leak tight" means that solids, liquids, or gases cannot escape or spill out. It also means dust tight.

"Liner" means a continuous layer of natural or man-made materials beneath and on the sides of a waste impoundment or landfill which restricts or prevents the downward or lateral escape of solid waste, its constituents, or leachate. A liner is also used in cap construction to prevent and control vertical movement of fluids.

"Liquid waste" means any waste material that is determined to contain "free liquid".

"Lithified earthen material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include manmade materials, such as fill, concrete, and asphalt, or unconsolidated earthen materials, soil, or regolith lying at or near the earth surface.

"Local governing authority" means the governing body having jurisdiction.

"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.

"Lower explosive limit" means the lowest percent, by volume, of a mixture of explosive gas or gases in air that will propagate a flame at 25°C(77°F) and at standard atmospheric pressure.

"Lubricating oil" as used in Section 16 of these Regulations means the fraction of crude oil or synthetic oil used to reduce friction in motorized equipment. "Lubricating oil" includes rerefined oil. *[Eff. 07/01/2007]*

"Management" means the handling, storage, collection, transportation and disposal of solid waste.

"Manure" means accumulated animal excrement. This includes feces and urine, as well as any bedding material, spilled feed, or soil that is mixed with feces or urine.

"Material recovery facility (MRF)" means a facility designed to receive and process recyclable materials.

"Maximum horizontal acceleration in lithified earth material" means: (1) The maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years; or (2) The maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

"Mechanical" means operated or produced by mechanism or machine. This may include, but shall not be limited to, an excavator, backhoe, grader, tiller, auger, or hand shovel.

"Mill tailings" means an industrial solid waste generated by the mechanical or chemical processing of minerals for subsequent conversion into useable forms such as a metal, a metallic compound, an energy source, or raw material for manufacture.

"Mining waste" means overburden to be discarded and other industrial wastes directly related to the preparation, development and operation of mineral extraction facilities. Mining waste includes only waste material directly connected with the cleaning and preparation of substances mined by an operation are managed at the mine site where they are generated.

"Monofill" means a landfill or section of landfill at which only one type of waste is accepted for disposal.

"Municipal solid waste" 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.

"Municipal solid waste landfill (MSWLF)" means a sanitary landfill where one of the main waste streams accepted is municipal waste.

"Municipal solid waste incinerator ash" means the bottom ash, fly ash or air pollution control residues and other residuals of the combustion process from the operation of incinerator or energy recovery facilities managing municipal solid waste.

"Municipality" means a home rule or statutory city, town, or city and county, or territorial charter city.

"National Priorities List (NPL)" means the list, compiled by the U.S. Environmental Protection Agency pursuant to section 105 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §9605, of uncontrolled hazardous substance releases in the United States that are priorities for long-term remedial evaluation and response. For the purposes of this regulation, this term also includes sites that have been deleted from the NPL following completion of the cleanup, but for which there are required, ongoing operation and maintenance activities (including the implementation of institutional controls).

"Noise pollution" means sound levels radiating from the site boundary, at a distance of twenty five feet (25') or more, in excess of standards established in Sections 101 and 103 of the "Colorado Noise Abatement Act", Title 25, Article 12, Part 1, CRS, as amended.

"Noncommercial burning of trash" means the combustion of solid wastes in accordance with CRS 30-20-110 of the Act.

"Nonfriable asbestos waste" means any asbestos waste other than friable asbestos waste.

"Nuisance conditions" are those which may result from explosive gas, bird hazards, disease vectors, odors, windblown solid wastes or cover materials, open burning, water pollution, air pollution, noise pollution and traffic congestion.

"Open burning" means the uncontrolled or unconfined combustion of solid wastes at a facility for solid waste disposal without the following: Control of combustion air to maintain adequate temperature for

efficient combustion; containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and control of the emission of the combustion products.

"Operator" means the person(s) responsible for the overall operation of a facility or part of a facility.

"OtherCompatible Materials" means the minimum quantity of materials necessary to achieve and maintain an appropriate porosity, moisture level or carbon to nitrogen (C:N) ratio for proper composting. Such materials are limited to Type 1 feedstocks as defined in Subsection 14.1.4 of these Regulations, or other materials approved by the Department and governing body.

"Owner" means the person(s) who owns a facility or part of a facility.

"Passenger tire equivalents" means a conversion measurement that is used to estimate waste motor vehicle tire weights and volume amounts defined as an average sized whole passenger/light truck tire weighing twenty (20) pounds and occupying a volume of four (4) cubic feet. *[Eff. 01/30/2007]*

"Pathogens" means disease-causing organisms.

"Person" means an individual, partnership, private or municipal corporation, firm, board of metropolitan district or other sanitation district, or other association of persons.

"Person" as used in Section 16 of these Regulations means an individual. "Person" shall not include waste haulers, as defined in this Section. *[Eff. 07/01/2007]*

"Pilot" or **"Pilot Project"** means a restricted composting operation at an existing or new facility where the specific purpose is to investigate an alternative feedstock or to research operational methods.

"Point of compliance" as referred to in Section 2.2, 3.2.5 and 3.5 shall be located on land owned by the owner of the site and facility and means either:

- (1) For a landfill, a vertical surface which is not more than 150 meters from the waste management unit boundary as described in the engineering design and operations report: or (2)
- For other sites and facilities a vertical surface that is at the perimeter of the solid waste disposal site and facility boundary.

"Poor foundation conditions" means those areas where geological features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of the facility.

"Practicable solid waste management alternative" means a materials or resource recovery facility, transfer station or any other alternative to the existing landfill, which the owner or operator has determined will, if utilized as an alternate disposal site to solid waste management alternative:

- (1) Increase customer's cost for solid waste management services by less than 100%; or
- (2) Not result in a solid waste management cost to the local government owner or operator which exceeds one percent of that local government's total annual budget.

"Preliminary report" means an initial report prepared by qualified professionals, including geologists, land surveyors, ground water specialists, engineers and others which contains technical information regarding geologic, engineering and hydrologic data and site information, and other data which the Department deems necessary.

"Processed scrap metal" means scrap metal that has been manually or physically altered to separate

it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes, but is not limited to:

- (a) Scrap metal that has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type; and
- (b) Fines, drosses, and related materials that have been agglomerated.

“Processed Solid Waste” means the material from a post collection solid waste stream that has been separated for use in the composting process.

“Processing” means performing a type of solid waste disposal, including but not limited to incineration, and composting.

“Promptsrap metal” means scrap metal generated by the metal working or fabrication industries, including, but not limited to, turnings, cuttings, punchings, and borings. “Promptsrap metal” includes industrial metal scrap and new scrap metal.

“Putrescible wastes” means those solid wastes that contain organic matter capable of being decomposed by microorganisms, and of such a character and proportion as to be capable of attracting or providing food for birds or disease vectors.

“Qualified ground water scientist” is a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in ground water hydrology, and related fields as may be demonstrated by state registration, professional certifications, professional experience or completion of accredited university programs that enable that individual to make sound professional judgements regarding ground water monitoring, contaminant fate and transport, and corrective action.

“Recyclable materials” means any type of discarded or waste material that is not regulated under Section 25-8-205(1)(e), C.R.S., and can be reused, remanufactured, reclaimed, or recycled but not including recycled auto parts or excluded scrap metal that is being recycled, or scrap that is composed of worn out metal or metal product that has outlived its original use, commonly referred to as obsolete scrap.

“Recycling facility” means a separate facility, or a part of a solid waste disposal facility, where recycling operations are conducted. *[Eff. 07/01/2007]*

“Recycling operation” means a separate facility, or a part of a solid waste disposal facility at which recyclable materials may be separated from other materials for further processing or marketing.

“Remediation” or **“Remediate”** means a cleanup or removal to prevent or minimize the possible current or future release of hazardous substances to prevent an unacceptable threat to present or future public health, welfare or the environment.

“Remedy” or **“Remedial action”** means those actions consistent with a permanent remedy taken instead of, or in addition to, removal action in the event of a release or threatened release of hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health and welfare or the environment. The term includes, but is not limited to, such actions at the location of the release as storage, confinement, perimeter protection using dikes, trenches or ditches, clay cover, neutralization, cleanup of released hazardous substances and associated contaminated materials, recycling or reuse, diversion, destruction, segregation of reactive wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and runoff, on-site treatment or incineration, provision of alternative water supplies, any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment, and, where appropriate, post-removal site control

activities. The term includes the costs of permanent relocation of residents and businesses and community facilities (including the cost of providing "alternative land of equivalent value" to an Indian tribe pursuant to CERCLA section 126(b)) where the U.S. Environmental Protection Agency determines that relocation is more cost-effective than, and environmentally preferable to, the transportation, storage, treatment, destruction, or secure disposition off-site of such hazardous substances, or may otherwise be necessary to protect public health or welfare; the term includes off-site transport and off-site storage, treatment, destruction, or secure disposition of hazardous substances and associated contaminated materials.

"Remove" or "Removal" means the cleanup or removal of released hazardous substances from the environment; such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment; such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances; the disposal of removed material; or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. The term includes, in addition, without being limited to, security fencing and other measures to limit access, provision of alternative water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for, action taken under section 104(b) of CERCLA, post-removal site control, where appropriate, and any emergency assistance which may be provided under the Disaster Relief Act of 1974.

"Residentially generated" as used in Section 16 of these Regulations means used lead-acid batteries, used oil, and waste tires generated by a person or by removal of said items from a personal vehicle not used primarily for a commercial or business purpose. *[Eff. 07/01/2007]*

"Residual sludge" means solids, semi - solids or liquids remaining in a waste impoundment after final evaporative or other treatment or storage of the waste is completed, or which may be dredged out during the active life.

"Response activity" means remove, removal, remedy, or remedial action, including enforcement activities related thereto.

"Retailer" as used in Section 16 of these Regulations means any corporation, limited liability company, partnership, individual, sole proprietorship, joint-stock company, joint venture, or other private legal entity that engages in the sale of new lead-acid batteries, lubricating oil, or new tires directly to the end user. *[Eff. 07/01/2007]*

"Run-off" means any precipitation or surface water that has not contacted solid waste material and that drains over land from any part of a facility.

"Run-on" means any precipitation or surface water that drains over land on to any part of a facility.

"Sanitary landfill" means a discrete area of land or an excavation for which the final disposal of solid waste employs a method to obtain the most dense volume practicable of the waste and covering with earth or other suitable material. A sanitary landfill may receive household waste, community waste, municipal solid waste, commercial waste, and industrial waste.

"Saturated zone" means that part of the earth's crust in which all voids are filled with water.

"Scrap tire" means a tire that is no longer used for its original purpose.

"Scrap tire recycling" means the sale of scrap tires in the used tire market, the sale of tire casings or carcasses for retreading purposes, or the extraction of useful materials or energy from the tires through thermal, chemical, or physical processing.

"Secondary lead smelter" as used in Section 16 of these Regulations means a facility that recycles

lead-bearing scrap materials into elemental lead or lead alloys by smelting. [Eff. 07/01/2007]

"Seismic impact zone" means an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull will exceed 0.10G in 250 years.

"Self-certification checklist" means a checklist of regulatory requirements applicable to entities affected by one or more Sections of these Regulations. [Eff. 07/01/2007]

"Shredded circuit boards" means shredded electronic circuit boards that:

- (a) Are stored in containers that are sufficient to prevent any release to the environment prior to recovery; and
- (b) Do not contain mercury switches, mercury relays, nickel-cadmium batteries, or lithium batteries

"Significant" means, in the context of differentiating between liquid or semisolid waste streams, a difference of one order of magnitude in the concentration of any constituent.

"Site" or **"solid waste disposal site"** means the location for a facility chosen based upon geologic, hydrogeologic and operational considerations. For the purpose of Section 5.5 of this regulation, "site" means the area or areas where soil-disturbing activities are occurring or will occur.

"Site boundary" means the outermost perimeter of a solid waste disposal site and facility, as designated pursuant to the Act.

"Sludge" means any solid or semi - solid waste generated by municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, that has been treated to obtain pathogen destruction, odor control, or putrescibility control.

"Soil - disturbing activities" means excavation, grading, tilling, or any other mechanical activity used to disturb the soil.

"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 8, CRS or materials handled at facilities licensed pursuant to the provisions on "Radiation Control Act" in Title 25, Article 11, CRS. "Solid waste" does not include: (a) Materials handled at facilities licensed pursuant to the provisions on radiation control in Article 11 of Title 25, C.R.S.; or (b) Excluded scrap metal that is being recycled; or (c) Shredded circuit boards that are being recycled.

"Solid waste disposal" means the storage, treatment, utilization, processing, or final disposal of solid wastes.

"Solid waste disposal site and facility" means the location and/or facility at which the deposit and final treatment of solid wastes occur.

"Solid waste incinerator ash" means the bottom ash, flyash or air pollution control residues and other residuals of the combustion process from the operation of incinerator or energy recovery facilities managing solid waste.

"Source Separated" means solid waste segregated at the point of generation for special handling,

disposal, composting or recycling.

"Structural component" means liner, leachate collection system, final cover, run-on/run-off control system, or any other component which is used in the construction and operation of the facility and are necessary for protection of human health and the environment.

"Structurally rigid container" means a container capable of maintaining its shape when unsupported.

"Surface water" means water that flows on the land surface, or is tributary to such water.

"Tank" means a stationary device, designed to contain an accumulation of material, that is constructed primarily of non-earthen materials (e.g. wood, concrete, steel, plastic) that provide structural support.

"Tank system" means storage or processing tank(s) and associated ancillary equipment and containment system(s).

"Three year rolling average" means for an existing recycling facility an arithmetical average of the quantity (by weight or volume) of recyclable materials recycled at the facility during the previous three calendar years. This average shall be updated each calendar year. A new recycling facility shall use its first year's quantity for its second year's quantity, and the average of its first two years' quantities to calculate its third year's quantity. Thereafter it shall use the most current three years' average.

"Tire" means a pneumatic rubber covering designed to encircle the wheel of a motor vehicle, as such term is defined in Section 42-1-102 (58) C.R.S., in which a person or property is or may be transported or drawn upon a highway. *[Eff. 01/30/2007]*

"Tire" as used in Section 16 of these Regulations means a pneumatic rubber covering designed to encircle the wheel of a vehicle in which a person or property is or may be transported or drawn upon a highway. *[Eff. 07/01/2007]*

"Total expenditures" means all expenditures excluding capital outlays and debt repayment.

"Total revenues" means revenues from all taxes and fees but does not include the proceeds from borrowing or asset sales, excluding revenue from funds managed by the local government on behalf of a specific third party.

"Transfer station" means a facility at which refuse, awaiting transportation to a disposal site, is transferred from one type of containerized collection receptacle and placed into another or is processed for compaction.

"Transportation" means transport of persons or property by motor vehicle, bus, truck, railroad, light rail, mass transit, airplane, bicycle, or any other form of transport. Transportation includes pedestrian transportation. *[Eff. 01/30/2007]*

"Treatment" means performing a type of solid waste disposal, which includes but is not limited to, shredding, baling, liquid evaporation, and nonbeneficial sludge landspreading.

"Underground source of drinking water" means an aquifer or its portion:

- (a) Which supplies any public water system, or which contains a sufficient quantity of ground water to supply a public water system; and
- (b) Currently supplies drinking water for human consumption, or contains fewer than 10,000 mg/l total dissolved solids.

"Unstable area" means a location that is susceptible to natural or man - induced events or forces capable of impairing the integrity of some or all of the landfill structural components which are necessary for the prevention of releases from a landfill. "Unstable areas" can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.

"Uppermost aquifer" means the aquifer nearest the ground surface as well as other aquifers which are hydraulically connected with this aquifer within the facility boundary or adjacent to the facility boundary.

"Used lead-acid battery" as used in Section 16 of these Regulations means any lead-acid battery that is no longer functional or no longer used for its primary purpose. *[Eff. 07/01/2007]*

"Used oil" as used in Section 16 of these Regulations means any residually generated motor oil, refined from crude oil or a synthetic oil, that has been used and as a result of that use is contaminated by physical or chemical impurities. *[Eff. 07/01/2007]*

"Vermicomposting" means an activity that produces earthworm castings through earthworm activity associated with consumption of organic materials.

"Visible emissions" means emissions which contain asbestos fibers, are visually detectable without the aid of instruments and arise from any portion of an asbestos waste disposal area including but not limited to any soils, bags and containers.

"Visible emissions" means any emissions which are visually detectable without the aid of instruments, coming from material containing asbestos, asbestos waste, asbestos-contaminated soil, or from handling and disposal of asbestos waste, material containing asbestos or asbestos-contaminated soil.

"Waiver" for the purposes of these regulations shall mean a formalized process whereby an applicant may request to be excused from specific portions of these regulations. In general a defensible technical argument must be presented and verified before a waiver may be granted.

"Washout" means the carrying away of solid waste by waters of the base flood.

"Waste hauler" means any individual or any employee or agent of a partnership, private, county, or municipal corporation, firm, board of a metropolitan district, or other association of persons that haul waste under contract, agreement, or as otherwise provided by law, to solid wastes disposal sites and facilities. *[Eff. 01/30/2007]*

"Waste impoundment or impoundment" means a facility or part of a facility that is a natural topographic depression, excavation, pit, pond, lagoon, trench, or diked area. An impoundment, which may be lined with earthen material or synthetic material, is designed for storage, treatment or final disposal of solid waste. Examples of impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

"Waste management unit boundary" means a vertical surface located at the hydraulically downgradient limit of the area to be filled. This vertical surface extends down into the uppermost aquifer.

"Waste motor vehicle tire" means a tire used for a motor vehicle, as such term is defined in Section 42-1-102 (58), C.R.S. (except that motor vehicle shall not include motorcycles), which is no longer suitable for its original intended purpose because of wear, damage, or defect. *[Eff. 01/30/2007]*

"Waste motor vehicle tire hauler" means a person who commercially transports waste motor vehicle tires for compensation. *[Eff. 01/30/2007]*

"Waste motor vehicle tire monofill" means any duly licensed and permitted solid wastes disposal site and facility or section of solid wastes disposal site and facility at which waste motor vehicle tires are

accepted. [Eff. 01/30/2007]

“Waste motor vehicle tire recycling facility” means a commercial waste motor vehicle tire management facility that is regulated under the Recycling Section 8 of these Regulations (6 CCR 1007-2). [Eff. 01/30/2007]

“Waste motor vehicle tire storage site” means a commercial waste motor vehicle tire management facility that is regulated under the Scrap Tire Facilities Section 10 of these Regulations (6 CCR 1007-2). [Eff. 01/30/2007]

“Waste pile or pile” means any noncontainerized accumulation of solid, non-flowing waste that is used for treatment or storage or processing.

“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 inspection.

“Waste tire” means a light-duty whole tire used on a passenger-type vehicle or truck that is no longer suitable for its original intended purpose because of wear, damage, or defect. “Waste tire” does not include waste tires from any device moved exclusively by human power. [Eff. 01/30/2007]

“Waste tire monofill” as used in Section 16 of these Regulations means any solid wastes disposal site and facility having been issued a Certificate of Designation from the local governing body having jurisdiction or section of solid waste disposal site and facility at which only waste tires are accepted. [Eff. 07/01/2007]

“Water pollution” means the manmade or man-induced alteration of the background physical, chemical, biological or radiological integrity of ground water or surface water.

“Water treatment plant sludge disposal” means the final disposal of the accumulated solids from the processing of raw water in a treatment plant of a municipality or industry.

“Wetlands” means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

“Wetlands” generally include swamps, marshes, bogs, and similar areas.

“Wholesaler” as used in Section 16 of these Regulations means any corporation, limited liability company, partnership, individual, sole proprietorship, joint-stock company, joint venture, or other private legal entity that sells new lead-acid batteries, lubricating oil, or new tires for resale. [Eff. 07/01/2007]

“Within Vessel Composting” means a process in which compostable material is enclosed in a drum, silo, bin, tunnel, reactor, bag, or other container for the purpose of producing compost.

“Working day” means Monday through Friday and including holidays that fall on any of the days Monday through Friday.

“Working face” means that portion of a facility for solid wastes disposal where solid wastes are actively unloaded, placed, compacted and covered, at any time of operation.

“Yard Waste” means waste generated from yard maintenance, including garden waste, grass clippings, leaves and branches.

“Yards per day” means the cubic yardage of material a facility receives at the gate, for each 24 hour

period.

"100 Year flood" means a flood that has a 1 percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years, also called (base flood).

1.3 SCOPE AND EFFECTIVE DATE

1.3.1 These regulations are based on the authorities defined and established in the Solid Waste Act, 30-20-100.5, et seq . C.R.S. Under that statute, the siting, permitting and regulation of solid waste disposal sites and facilities is an area of dual jurisdiction; that is, both the Department and local governing bodies having jurisdiction have assigned roles and responsibilities. Due to the dual nature of this process, effective coordination and communication are important to both governmental agencies involved in decisions, approvals and enforcement. The department recognizes that a cooperative relationship must be established with the governing bodies having jurisdiction or with the agency or agencies identified by such bodies as contacts for their jurisdiction. However, these regulations cannot and do not assign to any agency authorities not granted them in statute; nor can these regulations negate or change any authority granted to a local agency under any other statute, regulation or ordinance.

1.3.2 The effective date of these regulations shall be October 9, 1993, with these exceptions.

- (A) The financial assurance requirements contained in Section 1.8 of these regulations shall be effective on the date specified in 30-20-104.5(4) C.R.S.
- (B) The location, design, operation, closure and post-closure requirements, contained in Sections 3.1, 3.2, 3.3, 3.5 and 3.6 respectively:
 - (1) Shall be effective April 9, 1994, for existing municipal solid waste landfills that have accepted and continue to accept 100 tons of solid waste per day or less; and,
 - (2) Shall be effective October 9, 1995, for existing municipal solid waste landfills that, on or before April 9, 1994, submit an application for a waiver under Section 1.5.3.
- (C) Provided no solid waste is accepted on or after April 9, 1994, the final cover requirements contained in Section 3.5 shall be effective October 9, 1994, for existing municipal solid waste landfills that have accepted and continue to accept 100 tons of solid waste per day or less.
- (D) Provided no solid waste is accepted on or after October 9, 1995, the final cover requirements contained in Section 3.5 shall be effective October 9, 1996, for existing municipal solid waste landfills that, on or before April 9, 1994, submit an application for a waiver under Section 1.5.3.
- (E) Unless a further extension is granted by the Department, the ground water monitoring and corrective action requirements contained in Section 2.2.:
 - (1) Shall be effective October 9, 1994, for existing units or lateral expansions of existing units at municipal solid waste landfills that have accepted and continue to accept 100 tons of solid waste per day or less; and,
 - (2) Shall be October 9, 1995 for new units or lateral expansions or existing units at municipal solid waste landfills that, on or before April 9, 1994, submit an application for a waiver under Section 1.5.3.

All extensions of the ground water and corrective action requirements, beyond the dates

listed in (1) and (2) above, shall be based upon the criteria specified in 40 CFR 258.50 and shall in no way extend beyond October 9, 1996, or otherwise violate the requirements of Subtitle D of RCRA.

(F) In the event an application submitted under subsections (B)(2), (D) or (E)(2) is denied by the Department that municipal solid waste landfill shall comply with all applicable requirements within six (6) months of said denial.

- 1.3.3 No person shall operate a facility for solid waste disposal, where processing, treatment, or final disposal is performed, at any site without a certificate of designation obtained from the governing body having jurisdiction except as specified in 30-20-102 C.R.S. as amended.
- 1.3.4 Sites for new solid waste disposal sites and facilities shall comply with these regulations, unless compliance with specific standards is waived by the Department in accordance with Section 1.5 of these regulations.
- 1.3.5 The construction, operation and closure of all new facilities for solid waste disposal shall comply with designs, specifications and procedures outlined in the certificate of designation application, or in amendments to such applications approved after Department review, and with all applicable local requirements, and with the standards of these regulations.
- 1.3.6 The construction, operation and closure of all approved facilities for solid waste disposal that were granted a certificate of designation before there were requirements for an engineering design and operations report or that are in operation on the effective date of these regulations, shall comply as a minimum with standards in Section 2 of these regulations.
- 1.3.7 Solid waste disposal sites and facilities that are exempted from certificate of designation requirements under provisions of Section 1.4 of these regulations shall comply with the applicable standards of these regulations, unless permitted or operated in compliance with regulations pursuant to the "Colorado Mined Land Reclamation Act", Title 34, Article 32, Section 101, et seq., CRS, as amended; or the "Hazardous Waste Act", Title 25, Article 15, Parts 1, 2, and 3, CRS, as amended.
- 1.3.8 Technical guidelines, including specific technical factors, may be developed and issued by the Department to assist applicants, local governments, and the public.
- 1.3.9 (A) All solid waste disposal sites and facilities are reviewed and approved for a specific owner/operator; a specific waste stream; a specific design; a specific operation plan. Significant changes to the above are required to be approved by the Department. Such approval or denial shall become a part of the operating record. The information describing changes relating to the above items shall be submitted and described in appropriate detail and in a clear and concise format. This is required in order to maintain current information and status on sites and facilities for monitoring and enforcement purposes.
- (B) Sites and facilities subject to 40 CFR Part 258 shall submit a compliance information applicable to their site for the compliance plan per Section 3.0.
- (C) Nothing in this section shall preclude any review action by the local governing authority under 30-20-100.5 et seq. or appropriate local ordinance or rule.
- 1.3.10 Statements of the basis and purpose for these regulations have been prepared and adopted by the board of health, and hereby incorporated into these regulations by reference, pursuant to the "Colorado Administrative Procedures Act", Title 24, Article 4, Section 103, C.R.S. 1973, as amended. A statement of basis and purpose for each change in the regulations is drafted to give the reasons for the regulatory change enacted. Copies are on file with the Department.

1.3.11 These regulations shall apply to all solid waste disposal sites and facilities as provided for in CRS 30-20-100.5 and herein.

(A) The minimum standards (Section Two) shall apply to all sites and facilities.

(B) Section 3.0 shall apply to all solid waste disposal landfills and facilities.

(C) Sections 4 through Section 13 are specific to specific waste streams and facilities.

Section Two is meant to be used in conjunction with all other sections. The Department recognizes that all the criteria may not be applicable to all sites, facilities or waste streams.

1.4 EXEMPTIONS

Notwithstanding the provisions in Section 1.3 of these regulations, the following facilities for solid wastes disposal shall be approved sites and/or facilities for which obtaining a certificate of designation under provisions of these regulations shall not be necessary for:

1.4.1 Those sites and facilities at which any person, other than a governmental unit, disposes of his own solid wastes on his own property; provided that the Department has determined, based upon review of an engineering design and operations report prepared and submitted by the operator in accordance with Sections 3.1, 3.2, and 3.3 of these regulations, that the disposal operation will comply with the Act and the applicable regulations of the Department.

1.4.2 Those facilities for solid waste disposal at which any person engaged in mining operations permitted by the Colorado Mined Land Reclamation Board, pursuant to the "Colorado Mined Land Reclamation Act" , Title 34, Article 32, Section 101, et seq. , CRS 1973, as amended, and its regulations, performs solid waste disposal of mining or other solid wastes generated by such operations within the permitted area for such operations.

1.4.3 Any site and facility operated for the purpose of processing, reclaiming, or recycling recyclable materials shall not be considered a solid wastes disposal site and facility and shall not require a certificate of designation as a solid wastes disposal site and facility; however, a site or facility shall establish an initial accumulation period and shall maintain documentation that proves recyclable materials are being recycled at the site at a rate that approximately equals that rate at which recyclable materials are being collected. Regulations will specify what time periods and volumes of recyclable materials constitute operations that qualify for this exemption and define what materials shall be deemed recyclable materials. Except that recyclable materials shall not include materials that are likely to contaminate ground water or create off-site odors as the result of processing, reclaiming, recycling, or storage prior to recycling.

1.4.4 Those sites where sludge is used beneficially as a fertilizer, soil conditioner, fuel or livestock feed, provided the sludge is certified to have met all applicable regulations of the Department and the Department of Agriculture. In addition, the use of manure as a fertilizer or soil conditioner or the composting on the site of generation of manure with other compatible materials necessary for effective composting as part of standard agricultural practice shall not require a certificate of designation.

1.4.5 Those facilities for hazardous waste disposal that have been issued a certificate of designation pursuant to Title 25, Article 15, Parts 1, 2, and 3, CRS, as amended, and its regulations.

1.4.6 Transfer stations, which shall not be deemed to be a solid waste disposal site and facility, shall not require a certificate of designation and shall meet standards as set forth in Section 7.

1.5 WAIVER PROCESSES AND PROCEDURES

- 1.5.1 If an applicant wishes to request a waiver of any provision of these regulations, written documentation requesting such waiver or waivers shall be submitted to the Department and the local governing authority. Waiver requests shall be site-specific and shall list those regulations or requirements for which a waiver is being requested. The waiver request shall supply sufficient technical information in a clear and concise format to justify the applicant's request.

Minimum information required for a waiver request shall consist of:

- (A) Name and address of the applicant and the owner
- (B) Site address and legal description
- (C) Site or facility name
- (D) County and township, range, section where the site is located.
- (E) Type, size, expected active life and operational history of the facility
- (F) Geological, hydrologic, and engineering and other such information necessary to support the applicants waiver request
- (G) The specific regulatory subsections for which the waiver request is being filed.
- (H) Any alternative requirements or performance standards offered in place of the standards requested to be waived.

- 1.5.2 Based upon written specific waiver documentation, in their consideration of an application, and in the exercise of their regulatory authority to assure compliance with these regulations, the Department after consultation with the governing body having jurisdiction may waive compliance with standards in Sections 2,3,4,5,6,7,8,9,10,11,12 and 13 provided that the application satisfies criteria (A) and (B) and (C) and (D) below:

- (A) The benefits derived from meeting a standard do not bear a reasonable relationship to the economic, environmental, and energy impacts or other factors which are particular to the facility; and
- (B) Such waiver is consistent with the purposes of the Act and these regulations; and
- (C) Such waiver is not deemed to constitute a major variation from the requirements of these regulations; and
- (D) The waiver will not cause or allow the violation of any air or water quality standard or federal or local restrictions.

- 1.5.3 The Department after consulting with the governing body having jurisdiction, shall waive compliance with the requirements of Section 3.2, "Design Criteria" and Section 2.2, "Ground Water Monitoring and Corrective Action" , by owners or operators for new municipal solid waste landfill units, existing MSWLF units and lateral expansions for which the owner or operator has submitted written specific waiver documentation that adequately demonstrates that:

- (A) Such owners or operators dispose of less than twenty (20) tons of municipal solid waste daily. The twenty tons per day shall be measured as an annual aggregate average; and
- (B) Certification that the hydrogeologic characteristics of the media beneath the site area are such that migration of contaminants from the facility into off-site ground water are unlikely.

A minimum criteria will be that the soils beneath the site have a minimum permeability of at least 1×10^{-6} cm/sec and the distance to the nearest aquifer is such that ground water contamination is unlikely; or

(C) There is no evidence of existing ground water contamination from the MSWLF unit indicated by contamination of a well utilizing the uppermost aquifer and located at or adjacent to the mswlf unit boundary. Documentation to fulfill this characterization requirement can consist of independent field study, or

(1) That no evidence of leachate was indicated through tests utilizing a piezometer at the point of compliance, or

(2) That no evidence of leachate was indicated through a test utilizing a wet/dry monitor at the point of compliance, or

(3) Ground water contamination from the unit is determined not to exist or not likely to occur through use of any other test agreed to by the applicant and department; and

(4) The MSWLF unit serves a community that experiences an annual interruption of at least three consecutive months of surface transportation that prevents access to a regional waste management facility; or

(5) The MSWLF unit serves a community that has no practicable waste management alternative and the landfill unit is located in an area that annually receives less than or equal to 25 inches of precipitation.

1.5.4 A waiver is granted based upon data and information submitted at a given point in time. Anytime that the facility which has been operating under a waiver granted by the Department can no longer meet the waiver criteria, the waiver is void and ceases to exist.

1.6 APPLICATION FOR CERTIFICATE OF DESIGNATION

1.6.1 Any person proposing to operate a facility for solid wastes disposal within the unincorporated portion of any county shall apply to the commissioners of the county in which the site is to be located for a certificate of designation and any person proposing to operate a facility for solid waste disposal within the corporate boundaries of a municipality shall apply to the governing body of that municipality for a certificate of designation.

1.6.2 On the date of its submittal, the application shall be accompanied by a non-refundable fee which has been established by the governing body having jurisdiction and which is based on the costs incurred by that body in the application review and approval processes. The application shall be accompanied by at least five (5) copies or as many additional copies as specified by local requirements, of an engineering design and operations report prepared in accordance with these regulations, unless the proposed solid waste disposal facility is a privately operated Solid Waste-to-Energy Incineration facility not under contract to a county and/or municipality or is a solid waste incineration facility, in which case Sections 1.6 and 11.2 through 11.5 shall apply. The application shall also include all other documents specified by local requirements. After receipt of an application, the governing body having jurisdiction shall forward copies of the application and at least five (5) copies of the engineering design and operations report to the Department for review and a recommendation for approval or disapproval.

1.6.3 Recommendations on certificate of designation applications, including the engineering design and operations report, shall be based upon compliance with the Act and these regulations.

- 1.6.4 The Department shall conduct a technical review of each application for a certificate of designation for a solid waste disposal site and facility. This review shall have two parts which are defined in the following subsections.
- 1.6.5 An application for a certificate of designation for a proposed solid wastes disposal site and facility shall be reviewed by the Department to determine if the contents of the application are complete as submitted.
- (A) The Department shall make an initial decision concerning the completeness of the application and its associated technical documents within thirty (30) days of the receipt of the application as a referral from the local governing body having jurisdiction. The Department shall base this decision on the content of the application, as submitted. The Department shall notify the applicant and local governing body having jurisdiction whether or not the comprehensive technical evaluation of the application will proceed. This notice shall be provided in writing to both the applicant and the local governing body having jurisdiction.
 - (B) If the Department fails to provide the applicant and the local governing body having jurisdiction with its written decision concerning the completeness of the application within the specified thirty (30) day period, the application will proceed through the comprehensive review described in Subsection 1.6.6 below.
 - (C) This initial decision from the Department concerning the completeness of the application will be based only on the completeness of the application as submitted and shall not imply nor indicate anything about the outcome of the subsequent comprehensive technical review. An affirmative decision concerning completeness shall not prevent the Department from asking that the applicant provide additional information or clarifications of the information contained in the application as submitted during the comprehensive technical review described in Subsection 1.6.6 below.
- 1.6.6 (A) An application for a certificate of designation for a proposed solid wastes disposal site and facility and associated technical documents which have been determined to be acceptable with regard to completeness shall, then, undergo a comprehensive technical evaluation to determine whether the site and facility, as proposed and documented in the submitted information, can meet the requirements of these regulations and the statute under which the regulations were adopted. This comprehensive technical review shall be the basis for the recommendations of the Department to the local governing body having jurisdiction concerning approval or disapproval of the proposed site and facility. Any technical conditions of approval made by the Department in its final report shall be incorporated as requirements in the certificate of designation.
- (B) The Department shall complete the comprehensive technical review of each application for a solid waste disposal site and facility within one hundred and fifty (150) days after the completeness review period, specified in Subsection 1.6.6 above, has elapsed.
- 1.6.7 (A) For each application, upon the completion of the review discussed in Subsection 1.6.6 above, the Department shall evaluate the work load already assigned to solid waste application review staff and the approximate length of time needed to complete these assignments. If it is determined that a comprehensive technical review of an additional application can not be completed within one hundred and fifty (150) days, the Department shall select a contractor from a list of qualified contractors to participate in the review of the application.
- (B) Upon selection for participation in the comprehensive technical review of an application for a certificate of designation for a specific solid waste disposal site and facility, the contractor selected shall receive from the Department a copy of all documents submitted as part of the application and shall provide to the Department within seven (7) days of selection: (1) A written statement which verifies that no conflict of interest exists with regard to

contractor's previous or current activities and the site or applicant in question in that comprehensive technical review; (2) A work plan which identifies the personnel and schedule for the technical review of the specific application and technical documents submitted as part of that application; and (3) And estimate of the cost for that review based on the contractor's current hourly rates and estimates of work required to participate in the technical evaluation of the application.

- (C) Upon receipt of the information identified in (B) above, the applicant shall be notified of the contractor selected and shall indicate whether or not that contractor is acceptable based on the information provided in (B) above. The applicant shall provide to the Department in writing the decision to accept or reject the contractor within two (2) working days after the contractor's submittal is received. If no such decision is received, the contractor selected will be assigned the work.
- (D) If the first contractor is rejected by the applicant, a second and final contractor will be selected from the list of qualified contractors and the process contained in Subsection 1.6.8 (B) and (C) above will be repeated.
- (E) If neither of the two contractors proposed is accepted, the applicant shall be deemed to have waived the one hundred fifty (150) day review period and the Department will review the application as quickly as the existing work load allows.
- (F) An applicant may request that the Department conduct the technical review of an application rather than submit it for review to a contractor. In this case the one hundred fifty (150) day time frame for the technical review is deemed to have been waived and the Department will complete the review as quickly as the existing work load allows.

1.7 SOLID WASTE AUTHORIZATION AND FEES [Eff. 03/30/2008]

1.7.1 Authorization The Department is authorized per Section 30-20-109, CRS, as amended, to collect various types of fees to fund specified portions of the solid waste program activities and functions. These fees shall be collected and used as defined in the following subsections. **The following fees will be effective on April 1, 2008:**

1.7.2 Document Review and Activity Fees:

- (A) **Applicability:** All "Facilities" and "Solid waste disposal sites and facilities" , as defined in Section 1.2 of these regulations, and all facility types listed in Section 1.7.3 of these regulations are subject to the following fees:
 - (1) **Document Review Fees:** The document review fees shall provide reimbursement to the Department for professional staff and administrative personnel time spent reviewing, evaluating and responding to documents submitted or required to be submitted in connection with open, closed, new, or existing solid waste sites and facilities including, but not limited to, the following:
 - (a) New applications for solid wastes disposal site and facilities;
 - (b) Amendments to an original application upon which a certificate of designation has been issued;
 - (c) Remediation activities concerning open, closed, or old disposal sites or spill and incident cleanups;
 - (d) Monitoring reports from open or closed facilities requiring monitoring;

- (e) Design and operations plans and amendments or modifications thereto;
- (f) Closure and post-closure plans and modifications;
- (g) Environmental Covenants or associated documents required under § 25-15-320, C.R.S., and
- (h) Construction submittals subject to review.

(2) **Activity Fees:** The activity fees shall provide reimbursement to the Department for professional staff and administrative personnel time spent on open, closed, new, or existing solid waste sites and facilities including the following activities related to (A)(1)(a-h) above:

- (a) Pre-operation site visit/investigation of solid waste disposal sites and facilities;
- (b) The attendance of Department staff at meetings and hearings concerning such applications or amendments meetings;
- (c) Preparing for meetings;
- (d) Negotiations;
- (e) Responding to questions or information requested at meetings with the facility or the facility's representatives;
- (f) Preparation for and attendance at public meetings or hearings; and
- (g) Responding to questions or information requested at public meetings or hearings.

(3) For purposes of this section, the following terms shall have these meanings:

- (a) "Evaluating" includes time spent determining whether the document is complete and adequate for its intended purpose and/or complies with regulatory requirements and may include time spent on site visits, as appropriate;
- (b) "Responding" includes Department determinations to, approve with conditions or modifications, request additional information, or disapprove, revoke, reissue, terminate or deny the permit, closure plan or other document;
- (c) "Reviewing" includes reviews of information submitted to the Department by the facility or its agents, regardless of whether the documents require a determination by the Department;
- (d) "Public meeting" means a hearing that has been publicly noticed.

(4) For purposes of this section, the Department will begin charging the facility for pre-permit application meetings and review of documents beginning with the third meeting between the Department and the facility, regardless of whether the facility files a permit application.

(5) In addition to the document review and activity fees specified above, the facility will reimburse the Department for any legal fees incurred by the Department associated with (1) and (2) above, in the amount the Department is then paying for legal representation to the Colorado Attorney General.

(6) The document review and activity fee shall be reviewed annually by the Director and a report shall be provided to the Solid and Hazardous Waste Commission including information supporting that the fee is both equitable to the regulated community and is sufficient to recover reasonable program expenses incurred thereby.

(B) **Schedule:** Solid waste sites and facilities that are subject to the document review and activity fees under paragraph (A) of this section shall pay an hourly charge of \$125 for departmental staff and administrative time. The Director shall establish a time-keeping system and shall make available to the owner/operator of the facility a record of those activities for which the owner/operator has been charged.

(1) The document review and activity fee of each type of regulated unit shall not exceed the ceilings noted in the schedule below. For facilities with more than one regulated unit, the maximum document review and activity fee is the sum of the ceiling fees for each unit at the facility.

(2) The department may, on a case-by-case basis and upon demonstration of need consistent with section 25-15-301.5, request a waiver of the ceiling fee from a solid waste site and facility subject to the document review and activity fee.

DOCUMENT REVIEW AND ACTIVITY FEES SCHEDULE

Task	Ceiling Fee
Notification/Registration/ Bonds	\$1,000
Certificate of Designation Application	\$35,000
Design and Operation Plan Modification	\$25,000
Construction CQA Report	\$5,000
Ones Own Waste Design & Operation Plan	\$35,000
Audit Reports	\$5,000
Financial Assurance – Annual	\$3000
Financial Assurance – 5 yr	\$5000
Monitoring Reports (e.g., groundwater landfill gas, remediation's)	\$3,000
Corrective Action, Remediation & Pilot Project Plans (e.g., gas, groundwater, geotechnical, storm-	\$10,000/calendar year

water, site visit, meetings etc.)	
Closure Plans and modifications	\$5,000
Post-Closure Plans and modifications	\$5,000
Transfer Station Operating Plan	\$10,000
Asbestos Contaminated Soil Facilities	\$15,000/area/calendar year
Compost Facility Design & Operation Plan	\$15,000
General Correspondence	\$500
Special Requests	\$10,000

1.7.3 ANNUAL FEES [Eff. 09/30/2008]

(A) Applicability:

- (1) An operating fee of \$1,000 per year shall be paid annually by solid waste sites and facilities regulated under the following Parts that are not subject to the Solid Waste User Fee, except Part 8 as noted below:
 - a. Part 7 (Transfer Stations),
 - b. Part 8 Recycling: Facility annual fee is \$150/facility/year,
 - c. Part 9 (Surface Impoundment Facilities)
 - d. Part 10 (Scrap Tire Facilities),
 - e. Part 11 (Solid Waste Incinerator Facilities),
 - f. Part 13 (Infectious Waste Disposal Facilities),
 - g. Part 14 (Compost Facilities) and
 - h. Unattended facilities regulated under Parts 1 and 2 of these regulations that do not pay fees under section 25-16-104.5, C.R.S., including:
 - i. Surface Impoundments,
 - ii. Landfills, and
 - iii. Monofills
- (2) The facilities listed in Section 1.7.3(A)(1) above are subject to the annual operating fee from the time such facilities first begin operating until final closure is certified and shall provide payment to provide reimbursement to the Department for those costs incurred in tracking, compliance monitoring, compliance assistance, plan

review, enforcement, and other recurring activities that are reasonable and necessary to ensure compliance with these regulations.

(3) A post-closure fee of \$1,000 per year shall be paid annually by solid waste sites and facilities regulated under the following Parts that are not subject to the Solid Waste User Fee, except Part 8 as noted below:

- a. Part 2,
- b. Part 3,
- c. Part 7 (Transfer Stations),
- d. Part 8 Recycling: annual fee is \$150/facility/year,
- e. Part 9 (Surface Impoundment Facilities),
- f. Part 10 (Scrap Tire Facilities),
- g. Part 11 (Solid Waste Incinerator Facilities),
- h. Part 13 (Infectious Waste Disposal Facilities),
- i. Part 14 (Compost Facilities) and
- j. Unattended facilities regulated under Parts 1 and 2 of these regulations, including:
 - i. Surface impoundments,
 - ii. Landfills, and
 - iii. Monofills

(4) The facilities listed in Section 1.7.3(A)(3) above are subject to the post-closure fee for the duration of the post-closure care period and shall provide payment to provide reimbursement to the Department for those costs incurred in tracking, compliance monitoring, compliance assistance, plan review, enforcement, and other recurring activities that are reasonable and necessary to ensure compliance with these regulations.

(B) **Payment:** All owners and operators of facilities subject to the fees of this section shall provide timely payment of the annual fees to the Treasurer of the State of Colorado, as provided in this section. All annual fees shall be credited to the Solid Waste Management Fund created in section 30-20-118, C.R.S. A late payment fee of 2% per month or portion thereof shall be assessed on any unpaid balance subject to the limitations of 24-79.5-101, et seq. C.R.S.

1.7.4 All solid waste facility owners or operators shall transmit to the Department within thirty (30) days following the end of each quarter, the monies collected for the solid waste user fee. The user fee must be charged on all solid waste disposed of in the solid waste facility, regardless of point of origin, density or whether the facility is charging for disposal.

A. Equivalent rate structure: A facility may request that the Department approve an equivalent rate structure for the facility that is based upon the population of the defined service area

for the facility. The service area population shall be based upon official Colorado demographic figures that are established under the most recent national census. Each facility using an equivalent rate structure must update its demographic data every five years to ensure that its service area population remains subject to the equivalent rate structure.

1. The equivalent rate structure will only be available to facilities that have a service area population of no more than 3500 people. All other facilities must utilize the fee structure set forth in § 25-16-104.5, C.R.S.
2. A facility must request an equivalent rate structure in writing. The facility shall submit the applicable population data, and a map and/or description of the service area to the Department as part of its request.
3. The equivalent rate structure shall be based on the following formula:

$$4.5 \text{ lbs./person/day} \times 365 \text{ days/year} \text{ divided by } 2,000 \text{ lbs./ton} = X \text{ tons/year}$$

$$(X \text{ tons/year} \times 3.333 \text{ cubic yards/ton}) \times (\text{the cubic yard rate that is established in current statute}) = \text{the dollar amount to be paid per annum.}$$

B. Allowable expenditures and reporting: Local jurisdictions operating disposal facilities and collecting user fees are allowed to use these fees to cover their expenses in performing response activities at National Priority List (NPL) sites, pursuant to § 25-16-104.5(3)(b), C.R.S. The following provisions set forth the reporting requirements, allowable expenses, and other aspects of fee collection and retention or use under this citation.

1. A jurisdiction must obtain approval from the Department to use or retain for future use, fees as provided in statute. The jurisdiction shall submit a written request including the name of the site, what response activities are to be taken, the requirement for taking such action (e.g., a Record of Decision, Consent Decree or an Order), and estimates of how much money will be expended and over what period of time. The information provided must demonstrate compliance with the provisions of § 25-16-104.5, C.R.S. and these regulations, which shall be the criteria for approval or disapproval by the Department. The Department will use its best efforts to complete its review of such requests within 30 days.
2. A jurisdiction may retain fees pending the Department's decision and any appeal thereof; however, the jurisdiction may not expend such fees until approval is granted by the Department. The Department shall provide a jurisdiction with a written statement of reasons for any disapproval or partial disapproval. A jurisdiction may appeal the Department's determination in accordance with the Colorado Administrative Procedures Act, Section 24-4-105 C.R.S.
3. A jurisdiction that expends fee monies on designated sites listed on the NPL shall be subject to quarterly reporting requirements. The jurisdiction shall report to the Department all fee monies collected, monies remitted to the solid waste management fund, and monies expended pursuant to statute to fund response activities at NPL sites during the previous quarter. The jurisdiction shall further describe the expended funds on a site specific and activity specific basis, including the site name and the nature of the expenditure. If credits are requested against future expenditures as per paragraph 6 of this subsection, the jurisdiction shall specify the amount, site name and proposed activities. The jurisdiction shall also report the amount of interest or dividend gained on any retained fees and how it was retained, used or remitted on a site-specific basis.

4. A jurisdiction shall remit any fees and accrued interest not retained or used for allowable expenses as described herein to the Department on a quarterly basis.
 5. If a jurisdiction has received settlement monies for response activities from other responsible parties, the jurisdiction must first use such settlement monies for those response activities before using retained fees. In order to obtain Department approval to retain and spend retained fees on NPL sites where such settlement monies have been received, the jurisdiction must submit information on the settlement to the Department, with an accounting of these monies to show that they have been expended.
 6. Only the costs of response activities at sites on the NPL where the local jurisdiction is required to perform such activities as a consequence of being a potentially responsible party (as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Contingency Plan) or as a result of a Record of Decision, Order, Consent Decree, Consent Agreement, or other agreement between the local jurisdiction and the U.S. Environmental Protection Agency, qualify for retention and expenditure of collected fees. Allowable expenses include, but are not limited to: the costs of producing required documents such as Remedial Investigations, Feasibility Studies, Records of Decision, and Remedial Designs; the cost of constructing remedial or removal actions; and legal costs associated with the negotiation of orders with the U.S. Environmental Protection Agency. Allowable expenses do not include, without limitation: certain litigation costs, including cost recovery; costs incurred as a regulatory oversight agency that are not required by the U.S. Environmental Protection Agency; additional actions taken at the discretion of the jurisdiction that are not required by the U.S. Environmental Protection Agency; and costs associated with sites that are not on the NPL.
 7. Upon approval from the Department, a jurisdiction may be credited fees for future allowable expenses, if it can be shown that the expenditure and remittance of fees as described above will not cover the estimated allowable expenses. This need must be demonstrated by showing projected allowable expenditures against expected revenues from retained fees. The approval of the Department will be based on compliance with § 25-16-104.5, C.R.S. and these regulations regarding allowable expenses. In addition, the Department may consider other factors such as the time period of retention, in assessing such a request.
- C. Audit: The Department may audit a facility in order to ascertain whether or not the facility is in compliance with these regulations and the governing statute.
1. An operator of a solid waste disposal facility shall retain all records regarding the collection and remittance of solid waste user fees for a period of three years.
 2. A jurisdiction shall retain all records relating to its retention and/or expenditure of solid waste user fees for a minimum of three years, at which time it may request that the records no longer be retained.
- D. Conversion factors: Any solid waste disposal facility or jurisdiction may use the following conversion factors when calculating HSRF fees:
- 0.333 cubic yards/passenger car
- 0.666 cubic yards/light duty truck/suv

3.333 cubic yards/ton for municipal solid waste

5.000 cubic yards/1,000 gallons

0.75 cubic yards/ton for soil

A facility may request that the Department approve an alternate conversion rate, based on the material specific density for a given waste stream. This request must include data that validates the density of the material.

1.8 FINANCIAL ASSURANCE CRITERIA

1.8.1 (A) The owner or operator of any solid waste disposal site/facility shall maintain in written documented form current cost estimates for hiring a third party to close such site and facility and to conduct post-closure care of such site/facility. The owner or operator of any solid wastes disposal site and facility shall establish financial assurance sufficient to ensure payment of such costs. No solid wastes disposal site/facility shall operate without being in compliance with these financial assurance requirements. The ultimate responsibility for financial assurance rests with the owner of the facility, however, the operator or lessee may provide financial assurance for the facility under these rules, if approved.

(B) A detailed written estimate of the cost of hiring a third party to close the largest area of a site and facility that may require closure shall be the basis for the closure estimate. The closure cost estimate must equal the cost of closing the largest area requiring closure during the active life of the site and facility when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan.

(C) A third party shall be a party who is neither a parent nor a subsidiary of the owner or operator.

1.8.2 (A) No governing body having jurisdiction shall require an applicant for a certificate of designation to obtain any financial assurance mechanism or amount in addition to that required by the provisions of C.R.S. 30-20-104.5.

(1) All owners and operators shall provide, concurrently, to the Department and the local governing body having jurisdiction, proof of sufficiency of financial assurance per the requirements set forth in these regulations and 30-20-104.5. C.R.S. as amended. The Department shall consult with the governing body having jurisdiction prior to accepting an applicant's financial assurance. Consultation may consist of telephone conversations, written communications or meetings, dependent upon the particular circumstance.

(2) Local recommendations shall be considered in establishing the amount of financial assurance to be posted.

(3) In the case where a site and facility is owned or operated by the local governing body having jurisdiction, the Department may consult the local governing body having jurisdiction on matters concerning financial assurance but shall retain final decision making and approval authority.

(B) The owner or operator of any solid wastes disposal site/facility that is required to undertake a corrective action program pursuant to these regulations and/or Subpart E of the federal regulations promulgated pursuant to the provisions of Subtitle D of the federal "Resource Conservation and Recovery Act of 1976", as amended and/or C.R.S., 30-20-104.5 et seq., as amended, shall maintain a detailed written estimate of the cost of hiring a third party to perform such corrective action. This estimate, and proof of financial assurance to

undertake corrective action, will not be required until such time as a known release has occurred.

(C) The owner or operator of any solid wastes disposal site/facility shall maintain:

- (1) A detailed written estimate of the cost of hiring a third party to close such site/facility.
- (2) A detailed written estimate of the cost of hiring a third party to conduct post-closure care at such site and facility.

1.8.3 The owner or operator of any solid waste disposal site and facility shall:

- (A) Notify the Department when the required cost estimates have been placed in the operating file for such site and facility.
- (B) Express the required cost estimates in current dollars.
- (C) Annually adjust such cost estimates to account for inflation or deflation by using the implicit price deflator for the gross domestic product or its successor as published by the U.S. Department of Commerce.
- (D) Owners or operators of a site and facility must replace original cost estimates with new cost estimates every five (5) years unless otherwise required by the Department.
- (E) Cost estimates for closure, post-closure or corrective action may be increased or decreased. Justification for changing the financial assurance must be presented to the Department and the local governing body having jurisdiction, and must be acceptable to Department. Such justification shall be made a permanent part of the operating record of the site and facility.
- (F) Financial assurance coverage must be provided continuously until a release is granted by the Department.

1.8.4 (A) On or before April 9, 1997 for facilities accepting greater than 20 tons per day and October 9, 1997 for facilities accepting less than twenty tons per day the owner or operator of each existing solid waste disposal site and facility shall establish financial assurance for the site and facility. An extension to the above dates up to April 9, 1998 may be requested. The owner or operator of each new solid waste disposal site and facility which proposes to begin operation on or after this date shall establish financial assurance for the solid waste disposal site and facility on that date or sixty (60) days prior to initial receipt of waste by the site and facility whichever date is later. Future updated filings must be submitted six months after the close of the governmental or corporate fiscal year if the corporate financial test, local government financial test, or the corporate guarantee is used. All other update filings must be submitted by the anniversary date of the other mechanisms or as established by the Department.

(B) Such financial assurance shall remain in effect until a release is granted by the Department.

(C) Subject to approval by the Department and the governing body having jurisdiction, the owner or operator of a solid wastes disposal site and facility shall use one or more of the following financial mechanisms to financially assure full payment of all closure, post-closure, and if applicable, corrective action estimated costs.

- (1) Trust fund
- (2) Letter of credit

- (3) Surety bond
- (4) Insurance
- (5) Corporate financial test
- (6) Local government financial test
- (7) Corporate guarantee
- (8) Local government guarantee
- (9) State approved mechanism

- (a) Certificate of Deposit
- (b) Multiple financial mechanisms
- (c) Other methods as approved

- (D) A certificate of designation may not be transferred to a new owner or operator unless, as part of the process, the assignment or transfer of the financial instrument(s) or alternate financial assurance has been reviewed and approved by the Department and the governing body having jurisdiction.
- (E) The Department after consultation with the governing body having jurisdiction will give written consent to the owner or operator that he may terminate the financial assurance mechanism identified in paragraph C of this Section when:
 - (1) The owner or operator provides alternate financial assurance as specified in this section; or
 - (2) The Department, after consultation with the local governing body having jurisdiction, releases the owner or operator from the requirements of Section 1.8.1 through 1.8.4; or
 - (3) All closure, post closure, and if applicable, corrective action requirements, have been completed to the Department satisfaction.
 - (4) In the event that the owner and operator are separate parties, both will be a part of any discussions prior to the release of the financial instrument.

1.8.5 (A) The Department shall assess a fee per Subsection 1.7.2 to offset the costs of the Department's review of the financial assurance information (per C.R.S. 30-20-104.5, as amended).

- (B) If at any time the Department shall determine that an owner or operator has insufficient financial assurance or otherwise is not in full compliance with these regulations or 30-20-104.5 C.R.S., as amended, it shall so notify the owner or operator. If the deficiency or other non-compliance is not corrected within sixty (60) days of this notice, the Department and governing body having jurisdiction may suspend the owner or operator's certificate of designation or the owner or operator's authority to operate all affected sites and facilities until it is satisfied that the deficiency or violation has been satisfactorily corrected.

- (C) No release or reimbursement of funds will be made if a known release has occurred at a

site/facility and the owner or operator does not then have sufficient financial assurance to implement the corrective action plan for such release. Further, if within ninety (90) days of a known release an owner or operator has not established sufficient financial assurance for that release, the Department shall recommend that the local governing body having jurisdiction suspend or revoke the certificate of designation for the site and facility of the known release. The Department, after consultation with the local governing body having jurisdiction, may then apply closure and post closure trust funds to implement the corrective action plan, and assess the owner or operator for any deficiency in the closure and post closure trust funds which results.

- (D) The Department is authorized to contract with one or more private contractors to conduct the third-party closure, post-closure care, or corrective action at a solid waste disposal site and facility, as may be necessary. The Department is authorized to expend such monies for the third party closure, post-closure, or corrective action as available to the Department from the financial assurance mechanisms provided by the owner or operator of the solid wastes site disposal and facility. Any such contract shall be between the Department and the private contractor and the owner or operator shall not be a party to such contract. The Department may disallow a contractor because of conflicts of interest or other reasons. The Department may contract with the local governing body that issued the certificate of designation to conduct such third party closure, post-closure care, or corrective action.

1.8.6 Trust Fund for Closure and Post Closure

- (A) An owner or operator may satisfy the closure and post-closure requirements of this section by establishing a closure and post-closure trust fund which conforms to the requirements of this paragraph. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency. All trust agreements must be submitted to the Department for prior approval. An owner or operator of a new or existing facility must submit an originally signed duplicate of the trust agreement to the Department per Section 1.8.4(A). The trust agreement shall be approved by the Department only after consultation with the governing body having jurisdiction. A trust fund must contain, at the end of the operating life of the facility, or within twenty years of its approval, sufficient funding to cover the estimated costs of closure and post-closure care.
- (B) The trustee, to be validated by the comptroller or banking commission, shall be the trust department of a federal or state chartered bank with capital and surplus of not less than \$10,000,000, selected by the operator and acceptable to the Department. Said bank must be located and legally chartered to operate in one of the fifty (50) states. The trustee shall direct the investment of funds in the trust, using the standard of care of a fiduciary. No funds shall be released, disbursed, or transferred by the trustee from this trust without the express written authorization of the Department after consultation with the governing body having jurisdiction.
- (C) The wording of the trust agreement must be identical to the wording specified in Appendix A, and no changes are to be allowed without Department approval, after consultation with the governing body having jurisdiction. The trust agreement must be accompanied by a formal certification of acknowledgment [Appendix A]. Schedule A of the trust agreement must be updated within sixty (60) days after a change in the amount of the current cost estimate covered by the agreement.
- (D) Payments into the trust fund by the owner or operator must, at a minimum, be made quarterly over the term of the operating life of the facility or eighty consecutive quarters, whichever period is shorter, as estimated in the closure and post closure plan. This period is hereafter referred to as the "pay-in period". The payments into the trust fund must be

made as follows:

- (1) For a new facility, the first payment must be made before the initial receipt of waste. A receipt from the trustee for this payment must be submitted by the owner or operator to the Department and local governing body having jurisdiction before this initial receipt of waste.
- (2) A receipt for the initial payment must be submitted to the Department by the trustee for both new and existing sites/facilities. The first payment for both new and existing facilities must be at least equal to the current closure and post-closure cost estimate, divided by the number of quarters in the pay-in period.

The amount of each subsequent payment must be determined by this formula:

$$CE - CV$$

NEXT PAYMENT = -----

$$Y$$

Where CE is the current closure and post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of quarters remaining in the pay-in period. After the first four quarters, and annually thereafter, the CE shall be multiplied times the preceding year's annual rate of inflation before subtracting CV.

- (3) In lieu of using the formula expressed in Section 1.8.6(D)(2) the equivalent quarterly payments into the trust fund may be determined by calculating the net present value of CE.
- (E) The owner or operator may accelerate payments into the trust fund or may deposit the full amount of the current closure and post-closure cost estimate at the time the fund is established, or at any time thereafter. However, the value of the fund must be maintained at no less than the value that the fund would have if quarterly payments were made as specified in 1.8.6(D).
- (F) If the owner or operator establishes a closure and post-closure trust fund after having used one or more alternate mechanisms specified in Section 1.8.4, the first payment must be in at least the amount that the fund would contain if the trust fund were established initially and all quarterly payments had been made.
- (G) Whenever the current closure and post-closure cost estimate increases, and is approved by the Department, the owner or operator must recalculate the payments into the trust fund based on the new cost estimate (new CE), retroactive to the first payment into the trust fund. The amount which would have been paid to date into the trust fund, as recalculated with the new CE, must be compared to the trustee's most recent annual valuation of the trust fund. If the current valuation of the fund is less than the amount which would be required when recalculated using the new CE, the owner or operator must, within sixty (60) days of the approval of the new estimate, either deposit an amount into the fund so that its value after this deposit at least equals the amount as calculated with the new CE, or obtain other financial assurance as specified in this section to cover the difference.
- (H) During the operating life of the facility, and post-closure care period, if the value of the trust fund is greater than the total amount of the current closure and post-closure cost estimate, the owner or operator may submit a written request with appropriate documentation justifying the request to the Department and the governing body having

jurisdiction for the release of the amount in excess of the current closure and post-closure cost estimate. If the Department concurs with the accuracy of the justification, the amount in the trust fund in excess of the current closure and post-closure cost estimates shall be released.

(I) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, the owner or operator may submit a written request to the Department for release of the amount in excess of the current closure and post-closure cost estimate covered by the trust fund. The Department will consult with the governing body having jurisdiction before approval of the change.

(J) Within sixty (60) days after receiving a request from the owner or operator for release of funds as specified in this section, the Department will instruct the trustee to release to the owner or operator such funds as the Department specifies in writing.

(K) Closure and Post-Closure Care Reimbursements

(1) After beginning partial or final closure, an owner or operator or another person authorized to conduct partial or final closure may request reimbursements for partial or final closure expenditures by submitting itemized receipts to the Department. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving receipts for partial or final closure activities, the Department will instruct the trustee to make reimbursements in those amounts as the Department determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the Department has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, it may withhold reimbursements of such amounts as is deemed prudent until it determines, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Department does not instruct the trustee to make such reimbursements, it will provide the owner or operator with a detailed written statement of reasons.

(2) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized bills to the Department. Within sixty (60) days after receiving bills for post-closure care activities, the Department will instruct the trustee to make reimbursements in those amounts as the Department specifies in writing, if the Department determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Department does not instruct the trustee to make such reimbursements, it will provide the owner or operator with a detailed written statement of reasons.

(3) Where there is one trust fund for both closure and post-closure care, then there will not be any reimbursement for closure costs if there are not sufficient funds to cover both the remaining closure and post-closure care costs.

(L) The Department, after consultation with the local governing body having jurisdiction, shall agree to termination of the trust fund when the requirements of Section 1.8.4(E) have been satisfied and shall release all monies to the owner or operator.

1.8.7 Letter-of-Credit for Closure and Post-Closure

- (A) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter-of-credit which conforms to the requirements of this paragraph. An owner or operator of a new facility must submit the letter of credit to the Department per Section 1.8.4(A). The letter of credit must be effective before this initial receipt of waste. The issuing institution must have the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.
- (B) A letter-of-credit must be in full conformance with Article 5 of the uniform commercial code, C.R.S. 4-5-101 et seq. as amended.
- (C) The wording of the letter-of-credit must be identical to the wording specified in Appendix A.
- (D) An owner or operator who uses a letter-of-credit to satisfy the requirements of this section must also establish a standby trust fund, unless an alternate mechanism has been established by the state of Colorado to directly receive monies, or the owner or operator has previously established a trust fund under Section 1.8.6. Under the terms of the letter-of-credit, all amounts paid pursuant to a draft by the Department will be deposited by the issuing institution directly into the standby trust fund, or trust fund, in accordance with instructions from the Department. This standby trust fund must meet the requirements of the trust fund, Subsection 1.8.6, Except that:
 - (1) Payments into the trust fund as specified in 1.8.6.
 - (2) Updating of Schedule A of the trust agreement to show current closure and post-closure cost estimates.
 - (3) Annual valuations as required by the trust agreement; and
 - (4) Notices of nonpayment as required by the trust agreement.
- (E) The letter-of-credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA identification number, if available, name, and address of the facility, and the amount of funds assured for closure and post-closure of the facility by the letter of credit.
- (F) The letter of credit must be irrevocable and issued for a period of at least one (1) year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one (1) year unless, at least one hundred twenty (120) days before the current expiration date, the issuing institution notifies the owner or operator and the Department and the governing body having jurisdiction by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty (120) days will begin on the date when the owner or operator and the Department and the local governing body having jurisdiction have received the notice, as evidenced by the return receipts.
- (G) The letter of credit must be issued in an amount at least equal to the current closure and post-closure cost estimate, less any amount covered by alternative assurance mechanisms.
- (H) Whenever the current closure and post-closure cost estimate increases to an amount greater than the amount of the letter of credit during the term of the letter of credit, the owner or operator, within sixty (60) days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current closure and post-closure cost estimate and submit evidence of such increase to the Department, or obtain other

financial assurance as specified in Section 1.8.4 to cover the increase. Whenever the current closure and post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current closure and post-closure cost estimate following written approval by the Department after consultation with the local governing body having jurisdiction providing sufficient documentation to justify this action has been submitted to the Department.

- (I) Following a determination that the owner or operator has failed to perform final closure or post-closure or corrective action in accordance with the closure or post-closure or corrective action plan and other permit requirements when required to do so, the Department may draw on the letter of credit.
- (J) If the owner or operator does not establish alternate financial assurance as specified and obtain written approval of such alternate assurance from the Department, written after consultation with the governing body having jurisdiction within ninety (90) days after receipt by both the owner or operator and the Department of a notice from issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Department will draw on the letter of credit. The Department may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty (30) days of any such extension the Department will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the Department.
- (K) The Department will return the letter of credit to the issuing institution for termination when the requirements of Section 1.8.4(E) have been satisfied.

1.8.8 Surety Bond Guaranteeing Performance or Payment into a Closure and Post-Closure Trust Fund

- (A) An owner or operator may satisfy the requirements of Section 1.8.1 through 1.8.3 by obtaining a surety bond which conforms to the requirements of this paragraph, and submitting the bond to the Department and the local governing body having jurisdiction on or before the effective date of these regulations. An owner or operator of a new facility must submit the bond to the Department and the local governing body having jurisdiction at least ninety (90) business days before the date on which waste is first received. The bond must be effective before this initial receipt of waste. The surety company issuing the bond and any co-sureties must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury, and should be conducting business in Colorado and issue the bond subject to the laws and jurisdiction of the state of Colorado. If the surety is using reinsurance, a treasury reinsurance form must be submitted with the bond or within forty-five (45) days thereafter. If co-sureties are being used, the original bond must reflect that fact.
- (B) The wording of the surety bond must be identical to the wording in Appendix A.
- (C) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund, unless there has been an alternate mechanism established by the State of Colorado to directly receive monies, or the owner or operator has previously established a trust fund under 1.8.6. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund, or other trust fund, in accordance with the instructions from the Department. This standby trust fund must meet the requirements of the trust fund, Section 1.8.6, except that:
 - (1) Payments into the trust fund as specified in 1.8.6.

- (2) Updating of Schedule A of the trust agreement to show current closure and post-closure cost estimates.
 - (3) Annual valuations as required by the trust agreement; and
 - (4) Notices of nonpayment as required by the trust agreement.
- (D) The bond must guarantee that the owner or operator will:
 - (1) Fund the applicable trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or
 - (2) Fund the standby trust fund in an amount equal to the penal sum within fifteen (15) days after an order to begin closure is issued by the Department or local governing body having jurisdiction or state court or other court of competent jurisdiction; or
 - (3) Provide alternate financial assurance as specified in Section 1.8.4, and obtain the approval of the Department within (90) days after receipt by the owner or operator and the Department of a notice of cancellation of the bond from the surety. Prior to approving the alternate financial assurance, the Department shall consult with the local governing body having jurisdiction.
- (E) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.
- (F) The penal sum of the bond must be in an amount at least equal to the current closure and post-closure cost estimate, less amounts covered by alternative mechanisms.
- (G) Whenever the current closure and post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty (60) days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure and post-closure cost estimate and submit evidence of such increase to the Department and local governing body having jurisdiction or obtain other financial assurance as specified in this section to cover the increase.
- (H) Whenever the current closure and post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure and post-closure cost estimate following the submittal of sufficient justification to the Department and local governing body having jurisdiction and written approval by the Department.
- (I) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Department and the governing body having jurisdiction. Cancellation may not occur until one hundred twenty (120) days after the notice of cancellation has been received by both the owner or operator and the Department, as evidenced by the return receipts.
- (J) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Department and the governing body having jurisdiction. Cancellation may not occur until one hundred twenty (120) days after the notice of cancellation has been received by both the owner or operator, the Department, and the local governing body having jurisdiction, as evidenced by the return receipts.
- (K) The owner or operator may cancel the bond if the Department after consultation with the

governing body having jurisdiction have given prior written consent.

1.8.9 Insurance for Closure and Post-Closure

- (A) An owner or operator of a facility may satisfy the requirements of this section by obtaining closure and post-closure insurance which conforms to the requirements of this paragraph and submitting a certificate of such insurance to the Department and the governing body having jurisdiction upon the effective date of these regulations. An owner or operator of a new facility must submit the certificate of insurance to the Department and the local governing body having jurisdiction at least ninety (90) business days before the date on which waste is first received. The insurance must be effective before this initial receipt of waste. At a minimum, the insurer must be licensed to transact the business of insurance or be eligible to provide insurance as an excess or surplus lines insurer, and comply with the Title 10 Insurance Code, C.R.S., as amended. The insurance company must be conducting business in Colorado and assure the policy is subject to the laws and jurisdiction of the State of Colorado.
- (B) The wording of the certificate of insurance must be identical to the wording specified in Appendix A.
- (C) The closure and post-closure insurance policy must be issued for a face amount at least equal to the current closure and post-closure cost estimate. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.
- (D) The Closure and Post-Closure Insurance Policy
 - (1) Must guarantee that funds will be available to close and provide post-closure care of the facility whenever final closure and post-closure occurs. The policy must also guarantee that once final closure and post-closure begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Department, after consultation with the local governing body having jurisdiction to such party or parties as the Department specifies.
 - (2) If the owner or operator wishes to pay for closure and post-closure activities directly, without accessing the insurance coverage, this may be done after receiving written approval by the Department after consultation with the local governing body having jurisdiction. All terms, limits and other applicable information must accompany this approval.
- (E) Closure and Post-Closure Care Reimbursements
 - (1) After beginning partial or final closure and post-closure, an owner or operator or another person authorized to perform closure and/or post-closure may request reimbursements for closure and/or post-closure expenditures by submitting itemized receipts to the Department. The owner or operator may request reimbursements for partial closure only if the remaining value of the policy is sufficient to cover maximum costs of closing the facility over its remaining operating life. Within sixty (60) days after receiving receipts for closure activities, the Department will instruct the insurer to make reimbursements in such amounts as the Department specifies in writing if the Department after consultation with the local governing body having jurisdiction determines that the partial or final closure expenditures are in accordance with the approved closure plan, or

otherwise justified. If the Department has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the face amount of the policy, it may withhold reimbursements of such amounts as it deems prudent until it determines, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Department does not instruct the insurer to make such reimbursements, it will provide the owner or operator with a detailed written statement of reasons.

- (2) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized receipts to the Department. Within sixty (60) days after receiving receipts for post-closure care activities, the Department will instruct the insurer to make reimbursements in those amounts as the Department specifies in writing, if the Department after consultation with the local governing body having jurisdiction determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Department does not instruct the insurer to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.
- (F) Where there is one insurance policy for both closure and post-closure care, then there will not be any reimbursement for closure costs if there are not sufficient funds to cover both the remaining closure and post-closure care costs.
- (G) The owner or operator must maintain the policy in full force and effect until the Department in consultation with the governing body having jurisdiction consents to termination of the policy by the owner or operator as specified in this section. Failure to pay the premium, without substitution of alternate financial assurance as specified in this section, will constitute a violation of these regulations, warranting such remedy as the Department in consultation with the local governing body having jurisdiction deems necessary. Such violation will be deemed to begin upon receipt by the Department and the local governing body having jurisdiction of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.
- (H) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.
- (I) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel the policy by sending notice of cancellation by certified mail to the owner or operator and the Department or governing body having jurisdiction one hundred twenty (120) days in advance of cancellation.
- (J) If the insurer cancels the policy the owner or operator must obtain financial assurance as determined in 1.8.4. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:
- (1) The Department after consultation with the local governing body having jurisdiction deems the facility abandoned; or
 - (2) The certificate of designation is terminated or revoked or a new permit is denied; or

- (3) Closure is ordered by the Department or the local governing body having jurisdiction or a State or other court of competent jurisdiction; or
 - (4) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (bankruptcy), U.S. Code; or
 - (5) The premium due is paid.
- (K) All premiums shall be paid annually and proof of payment shall be supplied to the Department and to the governing body having jurisdiction.
- (L) Whenever the current closure and post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator, within sixty (60) days after the increase, must either cause the face amount to be increased to an amount at least equal to the current closure and post-closure cost estimate and submit evidence of such increase to the Department and the local governing body having jurisdiction, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure and post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current closure and post-closure cost estimate following written approval by the Department after consultation with the local governing body having jurisdiction, providing that sufficient justification has been submitted to the Department and the local governing body having jurisdiction.
- (M) Commencing on the date that liability to make payments pursuant to the post-closure insurance policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26-week treasury securities.
- (N) The Department will give written consent to the owner or operator that he may terminate the insurance policy when the requirements of Section 1.8.4(E) have been satisfied

1.8.10 Corporate Financial Test

An owner or operator that satisfies the requirements of paragraphs 1.8.10(A) through 1.8.10(c) of this section may demonstrate financial assurance up to the amount specified in paragraph c of this section:

(A) Financial component.

- (1) The owner or operator must satisfy one of the following three conditions:
 - (a) A current rating for its senior unsubordinated debt of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's; or
 - (b) A ratio of less than 1.5 comparing total liabilities to net worth; or
 - (c) A ratio of greater than 0.10 comparing the sum of net income plus depreciation, depletion and amortization, minus \$10 million, to total liabilities.
- (2) The tangible net worth of the owner or operator must be greater than:

- (a) The sum of the current closure, post-closure care, corrective action cost estimates and any other environmental obligations, including guarantees, covered by a financial test plus \$10 million except as provided in paragraph 1.8.10(A)(2)(b) of this section.
 - (b) \$10 million in net worth plus the amount of any guarantees that have not been recognized as liabilities on the financial statements provided all of the current closure, post-closure care, and corrective action costs and any other environmental obligations covered by a financial test are recognized as liabilities on the owner's or operator's audited financial statements, and subject to the approval of the Department.
 - (3) The owner or operator must have assets located in the United States amounting to at least the sum of current closure, post-closure care, corrective action cost estimates and any other environmental obligations covered by a financial test as described in paragraph 1.8.10 (c) of this section.
- (B) Record keeping and reporting requirements.
- (1) The owner or operator must place the following items into the facility's operating record:
 - (a) A letter signed by the owner's or operator's chief financial officer that: (i) Lists all the current cost estimates covered by a financial test, including, but not limited to, cost estimates required for solid waste management facilities under 1.8 of these regulations and cost factors for all other environmental obligations, if applicable; and (ii) Provides evidence demonstrating that the owner/operator meets the conditions of either paragraph 1.8.10(A)(1)(a), or (b), or (c) of this section and paragraphs 1.8.10(A)(2) and 1.8.10(A)(3) of this section.
 - (b) A copy of the independent certified public accountant's unqualified opinion of the owner's or operator's financial statements for the latest full fiscal year. To be eligible to use the financial test, the owner's or operator's financial statements must receive an unqualified opinion from the independent certified public accountant. An adverse opinion, disclaimer of opinion, or other qualified opinion will be cause for disallowance, with the potential exception for qualified opinions provided in the next sentence. The Department may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the Department deems that the matters which form the basis for the qualification are insufficient to warrant disallowance of the financial test. If the Department does not allow use of the test, the owner or operator must provide alternate financial assurance that satisfies the requirements of this section.
 - (C) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing that owner or operator satisfies paragraph 1.8.10(A)(1)(b) or (c) of this section that are different from data in the audited financial statements referred to in paragraph 1.8.10(B)(1) and (2) of this section or any other audited financial statement or data filed with the Securities and Exchange Commission, then a special report from the owner's or operator's independent certified public accountant is required. The special report shall be based upon an agreed upon procedures of engagement in accordance with professional auditing standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of that comparison, and the reasons for any differences.

- (D) If the chief financial officer's letter provides a demonstration that the solid waste disposal site and facility has provided financial assurance for environmental obligations as provided in paragraph 1.8.10(A)(2)(b) of this section, then the letter shall include a report from the independent certified public accountant that verifies that all of the environmental obligations covered by a financial test have been recognized as liabilities on the audited financial statements, how these obligations have been measured and reported, and that the tangible net worth of the firm is at least \$10 million plus the amount of any guarantees provided.
- (2) An owner or operator must place the items specified in paragraph 1.8.10(B)(1) of this section in the operating record and send a copy to the Department indicating that these items have been placed in the operating record before the initial receipt of waste or before the effective date of the requirements of this section, whichever is later in the case of closure, and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of these regulations.
- (3) After the initial placement of items specified in paragraph 1.8.10(B)(1) of this section in the operating record, the owner or operator must annually update the information and place updated information in the operating record and send a copy to the Department within 90 days following the close of the owner or operator's fiscal year. The Department may provide up to an additional 45 days for an owner or operator who can demonstrate that 90 days is insufficient time to acquire audited financial statements. The updated information must consist of all items specified in paragraph 1.8.10(B)(1) of this section.
- (4) The owner or operator is no longer required to submit the items specified in this paragraph 1.8.10(B) or comply with the requirements of this paragraph 1.8.10 when:
- (a) The owner or operator substitutes alternate financial assurance as specified in this section that is not subject to these record keeping and reporting requirements; or
- (b) the owner or operator is released from the requirements of this section in accordance with these regulations.
- (5) If the owner or operator no longer meets the requirements of paragraph 1.8.10(A) of this section, the owner or operator shall, within 120 days following the close of the owner or operator's fiscal year, obtain alternative financial assurance satisfy the requirements of this section, place the required submissions for assurance in the operating record, and notify the Department that the owner or operator no longer meets the criteria of the financial test and that alternate financial assurance has been obtained.
- (6) The Department may, based on a reasonable belief that the owner or operator no longer meet the requirements of paragraph 1.8.10(A) of this section, require at any time the owner or operator to provide reports of its financial condition in addition to or including current financial test documentation as specified in paragraph 1.8.10(B) of this section. If the Department finds that the owner or operator no longer meets the requirements of paragraph 1.8.10(A) of this section, the owner or operator must provide alternate financial assurance that meets the requirements of this section.
- (7) Calculation of costs to be assured. When calculating the current cost estimates for closure, post-closure care, corrective action, or the sum of the combination of

such costs to be covered, and any other environmental obligations assured by a financial test referred to in this section 1.8.10, the owner or operator must include cost estimates required for municipal solid waste management facilities under this part, as well as cost estimates required for other environmental obligations, if applicable.

1.8.11 Local Government Financial Test An owner or operator that satisfies the requirements of paragraphs A, B and c of this section may demonstrate financial assurance up to the amount specified in paragraph D of this section:

(A) Financial Component

(1) The owner or operator must satisfy one of the following:

(a) If the owner or operator has outstanding, rated, general obligation bonds, that are not secured by insurance, a letter of credit, or other collateral or guarantee, it must have a current rating of Aaa, Aa, A, or Baa, as issued by Moody's, or AAA, AA, A, or BBB, as issued by Standard and Poor's on all outstanding general obligation bonds; or,

(b) The owner or operator must satisfy each of the following financial ratios based on the owner or operator's most recent audited annual financial statement:

(i) A ratio of cash plus marketable securities to total expenditures greater than or equal to 0.05; and

(ii) A ratio of annual debt service to total expenditures less than or equal to 0.20; and

(2) The owner or operator must prepare its financial statements and have them audited in conformity with generally accepted accounting principles for governments and have its financial statements audited by an independent certified public accountant.

(3) A local government is not eligible to assure its obligations under this paragraph 1.8.11(A) if it:

(a) Is currently in default on any outstanding general obligation bonds,

(b) Has an outstanding general obligation bond rated lower than Baa as issued by Moody's or BBB as issued by Standard and Poor's, or

(c) Operated at a deficit equal to five percent or more of total annual revenue in each of the past two fiscal years, unless the owner or operator demonstrates, through the submission of an auditor's statement to the Department, that the accedence of this deficit restriction was caused by expenditures from specific funds previously set aside and budgeted in prior fiscal years and not by general expenditures for the applicable fiscal year exceeding total annual revenue by an amount equal to or greater than five percent, or

(d) Receives an adverse opinion, disclaimer of opinion, or other qualified opinion from the independent certified public accountant (or appropriate State agency) auditing its financial statement as required under paragraph

1.8.11A(2) of this section. However, the Department may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the Department deems the qualification insufficient to warrant disallowance of the test.

- (B) Public Notice Component The local government owner or operator must place a reference to the closure, post-closure care, or corrective action costs assured through the financial test into its next comprehensive annual financial report (CAFR) or audited financial statement after the effective date of this section or prior to the initial receipt of waste at the facility, whichever is later. Disclosure must include the nature and source of closure and post-closure care requirements, the reported liability at the balance sheet date, the estimated total closure and post-closure care costs remaining to be recognized, the percentage of landfill capacity used to date, and the estimated landfill life in years. A reference to corrective action costs must be placed in the CAFR not later than 120 days after the corrective action remedy has been selected in accordance with the requirements of these regulations for the first year the financial test issued to assure costs at a particular facility, the reference may instead be placed in the operation record until issuance of the next available CAFR if timing does not permit the reference to be incorporated into the most recently issued CAFR or budget. For closure and post-closure costs, conformance with Government Accounting Standards Board Statement 18 assures compliance with this public notice. The reference must include the amount of each cost-estimate and the year(s) in which the local government expects these costs to be incurred. References in the budget must occur as budgeted line items if the activities are to occur in the period covered by the budget, but may appear in a supplemental data section if the activities will not occur until after the period covered by the budget.

(C) Recordkeeping and Reporting Requirements

- (1) The local government owner or operator must place the following items in the facility's operating record and deliver a copy to the Department:
- (a) A letter signed by the local government's chief financial officer that:
 - (i) Lists all the current cost estimates covered by a financial test, as described in paragraph 1.8.11(B) of this section;
 - (ii) Provides evidence and certifies that the local government meets the conditions of paragraphs 1.8.11A(1), 1.8.11A(2), and 1.8.11A(3) of this section; and
 - (iii) Certifies that the local government meets the conditions of paragraph 1.8.11(D) of this section.
 - (b) The local government's independently audited year-end financial statements for the latest fiscal year, including the unqualified opinion of the auditor who must be an independent, certified public accountant or an appropriate State agency that conducts equivalent comprehensive audits; and
- (2) The items required in paragraph 1.8.11(c)(1)(a) of this section must be placed in the facility operating record as follows:
- (a) In the case of closure and post-closure care, either before April 9, 1997, or prior to the initial receipt of waste at the facility, whichever is later, or

- (b) In the case of corrective action, not later than 120 days after the corrective action remedy is selected in accordance with the requirements of Section 2.2 and Appendix B6.
- (3) After the initial placement of the items in the facility's operating record, the local government owner or operator must update the information and place the updated information in the operating record within six (6) months following the close of the owner or operator's fiscal year.
- (4) The local government owner or operator is no longer required to meet the requirements of paragraph 1.8.11(c) of this section when:
 - (a) The owner or operator substitutes alternate financial assurance as specified in paragraph 1.8.11(c)(5) of this section; or
 - (b) The owner or operator is released from the requirements of this section in accordance with Sections 1.8.3(F) and 1.8.4(B).
- (5) A local government must satisfy the requirements of the financial test at the close of each fiscal year. If the local government owner or operator no longer meets the requirements of the local government financial test it must, within 210 days following the close of the owner or operator's fiscal year, obtain alternative financial assurance that meets the requirements of section 1.8, place the required submissions for that assurance in the operating record, and notify the Department that the owner or operator no longer meets the criteria of the financial test and that alternate assurance has been obtained.
- (6) The Department, based on a reasonable belief that the local government owner or operator may no longer meet the requirements of the local government financial test, may require additional reports of financial condition from the local government at any time. If the Department finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of the local government financial test, the local government must provide alternate financial assurance in accordance with paragraph 1.8.11(C)c5) of this section.
- (7) A report to the local government from the local government's independent certified public accountant (CPA) based on performing agreed upon procedures engagement relative to the financial ratios required by 1.8.11(A)(1)(B)(i) and (ii), if applicable, and the requirements of 1.8.11(A)(2) and 1.8.11(A)(3)(C) and 1.8.11(A)(3)(D). The CPA report should state the procedures performed and the CPA findings; and a copy of the comprehensive annual financial report (CAFR) used to comply with this section and (6) or certification that the requirements of General Accounting Standards Board Statement 18 have been met. The special report should state the auditor conducted the following agreed-upon procedures:
 - (a) Conduct a comparison between
 - (i) The data and statements contained in the CFO letter and
 - (ii) The data and statements contained in the local government's audited financial statements for the most recently completed fiscal year.
 - (b) Found that the data and statements presented in the CFO letter were taken directly, or appropriately derived, from the corresponding data in the audited financial statements.

- (c) Recomputed totals and percentages used in calculating the conditions of the local government financial test.
- (D) Calculation of Costs to be Assured The portion of the closure, post-closure, and corrective action costs for which an owner or operator can assure under this paragraph is determined as follows:
 - (1) If the local government owner or operator does not assure other environmental obligations through a financial test, it may assure closure, post-closure, and corrective action costs that equal up to 43 percent of the local government's total annual revenue.
 - (2) If the local government assures other environmental obligations through a financial test it must add those costs to the closure, post-closure, and corrective action costs it seeks to assure under this Section 1.8.11(D). The total must not exceed 43 percent of the local government's total annual revenue.
 - (3) The owner or operator must obtain an alternate financial assurance instrument for those costs that exceed the limits set in paragraphs 1.8.11(D)(1) and (2) of this section.

1.8.12 Corporate Guarantee.

- (A) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in section 1.8.10 and must comply with the terms of the guarantee. A certified copy of the guarantee must be placed in the facility's operating record along with copies of the letter from the guarantor's chief financial officer and accountants' opinions. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter from the guarantor's chief financial officer must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee.
- (B) The guarantee must be effective and all required submissions placed in the operating record and a copy submitted to the Department before the initial receipt of waste or before the effective date of the requirements of these regulations whichever is later, in the case of closure and post-closure care, or in the case of corrective action no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of these regulations.
- (C) The terms of the guarantee must provide that:
 - (1) If the owner or operator fails to perform closure, post-closure care, and/or corrective action of a facility covered by the guarantee, the guarantor will:
 - (a) Perform, or pay a third party to perform, closure, post-closure care, and/or corrective action as required (performance guarantee); or
 - (b) Establish a fully funded trust fund as specified in paragraph 1.8.6 of this section in the name of the owner or operator (payment guarantee).

- (2) The guarantee will remain in force for as long as the owner or operator is required to comply with the applicable financial assurance requirements or unless the guarantor sends prior notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Department, as evidenced by the return receipts.
- (3) If notice of cancellation is given, the owner or operator must, within 90 days following receipt of the cancellation notice by the owner or operator and the Department, obtain alternate financial assurance, place evidence of that alternate financial assurance in the facility operating record, and notify the Department. If the owner or operator fails to provide alternate financial assurance within the 90-day period, the guarantor must provide that alternate assurance within 120 days of the cancellation notice, obtain alternative assurance, place evidence of the alternate assurance in the facility operating record, and notify the Department.
- (D) If a corporate guarantor no longer meets the requirements of paragraph 1.8.10(A) of this section, the owner or operator must, within 90 days, obtain alternative assurance, place evidence of the alternate assurance in the facility operating record, and notify the Department. If the owner or operator fails to provide alternate financial assurance within the 90-day period, the guarantor must provide that alternate assurance within the next 30 days.
- (E) The owner or operator is no longer required to meet the requirements of this 1.8.12 when:
 - (1) The owner or operator substitutes alternate financial assurance as specified in this section; subject to Department approval or
 - (2) The owner or operator is released by the Department from the requirements of this section in accordance with these regulations.

1.8.13 Local Government Guarantee

An owner or operator may demonstrate financial assurance for closure, post-closure, and corrective action, as required by Sections 1.8.1 through 1.8.5, by obtaining a written guarantee provided by a local government. The guarantor must meet the requirements of the local government financial test in paragraph 1.8.11 of this section, and must comply with the terms of a written guarantee.

- (A) Terms of the Written Guarantee The guarantee must be effective before the initial receipt of waste or before the effective date of this section, whichever is later, in the case of closure, post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of Section 2.2 and Appendix B6. The guarantee must provide that:
 - (1) If the owner or operator fails to perform closure, post-closure care, and/or corrective action of a facility covered by the guarantee, the guarantor will:
 - (a) Perform, or pay a third party to perform, closure, post-closure care, and/or corrective action as required; or
 - (b) Establish a fully funded trust fund as specified in paragraph 1.8.6 of this section in the name of the owner or operator.
 - (2) The guarantee will remain in force unless the guarantor sends notice of cancellation

by certified mail to the owner or operator and to the Department. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Department, as evidenced by the return receipts.

- (3) If a guarantee is canceled, the owner or operator must, within 90 days following receipt of the cancellation notice by the owner or operator and the Department, obtain alternate financial assurance, place evidence of that alternate financial assurance in the facility operating record, and notify the Department. If the owner or operator fails to provide alternate financial assurance within the 90-day period, the guarantor must provide that alternate assurance within 120 days following the guarantor's notice of cancellation, place evidence of the alternative assurance in the facility operating record, and notify the Department.

(B) Recordkeeping and Reporting

- (1) The owner or operator must place a certified copy of the guarantee along with the items required under paragraph 1.8.11(c) of this section into the facility's operating record before the initial receipt of waste or before the effective date of this section, whichever is later, in the case of closure, post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of Section 2.2 and Appendix B6.
- (2) The owner or operator is no longer required to maintain the items specified in Section 1.8.13 when:
 - (a) The owner or operator substitutes alternate financial assurance as specified in this Section 1.8; or
 - (b) The owner or operator is released from the requirements of this section in accordance with Sections 1.8.3(F), 1.8.4(B) and 1.8.18.
- (3) If a local government guarantor no longer meets the requirements of paragraph 1.8.11 of this section, the owner or operator must, within 90 days following the close of the guarantor's fiscal year, obtain alternative assurance, place evidence of the alternate assurance in the facility operating record, and notify the Department. If the owner or operator fails to provide alternate financial assurance within the 90-day period, the guarantor must provide that alternate assurance within next 30 days.
- (4) A local government guarantor must satisfy the requirements for the local government guarantee at the close of each fiscal year. A demonstration that the local government meets all requirements of the local government guarantee under this section of the regulations must be placed in the operating records and with the Department within 180 days following the close of the guarantor's fiscal year.

1.8.14 Certificate of Deposit for Closure and Post-Closure

- (A) An owner or operator may satisfy the requirements of this section by establishing a Certificate of Deposit which conforms to the requirements. An owner or operator of a new or existing facility must submit the original Certificate of Deposit to the Department per Section 1.8.4(A). The Certificate of Deposit must be effective before the initial receipt of solid waste. The issuing institution must have the authority to issue Certificate of Deposits and whose operations must be regulated, insured, and examined by a federal or state agency.

- (B) The issuing institution, to be validated by the comptroller or banking commission, shall be a federal or state chartered bank with capital and surplus of not less than \$10,000,000, selected by the operator and acceptable to the Department. Said bank must be located and legally chartered to operate in one of the fifty (50) states. The institution shall direct the investment of funds in the Certificate of Deposit, using the standard of care of a fiduciary. No funds shall be released, disbursed, or transferred by the institution from this Certificate of Deposit without the express written authorization of the Department after consultation with the local governing body having jurisdiction.
- (C) The wording of the Certificate of Deposit must be identical to the wording specified in Appendix A, unless otherwise approved by the Department.
- (D) Payments made with the Certificate of Deposit must comply with the provisions of Section 1.8.6(D), (E), (F), and (G) except for the following:
 - (1) The "pay-in period" shall be made yearly over the term of the operating life of the solid waste disposal site and facility or 20 consecutive years, whichever period is shorter, as estimated by the closure and post-closure plan.
 - (2) The Certificate of Deposit shall be issued for a period of one year and shall be automatically renewable with interest added to the principal.
 - (3) The owner or operator will notify the Department and the bank of the amount that the Certificate of Deposit will be increased to within thirty (30) days of the annual maturity of the Certificate of Deposit due to the annual payment and the inflationary adjustment as determined in Section 1.8.3(c).
- (E) The owner or operator who uses a Certificate of Deposit to satisfy the requirements of this section must also establish a standby trust fund, unless the Department has approved the use of an alternate mechanism established by the State of Colorado to directly receive monies, or the owner or operator has previously established a trust fund under Section 1.8.6. Under the terms of the Certificate of Deposit, all amounts paid pursuant to a draft by the Department will be deposited by the issuing institution directly into the standby trust fund or authorized State fund, in accordance with instructions from the Department. This standby trust fund must meet the requirements of the trust fund, Section 1.8.6, except that:
 - (1) Payments into the trust fund as specified in 1.8.6.
 - (2) Updating of schedule a of the trust agreement to show current closure and post-closure cost estimates.
 - (3) Annual valuations as required by the trust agreement; and
 - (4) Notices of nonpayment as required by the trust agreement.
- (F) The Certificate of Deposit must be accompanied by a letter from the owner or operator referring to the Certificate of Deposit by number, issuing institution, and date, and providing the following information: the EPA identification number, if available; name and address of the facility; and the amount of funds assured for closure and post-closure of the facility by the Certificate of Deposit.
- (G) The Certificate of Deposit must provide that the expiration date will be automatically extended, at least sixty (60) days before the current expiration date, the issuing institution notifies the owner or operator and the Department and the governing body having

jurisdiction by certified mail of a decision not to extend the expiration date. Under the terms of the Certificate of Deposit, the sixty (60) days will begin on the date when the owner or operator and the Department and the local governing body having jurisdiction have received the notice, as evidenced by the return receipts. The issuing institution shall give thirty (30) day notification of maturity of the Certificate of Deposit to the Department and the owner or operator.

- (H) The issue amount of the Certificate of Deposit must be in an amount at least equal to the current closure and post-closure cost estimate, less amounts covered by alternative mechanisms.
- (I) Whenever the current closure and post-closure cost estimate increases to an amount greater than the issued amount during the term of the Certificate of Deposit, the owner or operator, within sixty (60) days after the increase, shall increase the issued amount of the Certificate of Deposit so that it is at least equal to the current closure and post-closure cost estimate and submit evidence of such increase to the Department and local governing body having jurisdiction, or obtain other financial assurance as specified in this section.
- (J) Whenever the current closure and post-closure cost estimate decreases during the operating life of the facility, the amount of the Certificate of Deposit may be reduced to the amount of the current closure and post-closure cost estimate following approval by the Department after consultation with the local governing body having jurisdiction and written approval by the Department. Reimbursements from the authorized State fund for closure, post-closure, or corrective action shall satisfy the requirements of Section 1.8.6(K).
- (K) Following a determination that the owner or operator has failed to perform final closure or post-closure or corrective action in accordance with the closure or post-closure or corrective action plan and other permit requirements when required to do so, the Department may draw on the Certificate of Deposit.
- (L) If the owner or operator does not establish alternate financial assurance as specified, and obtain written approval of such alternate assurance from the Department, after consultation with the local governing body having jurisdiction, within forty-five (45) days after receipt by both the owner or operator and the Department of a notice from issuing institution that it has decided not to extend the Certificate of Deposit beyond the current expiration date, the Department will draw on the Certificate of Deposit. The Department may delay the drawing if the issuing institution grants an extension of the term of the Certificate of Deposit. During the last thirty (30) days of any such extension the Department shall withdraw from the Certificate of Deposit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the Department.
- (M) The Department will return the Certificate of Deposit to the issuing institution for termination when the requirements of Section 1.8.4(E) have been satisfied.

1.8.15 Use of Multiple Financial Mechanisms An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. The mechanisms must be as specified in 1.8.4, of this section, except that it is the combination of mechanisms, rather than the single mechanism, which must provide full financial assurance for an amount at least equal to the current closure and post-closure cost estimates. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The amount of financial assurance for each financial mechanism shall be stated on each agreement per these regulations. When use of a financial mechanism for closure and post-

closure care of the facility becomes necessary, the Department after consultation with the local governing body having jurisdiction may choose the order in which to use the mechanisms or may choose to use all concurrently.

- 1.8.16 Other Methods Approved by the Department The Department may, on a case by case basis, approve the use of a financial assurance mechanism other than those provided for in Sections 1.8.6, 1.8.7, 1.8.8, 1.8.9, 1.8.11 and 1.8.13 to assure payment of closure, post-closure and corrective action costs, provided the alternative financial assurance mechanism proposed by the owner or operator of the facility provides equivalent or better financial assurance that the costs of closure, post-closure and corrective action will be completely covered. An owner or operator of a facility requesting approval of an alternative financial assurance mechanism must provide all information in support of its request which the Department finds necessary to adequately evaluate the alternative financial assurance mechanism.
- 1.8.17 Use of a Financial Mechanism for Multiple Facilities An owner or operator may use a financial assurance mechanism specified in Section 1.8.4. to meet the requirements of more than one facility; provided, however, that all solid waste facilities are located in Colorado and the owner and operator are the same.

All solid waste facilities under a multiple financial instrument must be located in Colorado. The owner and operator must be the same for all facilities unless special approval of the Department after consultation with the governing body having jurisdiction is first obtained. Evidence of financial assurance submitted to the Department and the local governing body having jurisdiction must include a list showing, for each facility, the EPA identification number, name, address, and the amount of funds for closure assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanisms have been established and maintained for each facility. In directing funds available through the mechanism for closure and post-closure of any of the facilities covered by the mechanism, the Department after consultation with the local governing body having jurisdiction may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

- 1.8.18 Release of the Owner or Operator from the Requirements of this Section After receiving certifications from the owner or operator and an Colorado registered professional engineer that final closure and post-closure has been completed in accordance with the approved closure plan the Department shall verify that the closure/post-closure meets the requirements as established. The Department and the governing body having jurisdiction will consult prior to the decision of the Department that financial assurance is no longer required. Notification shall be in writing.

If there is reason to believe that the closure/post-closure activities have not been made in accordance with the approved plan(s), the Department shall provide the owner or operator with a detailed written statement of any deficiencies.

- 1.8.19 No certificate of designation shall be effective unless and until the required financial assurance mechanism has been fully implemented as required by this Subsection 1.8. Failure to properly maintain financial assurance as required by this Subsection 1.8 and the certificate of designation may result in the suspension or revocation of the certificate of designation.

1.9 INSPECTIONS - ENFORCEMENT - CIVIL PENALTY

- 1.9.1 **Inspections of Solid Waste Disposal Sites and Facilities.** Solid waste disposal sites and facilities as well as any property, premises or place where the Department reasonably believes that solid waste may be located, based on information provided to the Department, discovered by the Department during inspection, or otherwise in the possession of the Department, may be inspected by authorized representatives of the Department to evaluate compliance with the Solid Waste Disposal Act, Sections 30-20-100.5 et seq, C.R.S. ("the Act"), any subsequent rule or regulation, or the approved design and operations report issued as part of the certificate of

designation or a previously issued compliance order.

(A) Authorized representatives of the Department shall have access to all such sites and facilities during normal business hours.

(B) Inspections shall be made upon consent or pursuant to a search warrant issued by the Colorado District Court in the judicial district where the site or facility is located, when it is demonstrated to the court that entry to such a facility is required to verify compliance with the Act.

(C) No prior notification is required for such inspections.

1.9.2 Enforcement. Whenever the Department determines that any site or facility as well as any property, premises or place where the Department reasonably believes, based on information provided to the Department, discovered by the Department during an inspection, or otherwise in the possession of the Department that solid waste may be located is not or has not been in compliance with the Act, any subsequent rule or regulation, the terms of a certificate of designation issued under Section 30-20-104, C.R.S. or with previously issued Compliance Orders, the Department may issue a Compliance Advisory and/or Compliance Order to such site or facility (the respondent). Further, the Department may request that the Attorney General bring suit for injunctive relief or penalties.

(A) A Compliance Advisory may be issued when the Department deems it appropriate to notify the respondent that a violation has occurred or is occurring. It shall include the factual basis for the violations. It does not constitute an agency action subject to appeal, but does constitute notice to the respondent of the violation(s).

(1) Compliance Advisories may be resolved by:

(a) An Informal Conference that shall be available to the respondent. The Informal Conference may be either by telephone, in person or by mail. The respondent shall be given the opportunity to submit additional materials addressing the basis for the Department's belief that a violation has occurred or is occurring.

(b) A No Violations Letter shall be issued by the Department, if, after receipt of the facility's response, the Department determines that some or all of the violations did not occur. It shall inform the respondent in writing and attach a copy of the correspondence to the Compliance Advisory in the respondent's file.

(c) A No Further Action Letter shall be issued by the Department to the respondent, if, after the Informal Conference or submittal of additional information, the Department finds, based upon the available information, that compliance with some or all of the violations in the Compliance Advisory has been achieved. A copy of the No Further Action Letter shall be attached to the Compliance Advisory in the respondent's file.

(i) A No Further Action letter shall serve to document which violations have been remedied as of the date of issuance of such letter, and shall inform the respondent that no further action regarding those violations is necessary by the respondent to come into compliance with the specified requirements.

(ii) The issuance of such No Further Action letter shall not preclude the

Department from issuing an Administrative Enforcement Action in accordance with Section 1.9.3 below or from bringing a civil action or seeking a civil penalty pursuant to section 30-20-113, C.R.S. for the violations cited in the Compliance Advisory.

- (d) If, in the case of a Compliance Advisory, no Informal Conference is held or if after the Informal Conference the Department determines that some or all the violations cited in the Compliance Advisory are correct, it may issue a Compliance Order.

(B) Administrative Enforcement Actions

- (1) A Compliance Order may be issued whenever the Department finds, based upon information provided to the Department, discovered by the Department during an inspection or otherwise in the possession of the Department, that the respondent is or has been in violation of the Act, any subsequent rule or regulation or any certificate of designation, or previously issued Compliance Order.
- (2) All Compliance Orders shall be served upon the respondent by registered mail, return receipt requested, or via personal service.
- (3) A Compliance Order shall identify the factual and legal elements of each violation. A Compliance Order may be prohibitory or mandatory in effect and may state what steps the respondent must take to prevent or remediate any violations.

(C) Resolution of Compliance Orders

- (1) An Informal Conference shall be available to the respondent to whom a Compliance Order has been issued. The Informal Conference may be either by telephone, in person or by mail.
- (2) The respondent may offer any evidence or argument concerning the existence or gravity of the violations alleged in the Compliance Order at an Informal Conference.
- (3) The respondent may also discuss the terms of the order and may request further explanation of the violations.
- (4) The respondent need not be represented by legal counsel at the Informal Conference, although the respondent may choose to do so.
- (5) A respondent's acceptance of an offer for an Informal Conference does not stay the effectiveness of any provision of a Compliance Order pursuant to 24-4-105, C.R.S. that is specified to be effective immediately unless otherwise agreed to in writing by the Department. Failure to accept an offer to attend an Informal Conference shall not preclude a respondent from filing an appeal of the Compliance Order.
- (6) Following the Informal Conference, the Department may reissue the Compliance Order as originally issued, modify the order, or withdraw the order. A modified or reissued Compliance Order shall become effective upon receipt by the respondent unless provided otherwise in such Compliance Order and is subject to appeal in accordance with Section 1.9.3 below.
- (7) Unless otherwise provided for in a Compliance Order, if no Informal Conference is

held or if a Compliance Order is originally issued as fully effective, the Compliance Order shall be subject to appeal in accordance with section 1.9.3 below.

(D) A No Violations Letter shall be issued by the Department if, after a response from the facility, the Department determines that some or all of the violations did not occur.

(1) A copy of the No Violations Letter shall be attached to the Compliance Order in the respondent's file.

(E) A No Further Action Letter shall be sent to the respondent and attached to the Compliance Order in the respondent's file, if, after an Informal Conference, the Department determines that the facility has come into compliance with respect to some or all of the violations.

(1) A No Further Action Letter shall serve to document which violations have been remedied as of the date of the letter.

(2) The issuance of such No Further Action letter shall not preclude the Department from issuing a Compliance Order in accordance with section 1.9.2 above or from bringing a civil action or seeking a civil penalty pursuant to section 30-20-113, C.R.S. for the violations cited in the Compliance Order.

(F) In accordance with Section 30-20-113(5) (b), C.R.S. of the Act, the Department may settle claims for civil penalties of up to \$2000 per violation per day through settlement agreements or compliance orders on consent. Such a settlement may include, but is not limited to, payment or contribution of the penalty amount to state or local agencies or for other environmentally beneficial purposes. Penalties collected by the Department shall be paid to the state treasurer.

1.9.3 Appeals of Compliance Orders

(A) After the Compliance Order is effective, but within thirty (30) calendar days of the effective date, the respondent may file a notice of appeal requesting an adjudicatory hearing pursuant to provisions of section 24-4-105, C.R.S., with the Division of Administrative Hearings and the Department. Failure to file such notice of appeal within thirty (30) calendar days shall terminate the respondent's right to challenge the Compliance Order.

(1) The filing of a notice of appeal shall not stay the respondent's obligation to comply with an effective Compliance Order.

(2) All Compliance Orders are effective upon receipt unless provided otherwise in the Compliance Order.

(B) Within thirty (30) calendar days of the date that the administrative law judge issues his/her decision, the Executive Director of the Department shall review the decision and make a determination regarding the final agency action. The respondent's obligations under the Compliance Order shall not be stayed pending determination of the final agency action by the Executive Director.

(C) All appeals of determinations of final agency action by the Executive Director shall be filed with the Denver District Court no later than thirty (30) calendar days after the respondent's receipt of the determination.

1.9.4 Judicial Enforcement Actions

- (A) The Department may, at any time that the Department finds that the respondent is or has been in violation of the Act, commence a civil action for injunctive relief, in accordance with section 30-20-113(2) C.R.S. in the district court of the judicial district in which the violation occurs.
 - (1) The Department may file a civil action for injunctive relief in addition to, or as an alternative to, the issuance of a Compliance Order.
- (B) In accordance with the Act, the Department may seek a civil penalty for each violation of the Act in the district court of the judicial district in which the violation occurs. The district court may impose a civil penalty of no more than \$2000 per violation per day.

SECTION 2 MINIMUM STANDARDS

2.1 SITE AND FACILITY STANDARDS

All solid waste disposal sites and facilities shall comply with the following standards:

- 2.1.1 Sites and facilities shall comply with the health laws, standards, rules, and regulations of the Department, the Water Quality Control Commission, the Air Quality Control Commission, and all applicable local laws and ordinances.
- 2.1.2 (A) Sites and facilities shall not knowingly receive any hazardous waste.
 - (B) Owners and operators of all solid waste disposal sites and facilities shall implement a program at the facility for detection and the prevention of the disposal of polychlorinated biphenyl (PCB) wastes and hazardous wastes. This program must include:
 - (1) Random inspections of incoming loads unless the owner or operator takes other steps to ensure that incoming loads do not contain such wastes;
 - (2) Records of any inspections;
 - (3) Training of facility personnel to recognize these wastes; and
 - (4) Notification of the Department if these wastes are discovered at the site and facility. Upon receipt of such notification, the Department, after consultation with the local governing body having jurisdiction, may require that the ground water monitoring program of the site and facility be altered to include adequate monitoring for parameters that would detect the release of the hazardous waste or wastes disposed of on site.
- (C) All sites and facilities, requiring a certificate of designation, shall have a waste characterization and disposal plan approved by the Department and in use for such site and facility. The plan shall outline waste screening methodologies, appropriate waste handling procedures, and waste exclusion procedures which shall be implemented at each facility. The plan shall:
 - (1) Describe the responsibility of the waste generator in determining if the generator's waste is a hazardous waste pursuant to the Colorado Hazardous Waste Regulations, 6 CCR 1007-3, Part 261. Such determination may be made by:
 - (i) Testing the waste according to the methods set forth in Subpart C of Part 261 or according to an equivalent method approved by the Department under Section 260.21; or

- (ii) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.
 - (2) Include the site and facility's owner or operator's evaluations, screening methods, and documentation procedures regarding the generator's waste characterization determination.
 - (3) Include an identification of the waste streams requiring specific waste handling and/or disposal methods; and
 - (4) Include a contingency plan developed for handling any hazardous waste that is inadvertently discovered.
- (D) (1) Existing sites and facilities for which a certificate of designation has been obtained by [the effective date of these regulation amendments] must submit a waste characterization plan pursuant to the Section 2.1.2(c) within [three months after the effective date of this amendment] for approval by the Department. Such plan shall also be provided to the local governing body having jurisdiction within [three months of the effective date of this regulation]. Nothing in this Subsection (D), including the Department's approval of any such waste characterization plan, shall affect the terms or conditions of any existing certificate of designation, and such existing terms and conditions shall remain enforceable by the local governing body having jurisdiction.
- (2) However, all approved sites and facilities with a certificate of designation before (the effective date of this regulation) that have submitted a plan or other document containing information required by subsection 2.1.2(C) to the Department prior to the [effective date of this regulatory proposal and subsequent to October 9, 1993] and received approval from the Department for such plan or document prior to [the effective date of this regulatory proposal] shall not be required to submit a new waste characterization plan pursuant to this Subsection (D). The Department may require such a site and facility to amend any such previously approved plan or submit a new waste characterization plan if the definition of solid waste in Section 1.2 of these regulations or the definition of hazardous waste pursuant to 6 CCR 1007-3, Part 261 is revised.
- (E) All waste characterization plans for new facilities shall incorporate the waste characterization plan into the engineering design and operation report included in the site and facility's application for a certificate of designation pursuant to the procedures described in Section 1.6 of these regulations.
- 2.1.3 Nuisance conditions shall not exist at or beyond the site boundary. All reasonable measures shall be employed to collect, properly contain, and dispose of scattered litter including frequent policing of the area, and the use of wind screens where necessary. The facility shall be managed in such a manner that noise, dust and odors do not constitute a hazard to human health. The facility shall be managed in such a manner that the attraction, breeding and emergence of birds, insects, rodents and other vectors do not constitute a health hazard.
- 2.1.4 Water pollution shall not occur at or beyond the point of compliance.
- 2.1.5 No significant aquifer recharge areas, as may be designated by the Colorado State Engineer's office or the Department's Water Quality Control Commission, shall be adversely impacted by solid waste disposal.
- 2.1.6 Sites and facilities shall, design, construct, and maintain: (a) A run-on control system to prevent flow onto the active facility during the peak discharge from a 25-year, 24-hour storm, and (b) A run-off

control system to: (1) collect the water volume resulting from a 25-year, 24-hour storm event and (2) control the water volume resulting from a 100-year, 24-hour storm event. (See also Section 2.5.7).

- 2.1.7 Sites and facilities shall be adequately fenced or secured to prevent waste material and debris from leaving the site. Waste material and debris shall not accumulate along the fence line and shall be collected regularly and placed into the fill.
- 2.1.8 Sites and facilities shall control public access, prevent unauthorized vehicular traffic, provide for site security both during and after hours, and prevent illegal dumping of wastes. Effective artificial barriers, or natural barriers, or both may be used in lieu of fencing.
- 2.1.9 Solid wastes deposited at any site and facility shall not be burned, other than by incineration in accordance with a certificate of designation issued pursuant to C.R.S. 30-20-110(f) of the Act. The Department may authorize, in extreme emergencies, the supervised burning of large quantities of combustible materials, such as agricultural wastes, silvicultural wastes, land clearing debris, diseased trees, or debris from emergency cleanup operations.
- 2.1.10 Sites and facilities for final disposal shall provide adequate cover as described in Section 3.3.5, prevent ponding of water, wind erosion and water pollution. In the operation of a site and facility, the solid wastes shall be distributed in the smallest area consistent with handling traffic to be unloaded. The solid wastes shall be placed in the most dense volume practicable using compaction or another method approved by the Department.
- 2.1.11 Sites and facilities shall have a minimum of windblown debris. The facility shall cease operations during periods when high wind warnings as defined in Section 1.2 are verified on-site. If the facility has no wind velocity measuring device, closure decisions shall be based on readings obtained hourly by the facility operator from the nearest national weather service office or other location approved by the Department with concurrence from the local governing body having jurisdiction.
- 2.1.12 Landfills shall not accept raw sludges from wastewater treatment plants, septic tank pumpings, or chemical toilet wastes, without approval from the governing body having jurisdiction and the Department.
- 2.1.13 Sludges shall not be co-disposed with other solid wastes at the working face of sanitary landfills without approval from the governing body having jurisdiction and the Department.
- 2.1.14 No facility may accept for disposal, liquid wastes or wastes containing free liquids without approval from the governing body having jurisdiction and the Department.
- 2.1.15 Solid waste disposal sites and facilities shall comply with the ground water protection standards at the relevant point of compliance as defined in Section 1.2 and the owner/operator shall make a demonstration of compliance.
- 2.1.16 Sites and facilities where final disposal is performed shall, upon being filled, be left in a condition of orderliness and good aesthetic appearance and capable of blending with the surrounding area.
- 2.1.17 Solid waste disposal sites and facilities shall not place wastes below or into surface or ground water. This practice is prohibited on and after the effective date of these regulations.
- 2.1.18 (A) If the owner or operator of a solid waste disposal site and facility observes, or is made aware of a condition or event which is likely to cause a release or has caused a release of a substance containing a parameter identified in the facility detection monitoring program pursuant to Appendix B4 and that such condition or event is likely to cause a statistically significant increase

over background, the owner or operator shall notify the department and the local governing body having jurisdiction in writing within ten (10) days.

(B) Notifications made under this subsection shall be made part of the operating record of each solid waste disposal site and facility.

(C) The procedure and timing for activities after the initial notification per 2.1.18(A) shall follow Appendix B4(C) and Appendix B5.”

2.2 GROUND WATER MONITORING

2.2.1 A solid waste disposal site and facility which has not received a specific waiver from ground water monitoring requirements of these regulations as provided in Appendix B or Section 1.5, shall implement a ground water monitoring program in conformance with Appendix B, Sections B1 through B8 of these regulations. The monitoring requirements shall be developed and implemented at the solid waste disposal site and facility. After consultation with the local governing body having jurisdiction, the Department shall review and may approve or deny the monitoring program developed as a result of the requirements set forth in Appendix B. Once approved, the owner or operator shall implement the monitoring plan at the site.

(A) A ground water monitoring system shall be installed in conformance with Appendix B, Section B2.

(B) The ground water shall be sampled and analyzed in conformance with Appendix B, Section B3.

(C) A detection monitoring system shall be implemented in conformance with Appendix B, Section B4.

(D) If statistically significant increases over background have been determined, in conformance with Appendix B, Section B3, assessment monitoring shall be implemented in conformance with Appendix B, Section B5.

(E) Statistically significant increases of Appendix I and Appendix II constituents shall trigger an assessment of interim measures and corrective measures in conformance with Appendix B, Section B6.

(F) Selection of remedy and implementation of the corrective action program shall be implemented in conformance with Appendix B, Sections B7 and B8.

(G) The list of chemical constituents which shall form the basis of monitoring and analyses during detection, assessment and corrective action at solid waste disposal sites and facilities other than MSWLFs will be determined on a case-by-case basis depending on the wastes received by the facility. To have an alternate list of chemical constituents approved for a site and facility, the owner or operator must demonstrate to the Department that the utilization of the alternate list during detection, assessment or corrective action will be as protective for that specific site and the waste streams received as the requirements specified for MSWLFs in these regulations.

2.3 EXPLOSIVE GASES

The owners or operators of all solid waste disposal sites and facilities which may generate explosive gases shall monitor for explosive gases.

2.3.1 The concentration of explosive gases generated by the facility for solid waste disposal shall not

exceed:

- (A) Twenty-five percent [25%] of the lower explosive limit (LEL) (one percent [1%] by volume in air for methane) within facility structures (excluding gas control or recovery systems); and
- (B) At the boundary, the lower explosive limit which is five percent (5%) by volume in air for methane.

2.3.2 Owners or operators shall implement a routine monitoring program for explosive gases. The type and frequency of monitoring must be determined based on the following factors:

- (A) Soil conditions;
- (B) The hydrogeologic conditions surrounding the facility;
- (C) The hydraulic conditions surrounding the facility; and
- (D) The location of facility structures and property boundaries.
- (E) The minimum frequency of monitoring shall be quarterly.

2.3.3 If explosive gas levels are detected exceeding the limits specified in Section 2.3.1, the owner or operator shall notify the Department and the local governing body having jurisdiction and:

- (A) Immediately take all necessary steps to ensure protection of human health;
- (B) Within seven (7) days of detection, place in the operating record documentation of the explosive gas levels detected and a description of the actions taken; and
- (C) Within sixty (60) days of detection, implement an approved remediation plan, place an approved copy of the plan in the operating record, and notify the Department and the local governing body having jurisdiction that the plan has been implemented. The plan shall describe the nature and extent of the problem and the proposed remedy.
- (D) The Department after consultation with the local governing body having jurisdiction may establish alternative schedules for demonstrating compliance with Subsection 2.3.1 (A) and (B) of this section.

2.3.4 All explosive gas monitoring points shall be installed in accordance with applicable rules and regulations of the "Water Well and Pump Installation Contractor's Act", Title 37, Article 91, Part 1, CRS as amended.

2.4 RECORDKEEPING

2.4.1 All operating records shall be part of the engineering design and operation report and shall be maintained at the facility, unless otherwise approved by the Department.

2.4.2 The owner or operator of a solid waste disposal site and facility shall record and retain in an operating record the following information as it becomes available:

- (A) Location restriction demonstration required under Subsection 3.1;
- (B) Inspection records, and training procedures;
- (C) Gas monitoring results from monitoring and any remediation plans required by Section 2.3;

- (E) Design documentation for controlling leachate or gas condensate;
- (F) Demonstrations, certifications, findings, data or documents required by Subsection 2.2;
- (G) Closure and post-closure care plans and any monitoring, testing, or analytical data as required by Subsection 2.5 And 2.6;
- (H) Cost estimates and financial assurance documentation required by Subsection 1.8; and
- (I) Information demonstrating compliance with waivers as required by Section 1.5.

2.4.3 The owner or operator must notify the Department and the local governing body having jurisdiction when the documents required by this section have been placed or added to the operating record. All information contained in the operating record must be furnished upon request or be made available at all reasonable times for inspection by the governing body having jurisdiction or the Department.

2.5 CLOSURE OF SOLID WASTE DISPOSAL SITES AND FACILITIES

2.5.1 Sites and facilities shall be closed in accordance with the Act, and these regulations.

2.5.2 No person shall close a solid waste disposal site and facility without notifying the Department and the governing body having jurisdiction in writing at least sixty (60) days in advance of the closure date.

2.5.3 The operator of a solid waste disposal site and facility shall notify the general public at least sixty (60) days in advance of the proposed closure date by placing signs of suitable size at the entrance to the site and facility.

2.5.4 Precautions shall be taken to prevent further use of the site and facility for unauthorized disposal.

2.5.5 Water pollution shall not occur at or beyond the point of compliance after closure.

2.5.6 Nuisance conditions shall not exist at or beyond the site boundary after closure (see also 2.1.3).

2.5.7 Permanent surface water diversion structures remaining after closure shall control run-on and run-off from the 100 year, 24-hour storm event.

2.5.8 The owner or operator shall prepare a closure plan for approval by the Department after consultation with the local governing body having jurisdiction. The approved plan shall be placed in the operating record.

2.5.9 The owner or operator must begin closure activities of each disposal phase no later than thirty (30) days after final waste grades are reached. Extensions beyond the thirty (30) day deadline for beginning closure may be granted by the Department and the local governing authority if the owner or operator demonstrates that all steps necessary to prevent threats to human health and the environment from the active disposal phase will be taken.

2.6 POST-CLOSURE CARE AND MAINTENANCE STANDARDS

2.6.1 The owner or operator of all solid waste disposal sites and facilities shall prepare a written post-closure plan to be approved by the Department after consultation with the local governing body having jurisdiction and shall place it in the operating record.

2.6.2 For MSWLFs, the post-closure care period shall be established by the Department and the

governing body having jurisdiction per Section 3.6, shall be based on the operating history of the site, and shall be at least thirty (30) years. The post-closure care period for solid waste disposal sites and facilities other than MSWLFs will be established by the Department and the governing body having jurisdiction.

PART B REQUIREMENTS AND INFORMATION CONCERNING ALL SOLID WASTE DISPOSAL SITES AND FACILITIES IN THE STATE OF COLORADO

SECTION 3 STANDARDS FOR SOLID WASTE DISPOSAL LANDFILL SITES AND FACILITIES

3.0 PURPOSE, SCOPE AND APPLICABILITY

- 3.0.1 It is the purpose and intent of these regulations as they apply to solid waste landfills (MSWLFs) to be equivalent to but not more stringent than the 40 CFR Part 258 while allowing the maximum flexibility of interpretation and application based upon the characteristics of the chosen site.
- 3.0.2 This Section 3 also applies to non-MSWLF sites and facilities. On a case-by-case demonstration basis, the application of these requirements to non-MSWLFs may be altered provided that the alternative standard is as protective of the environment and public health as the requirement specified in these regulations.

3.1 LOCATION RESTRICTIONS AND SITE STANDARDS

- 3.1.1 Landfills that accept putrescible wastes which occur within 10,000 feet (3048 meters) of any airport runway used by turbojet, or within 5,000 feet (1,523 meters) of any airport runway used only by piston-type aircraft shall not pose a bird hazard to aircraft. The applicant shall submit reasonable evidence regarding the ability to mitigate a bird hazard, to the Department and the local governing authority having jurisdiction for their review. Owners or operators proposing to site new facilities or expand existing facilities within a five (5) Mile radius of an airport runway that is used by turbojet or piston-type aircraft shall notify the Department and the local governing body having jurisdiction and the Federal Aviation Administration (FAA).
- 3.1.2 New landfills and expansions of existing landfills shall not be located in wetlands, unless the owner or operator can demonstrate that the proposed operation can meet the restrictions set forth in 40 CFR 258.12.
- 3.1.3 New landfills and expansions of existing landfills shall not be located within 200 feet (60 meters) of a fault that has had a displacement in holocene time unless the owner or operator demonstrates to the Department that an alternate setback distance of less than 200 feet (60 meters) will be effective or equally effective in the prevention of damage to the structural integrity of the facility and will be protective of human health and the environment.
- 3.1.4 New landfills and expansion of existing landfills shall not be located in seismic impact zones, unless the owner or operator demonstrates to the Department that all components, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator shall place the demonstration in the operating record of the facility and submit it to the Department and local governing body having jurisdiction.
- 3.1.5 Owners or operators of new landfills, existing landfills and expansions of existing landfills located in an unstable area must demonstrate that engineering measures have been incorporated into the facility's design to ensure that the integrity of the structural components of the facility will not be disrupted. The owner or operator shall place the demonstration in the operating record of the facility and submitted to the Department and the local governing body having jurisdiction. The owner or operator shall consider the following factors, at a minimum, when determining whether

an area is unstable:

- (A) On-site or local soil conditions that may result in significant differential settling;
- (B) On-site or local geologic or geomorphologic features; and
- (C) On-site or local human-made features or events (both surface and subsurface).

3.1.6 The topography of the site shall maximize protection against prevailing winds on-site and minimize the amount of precipitation catchment area upgradient of the site.

3.1.7 Landfills shall not be located in a floodplain as defined herein.

3.1.8 Landfills shall isolate wastes from the public and the environment. Sites and facilities shall demonstrate suitable isolation to the Department and governing body having jurisdiction by, at a minimum, addressing all Sections in 3.2 and CFR 258.40 in sufficient detail and clarity to justify to the Department and governing body having jurisdiction that wastes and any potential leachate will be controlled within the fill area. Emphasis will be placed on favorable geologic conditions over engineered improvements of marginal geological conditions.

3.1.9 Landfills shall not place wastes below or into surface water or ground water. The operation of sites and facilities that place waste into ground water after the effective date of these regulations is prohibited.

3.2 DESIGN REQUIREMENTS

All portions of the facility design and investigations must be reviewed and sealed by a Colorado professional engineer or reviewed by a professional geologist, as appropriate.

3.2.1 Geologic data The engineering design and operations report shall include, as a minimum, the following geologic data:

- (A) Types and regional thickness of unconsolidated soils materials;
- (B) Types and regional thickness of consolidated bedrock materials;
- (C) Regional and local geologic structure, including bedrock strike and dip, and fracture patterns; and
- (D) Geologic hazards, including but not limited to slope stability, faulting, folding, rockfall, landslides, subsidence or erosion potential, that may affect the design and operation of the facility for solid wastes disposal.

3.2.2 Hydrologic data The engineering design and operations report shall include, as a minimum, the following hydrological data:

- (A) Lakes, rivers, streams, springs, or bogs, on-site or within two miles of the site boundary;
- (B) Depth to and thickness of perched zones and uppermost aquifers;
- (C) Ground water wells within one mile of the site boundary, including well depth, depth to water, screened intervals, yields and the aquifers tapped;
- (D) Hydrologic properties of the perched zones and uppermost aquifer, including flow directions, flow rates, porosity, coefficient of storage, permeability, and potentiometric surface;

- (E) Site location in relation to the base floodplain of nearby drainages;
- (F) An evaluation of the potential for impacts to existing surface water and ground water quality from the proposed facility for solid waste disposal; and
- (G) The existing quality of ground water beneath the proposed facility.

3.2.3 Engineering data The engineering design and operations report shall contain, as a minimum, the following engineering data:

- (1) The type, quantity and location of material that will be required for use as a daily and intermediate cover over the life of the site and facility;
- (2) The type and quantity of material that will be required for use as liner material or final cover, including its compaction density and moisture content specifications, and the design permeability;
- (3) Maps and plans, drawn to a convenient common scale, that show the following:
 - (a) The location and depth of cut for liners;
 - (b) The daily or intermediate cover, and final cover;
 - (c) The location and depths of proposed fill or processing areas;
 - (d) The location, dimensions, and grades of all surface water diversion structures;
 - (e) The location and dimensions of all surface water containment structures, including those designed to impound contaminated runoff leachate, sludge, or liquids for evaporative treatment;
 - (f) The spatial distribution of engineering, geologic and hydrologic data, and relationship to the proposed facility;
 - (g) The location of all proposed facility structures and access roads;
 - (h) The location of all proposed monitoring points for surface water and ground water quality and explosive gases;
 - (i) The final contours and grades of the fill surface after closure;
 - (j) The location of fencing to be placed on-site;
 - (k) The location of each discrete phase of development; and
 - (l) The design details of the final cap, liner and leachate collection system.

3.2.4 Construction details for all proposed monitoring points for surface water and ground water quality and explosive gases.

3.2.5 Liner/design components

- (A) Demonstration shall be made, to the Department and the local governing body having jurisdiction, that the design developed for the facility will comply with Section 2.1.15 at the relevant point of compliance. The owner/operator shall consider at least the following

factors:

- (1) Barrier layer permeability;
 - (2) Barrier layer thickness;
 - (3) Barrier layer porosity;
 - (4) Slope of the barrier layer;
 - (5) Hydraulic head on the barrier layer;
 - (6) Distance to relevant point of compliance;
 - (7) Distance and characteristics, including quality, of the uppermost aquifer or monitored unit;
 - (8) Climatic factors;
 - (9) The estimated volume, physical characteristics and chemical characteristics of the leachate, and
 - (10) The chemical compatibility of the barrier layer to estimated leachate chemical characteristics;
 - (11) The distance ground water beneath the site would flow during the facility's operating life and post-closure care period. Distance to domestic wells or springs shown to tap the uppermost aquifer downgradient of the site shall be presented.
- (B) The design shall consist of two components: the barrier layer and the leachate collection/removal system. When approving a design that complies with this section, the Department shall consider the ability of the design to comply with Subsection 2.1.15 at the relevant point of compliance taking into consideration site characteristics and site operations.
- (C) Barrier layer: the barrier layer shall be an engineered improvement that meets the performance standard of 40 CFR Part 258.40(a)(1) and shall be one of the following:
- (1) Natural lithology with recompaction natural lithology with recompaction can be used as a barrier layer when:
 - (a) A minimum thickness of 20 feet of soils and/or bedrock with in-situ hydraulic conductivity demonstrated through field testing to be less than or equal to 1.0×10^{-6} cm/sec, are present at the base of an excavation of a sanitary landfill; and
 - (b) The upper 12-inches is recompacted to achieve a hydraulic conductivity of less than or equal to 1×10^{-7} cm/sec.
 - (2) Soil liner: a soil liner shall consist of at least 3-foot of compacted soil with an adequate moisture content and with a hydraulic conductivity less than or equal to 1×10^{-7} cm/sec.
 - (3) Composite liner: a composite liner shall consist of two components: The upper component shall consist of a minimum 30-mil flexible membrane line (FML), and

the lower component shall consist of at least a two-foot layer of compacted soil with a hydraulic conductivity less than or equal to 1×10^{-7} cm/sec. FML components consisting of high density polyethylene (HDPE) shall be at least 60-mil thick. The FML component shall be installed in direct and uniform contact with the compacted soil component.

- (4) Alternative designs: alternatives to the above designs may be approved by the Department based on waste type and site specific technical information. Proposals for alternative designs shall demonstrate that the facility can comply with Subsection 2.1.15 at the relevant point of compliance and for MSWLF with 40 CFR Part 258.40(a)(1). Alternative designs include, but are not limited to the following:

- (1) Geosynthetic clay liners;
- (2) Natural lithology without recompaction;
- (3) Soil admixtures;
- (4) Geomembranes;
- (5) Polymers, and
- (6) Variations of design components described in this Section 3.2.5.

(D) Leachate collection and leachate removal system

- (1) A leachate collection system shall be designed and constructed to maintain less than a twelve (12) inch depth of leachate over the barrier layer, and to promote transport of leachate from the most distant point of the leachate collection system to the leachate removal system in less than twelve (12) months (assuming a saturated drainage media). Factors to be considered in the design of a leachate collection system include, but are not limited to, the following:

- (a) Waste type;
- (b) Anticipated leachate generation rate;
- (c) Slope length;
- (d) Percent slope;
- (e) Barrier layer;
- (f) Hydraulic conductivity of the drainage layer, and
- (g) Long term performance during the active life and post-closure care period.

- (2) A leachate removal system shall be designed, constructed and operated to:

- (I) Allow the leachate collection system to perform as designed; and
- (II) Account for potential increased hydraulic head in the removal system.

3.2.6 Surface water control systems shall be designed, constructed and maintained to:

- (a) Restrict flow onto the active portion of the landfill during peak discharge from a 25-year, 24-hour storm; and
- (b) Control the water volume resulting from a 25-year, 24-hour storm from the active portion of the landfill. (See also Section 2.5.7).

3.2.7 Prior to the acceptance of waste, the owner or operator must submit a report to the Department and the local governing body having jurisdiction documenting that the designed construction has been completed in accordance with the approved plan. The report shall be signed by a Colorado registered professional engineer, approved by the Department and placed in the operating record.

3.3 OPERATING CRITERIA

3.3.1 General data The engineering design and operations report shall include, as a minimum, the following general data:

- (A) Mailing address, county and legal description of the landfill for solid wastes disposal, township, section, quarter section and range;
- (B) Area site, in acres;
- (C) Type of landfill for solid waste disposal proposed for the site; and
- (D) Discussion of landfills service area, including transportation corridors and surrounding access.

3.3.2 Operational data The engineering design and operations report shall include, as a minimum, the following operational data:

- (A) The qualifications, names, and addresses of the persons operating the landfill and having the authority to take corrective action in the event of noncompliance;
- (B) The hours of the day and days of the week that the landfill will be operating;
- (C) The types and daily volumes in yards per day and/or gallons per month of wastes to be received; expected life of site. If sludge is to be received, its quality should be determined in accordance with Department technical guidelines. A listing of the waste stream types to be approved for routine receipt;
- (D) The number, classification, and job descriptions of personnel projected to be employed at the landfill when operating at full capacity;
- (E) Number, description, and uses of all equipment projected to be employed at the landfill when operating at full capacity;
- (F) The size and types of disposal cells or processing areas to be constructed;
- (G) The frequency of the application of adequate cover;
- (H) The types and heights of fencing to be placed on-site;
- (I) Provisions to minimize nuisance conditions on-site;
- (J) Provisions for fire protection to eliminate open burning on-site, and to prevent the spread of open burning to adjoining property;

- (K) Provisions for the retrieval of windblown solid wastes, on or off-site;
- (L) Conceptual plans to be implemented if the contamination of surface waters or ground waters occur, or if nuisance conditions are confirmed beyond the site boundary; and
- (M) The amounts and sources of water to be used on site for the control of nuisance conditions, fire protection, construction purposes and personnel use.

3.3.3 Quality assurance and quality control reports shall be developed and implemented for all engineered structures at the landfill.

3.3.4 Cover material requirements

- (A) The owners or operators of all landfills must cover disposed solid waste with six (6) inches of earthen material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging.
- (B) Alternative materials of an alternative thickness (other than at least six (6) inches of earthen material) may be approved by the Department and the governing body having jurisdiction, if the owner or operator demonstrates that the alternative material and thickness control nuisance conditions and scavenging without presenting a threat to human health and the environment.
- (C) The Department and the governing body having jurisdiction may grant a temporary waiver from the requirement of daily and intermediate cover requirements, if the owner or operator demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical. Alternate approaches to daily cover as described above will be considered on a case-by-case basis for non-MSWLF's.

3.3.5 Sufficient amounts of adequate cover shall be readily available for use throughout the site's life and for closure to minimize nuisance conditions as necessary.

3.3.6 Adequate amounts of water shall be available for construction purposes and to minimize nuisance conditions, as necessary.

3.3.7 Leachate and landfill gas condensate may be recirculated over the landfill with specific approval by the Department and the local governing authority.

3.4 RECORDKEEPING

An operating record shall be maintained and include, as a minimum, the following:

- (A) Incoming waste volumes,
- (B) Water quality monitoring results,
- (C) Explosive gas monitoring results,
- (D) Construction as-built details, and
- (E) Variations from approved operations procedures.
- (F) Any demonstration and waiver documentation required in these regulations.

3.4.1 Following closure of landfills, the owner or operator shall:

- (A) Record a notation on the deed to the facility property, or some other instrument that is normally examined during title search; and
- (B) Notify the Department and the local governing body having jurisdiction that notation has been recorded and a copy has been placed in the operating record.

The notation on the deed must in perpetuity notify any potential purchaser of the property that:

- (1) The land has been used as a landfill facility; and
- (2) Its use is restricted under Section 3.6.1(7)

The Department after consultation with the local governing body having jurisdiction may grant permission to remove the notation from the deed if all wastes are removed from the facility.

3.5 CLOSURE

The owner or operator of a solid waste site and facility shall develop a closure plan which meets the following minimum criteria.

3.5.1 (A) The closure plan shall be prepared and submitted to the Department for approval. The closure plan shall describe the steps necessary to close the landfill at any point during its active life. The closure plan, at a minimum, shall include the following information:

- (1) A description of the final cover system, designed in accordance with Section 3.5.2 and 3.5.3, And the methods and procedures to be used to install the cover;
- (2) An estimate of the largest area of the landfill ever requiring a final cover during the active life; and
- (3) A schedule for completing all activities necessary to satisfy the closure criteria of this section.

(B) Discrete units of a landfill may be closed independently of closure of the entire facility.

3.5.2 The final grades shall promote surface water run-off and minimize erosion, and shall have slopes no less than 5% (20:1) and no greater than 25% (4:1). Variations from these standards may be acceptable if demonstrations of the adequacy of proposed variance are made to the Department by the owner or operator.

3.5.3 The final cover permeability shall not exceed that of the liner; and the final cover design shall be comprised of one (1) of the following types:

(A) A soil final cover design shall consist of the following:

- (1) An infiltration layer consisting of a minimum of 18 inches of earthen material that has a permeability of less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and
- (2) An erosion layer of earthen material a minimum of 6 inches in thickness that is capable of sustaining native plant growth.

(B) A composite final cover design shall consist of the following components:

(1) foundation layer to be comprised of a minimum six (6) inch soil layer, located immediately above the refuse, to provide a suitable foundation for placement of the geomembrane.

(2) The barrier layer shall consist of a geomembrane which has a minimum 30-mil thickness and displays properties adequate for its intended purpose.

Factors to be considered in determining barrier adequacy shall include, but are not limited to the following:

(1) The effects of landfill settlement,

(2) Permeability,

(3) Seam strength,

(4) Friction properties, and

(5) Puncture resistance.

(6) Rooting layer comprised of a soil capable of supporting a root system and of sufficient thickness to protect the barrier layer and a seed bed layer of soil capable of supporting plant germination. The minimum thickness of the former layer shall be eighteen inches and the latter layer shall be six inches.

(C) Alternatives to the above designs may be approved by the Department based on waste type and site specific technical information. Proposals for alternative designs shall demonstrate that the final cover system will minimize infiltration and erosion, and comply with Subsection 2.1.15 at the relevant point of compliance. Alternative designs include, but are not limited to the following:

(1) Geocomposite materials,

(2) Soil admixtures,

(3) Polymers and

(4) Variations of design components described in this Section 3.5.3.

3.5.4 The final cover shall be designed so that landfill gases will not adversely affect cover performance as described in this Section 3.5.

3.5.5 Upon approval, and prior to beginning closure of each landfill phase, an owner or operator must notify the Department and place notice of the intent to close the phase in the operating record.

3.5.6 The owner or operator must commence closure activities of each landfill phase no later than 30 days after final refuse grades are reached. Extensions beyond the 30-day deadline for beginning closure may be granted by the Department if the owner or operator demonstrates that all steps necessary to prevent threats to human health and the environment from the active landfill phase will be taken.

3.5.7 The owner or operator must complete closure activities of each landfill phase, in accordance with the closure plan, within one hundred eighty (180) days following the beginning of closure as specified in this section. Extensions of the closure period may be granted by the Department if the owner or operator demonstrates that closure will of necessity, take longer than one hundred

eighty (180) days and the owner/operator has taken and will continue to take all steps to prevent threats to human health and the environment.

- 3.5.8 Following closure of each landfill phase, the owner or operator must submit a report to the Department documenting that closure has been completed in accordance with the approved closure plan. The report, which must be signed by a Colorado registered professional engineer, shall be approved by the Department and placed in the operating record.

3.6 POST-CLOSURE CARE AND MAINTENANCE

- 3.6.1 (A) Following closure of each landfill or landfill phase, the owner or operator must conduct post-closure care which shall consist of at least the following:

- (1) Provisions to prevent nuisance conditions;
- (2) Maintaining the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;
- (3) Monitoring the ground water in accordance with the requirements of Subsection 2.2 And maintaining the ground water monitoring system, if applicable;
- (4) Maintaining and operating the leachate collection system in accordance with the requirements in Section 3.2.5 (C). The Department may allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to human health and the environment;
- (5) Maintaining and operating the gas monitoring system in accordance with the requirements Subsection 2.3.
- (6) Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and
- (7) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in the Department's regulations. The Department may approve any other disturbance if the owner or operator demonstrates that disturbance of the final cover, liner or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.

- 3.6.1 (B) Discrete landfill units that can be monitored and maintained separately may be allowed to begin and end the post-closure period independent of closure of the entire facility.

- 3.6.2 Following completion of the post-closure care period the owner or operator must notify the Department that a certification signed by an independent Colorado registered professional engineer or approved by the Department and the local governing body having jurisdiction, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.

- 3.6.3 Post-closure care must be conducted for a minimum of thirty (30) years.

The length of the post-closure care period may be:

- (A) Decreased by the Department after consultation with the local governing body having jurisdiction if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment; or
- (B) Increased by the Department after consultation with the local governing body having jurisdiction if it is determined that the lengthened period is necessary to protect human health and the environment.

SECTION 4 CONSTRUCTION DEBRIS AND INERT MATERIAL LANDFILL SITES AND FACILITIES [RESERVED]

SECTION 5 ASBESTOS WASTE MANAGEMENT

5.1 GENERAL PROVISIONS: The provisions of Section 5.1-5.4 shall apply to all asbestos waste disposal areas.

5.1.1 (A) Any person who disposes of asbestos waste and any owner or operator of an asbestos waste disposal area, shall comply with the requirements of Sections 1, 2, 3, and 5 of these regulations.

(B) If a conflict exists between the requirements of this section and Sections 1, 2, or 3, the requirements of Section 5 shall control.

5.1.2 Each asbestos waste disposal area shall comply with the rules and regulations of the Department, the Water Quality Control Commission, the Air Quality Control Commission and each applicable local law and ordinance. Each asbestos waste disposal area shall be located, designed, constructed, operated and maintained so that it will protect public health, worker safety, and the environment.

5.1.3 No asbestos waste management activities shall cause or contribute to the occurrence of any visible emissions.

5.2 NON - FRIABLE ASBESTOS WASTE DISPOSAL AREAS: The provisions of this subsection 5.2 shall apply to each asbestos waste disposal area that receives non - friable asbestos waste.

5.2.1 Within 24 hours following receipt of non - friable asbestos waste and any storage thereof in accordance with Section 5.4 of these regulations, the waste shall be covered with a minimum of nine inches (9") of soil or eighteen inches (18") of non - asbestos cover material. The Department and local governing body having jurisdiction may approve on a case-by-case basis alternative materials of an alternative thickness. All other requirements of Sections 1.1 through 1.9 and 2.0 and 3.0 of these regulations regarding placement of "adequate cover" shall also apply to the disposal of non - friable asbestos waste. Operators shall minimize the potential for release from and exposure to asbestos waste after placement in each disposal area and shall not compact the waste prior to application of cover materials. At no time shall compaction equipment come into contact with asbestos waste, containers, or packaging.

5.2.2 Non - friable asbestos waste management shall be accomplished in a manner that minimizes any change in the friability of the waste.

5.3 FRIABLE ASBESTOS WASTE DISPOSAL AREAS: The provisions of this subsection 5.3 shall apply to each asbestos waste disposal area that receives friable asbestos waste.

5.3.1 (A) No friable asbestos waste shall be received or disposed of at a solid waste facility unless expressly authorized by an approved design and operations plan. This design and operations plan shall describe the friable asbestos disposal area, areas, or work practices used for onsite

disposal of friable asbestos waste and shall contain provisions for a response to a spill or release of friable asbestos waste material.

5.3.2 The Department may approve specific disposal activities for friable asbestos waste on a case-by-case basis in accordance with Section 1.5 of these regulations.

5.3.3 No friable asbestos wastes shall be disposed of within one hundred feet (100') in all directions of the property line of a solid waste disposal site and facility.

5.3.4 Warning signs and fencing, or appropriate controls as approved by the Department, shall be installed and maintained at the perimeter of each asbestos waste disposal area where friable asbestos waste is disposed of, in accordance with the following minimum requirements:

(A) A fence shall be placed around the entire area where there has been or will be disposal of friable asbestos waste to ensure the restriction of activities in that area and to preclude the entry of unauthorized and unprotected personnel.

(B) Warning signs shall be displayed as follows: one at each entrance to each asbestos waste disposal area; and one or more on each side of the fenced area based on the length of the side, at a rate of one for every three hundred linear feet (300') of fence.

(C) Warning signs shall be posted in such a manner and in such locations that the legend can be easily read.

(D) Each warning sign shall be an upright rectangle with minimum measurements of twenty inches by fourteen inches (20"x14").

(E) Each warning sign shall display the legend set out below. The letter sizes used in the legend shall be as specified below or of a visibility at least equal to those specified below.

Legend	Notation
Asbestos Waste Disposal Area	1 inch
Do Not Create Dust	0.75 inch
Breathing Asbestos Is Hazardous to Your Health	14 point

(F) Spacing between any two lines in the legend of the warning signs must be at least equal to the height of the upper of the two lines.

(G) Facilities that have existing signs referring to Asbestos Waste Disposal Sites may continue to use these signs until replacement is warranted.

5.3.5 (A) No friable asbestos waste shall be accepted for disposal unless it is tightly sealed in at least two 6 mil, leak - tight plastic bags or in a wrapping or other container deemed equivalent by the Department.

(B) The outermost layer of any containers holding friable asbestos waste shall be labeled with either of the following legends in type at least .5 inches tall:

(1)	CAUTION CONTAINS ASBESTOS AVOID OPENING OR BREAKING CONTAINER BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH
(2)	DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD

5.3.6 All activities involved in the disposal of friable asbestos waste, including placement in an asbestos waste disposal area, covering the asbestos waste, and compacting the fill shall be conducted in a manner that minimizes the potential for the rupture or opening of any bags, wrappers or other containers holding the friable asbestos waste and that prevents the emission of asbestos to the air.

5.3.7 (A) Within 24 hours following receipt of friable asbestos waste and any storage thereof in accordance with Section 5.4 of these regulations, the waste shall be covered with a minimum of nine inches (9") of soil or eighteen inches (18") of non - asbestos cover material. The Department and local governing body having jurisdiction may approve on a case-by-case basis alternative materials of an alternative thickness. All other requirements of Sections 1.1 through 1.9 and 2.0 and 3.0 of these regulations regarding placement of "adequate cover" shall also apply to the disposal of friable asbestos waste. Operators shall minimize the potential for release from and exposure to asbestos waste after placement in the disposal area and shall not compact the waste prior to application of cover materials. At no time shall compaction equipment come into contact with asbestos waste, containers or packaging.

5.3.8 Structurally rigid containers that hold friable asbestos waste shall be covered as specified in Section 5.3.7 within seventy-two hours of receipt or termination of storage. Precautions must be taken to avoid damage or rupture of the asbestos containers during handling. Before the owner/operator compacts any friable asbestos waste containers, the containers shall be covered with a minimum of nine inches (9") of soil or eighteen inches (18") of non-asbestos cover material.

5.3.9 (A) Any friable asbestos waste received in packaging other than a structurally rigid container shall be received and disposed of only if:

- (1) An asbestos waste disposal area necessary for the disposal of such friable asbestos waste is prepared prior to the arrival of such waste at the landfill;
- (2) A minimum of nine inches (9") of soil or eighteen inches (18") of non - asbestos cover material and the equipment necessary to cover the asbestos waste upon its placement in each asbestos waste disposal area is available to cover the asbestos waste per the requirements of Sections 5.3.7 and 5.3.8;
- (3) All unrelated landfill activities within one hundred (100') feet in all directions of each asbestos waste disposal area are stopped during the placement, covering, and compaction of the asbestos waste;

- (4) No non - essential persons are allowed within one hundred (100') feet in all directions of each asbestos waste disposal area during the placement, covering, and compaction of the asbestos waste;
 - (5) Sustained wind speeds at the asbestos waste disposal area do not exceed twenty miles per hour (20 mph) and gusts do not exceed thirty miles per hour (30 mph);
 - (6) A source of water is provided at the site to facilitate wetting the asbestos wastes if any container is breached during placement of asbestos waste.
- (B) Any friable asbestos waste received in packaging other than structurally rigid containers shall be disposed of by placement in an asbestos waste disposal area that is at least one hundred feet (100') in all directions from any area being used concurrently for the disposal of other waste.

5.3.10 The owner or operator of an asbestos waste disposal area where friable asbestos waste has been disposed of shall:

- (A) Maintain operating records required under subsection 2.4 of these regulations, including permanent records of the date and amount of each receipt of asbestos waste, the location of each asbestos waste disposal area within the boundaries of the solid waste disposal facility and the quantity of asbestos waste at each such location. These records shall be of sufficient specificity to identify the location and depth of the asbestos waste.
- (B) Ensure that records made to comply with this subsection are readily available at all times and are made available to the local governing body having jurisdiction and the Department upon request.
- (C) Such records shall be submitted to the local governing body having jurisdiction within thirty (30) days after the closure of the asbestos waste disposal area has been completed.

5.4 STORAGE OF ASBESTOS WASTE: Storage of asbestos waste at an asbestos waste disposal area, prior to burial, shall be conducted in accordance with the following requirements:

- 5.4.1 Asbestos waste shall be stored only in rigid containers and in segregated locations used solely for the purpose of such storage where asbestos waste packages can be handled, stored and maintained without being opened or disturbed.
- 5.4.2 Asbestos waste shall be stored at an asbestos waste disposal area for no more than twenty (20) calendar days prior to burial.
- 5.4.3 A warning sign shall be posted on each side of an area where asbestos waste is stored prior to burial. Such signs shall conform to subsection 5.3.4(C), (D) and (F). The legend on each such sign shall conform to the requirements of subsection 5.3.4(E) except that the first line shall read "Asbestos Waste Storage".

5.5 MANAGEMENT OF ASBESTOS-CONTAMINATED SOIL:

5.5.1 APPLICABILITY

- (A) The requirements of Section 5.5 apply to the owner or operator of any property with asbestos-contaminated soil at which soil-disturbing activities are occurring or planned for any area containing asbestos-contaminated soil, but excluding asbestos waste disposal areas that have a Certificate of Designation. The requirements of this Section 5.5 are triggered when the owner or operator has reason to know of asbestos-contaminated soil

at a site (such as through confirmation by analysis of observed material that is suspected of containing asbestos), or has reason to believe that visible asbestos may be encountered. An owner or operator who has no reason to know of asbestos-contaminated soil at a site, and has no reason to believe that visible asbestos will be encountered, does not have a duty under these regulations to sample or otherwise investigate for asbestos-contaminated soil prior to commencing excavation, or other soil disturbing activities, at the site.

- (B) Removal of asbestos-containing material on a facility component, that is located on or in soil that will be disturbed, shall be conducted under this Section 5.5, in accordance with work practices in Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B), Section III.O, but is not subject to the permit requirements of 5 CCR 1001-10, Part B, as long as the total quantity of asbestos-containing material is below the following trigger levels:

- (1) 260 linear feet on pipes,
- (2) 160 square feet on other surfaces, or
- (3) The volume of a 55-gallon drum.

Removal of asbestos-containing material on a facility component with asbestos quantities above the trigger levels is subject to the permit and abatement requirements of Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B), and is therefore outside the scope of this Section 5.5 as provided in Section 5.5.2(B) of these regulations.

- (C) Removal of pieces of asbestos-containing material, that are not on a facility component, and are located on or in soil that will be disturbed, shall be conducted under this Section 5.5, in accordance with work practices in Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B), Section III.O, but is not subject to the permit requirements of 5 CCR 1001-10, Part B.

5.5.2 EXEMPTIONS

- (A) If visible asbestos is solely nonfriable material containing asbestos, that has not been rendered friable, as determined by an asbestos building inspector in accordance with Section 5.5.6(A)(3), the nonfriable material can be removed from the soil and properly disposed. If all reasonably available information does not suggest that friable asbestos may also be present, the surrounding soil is not considered to be subject to the requirements of this Section 5.5.
- (B) Asbestos abatement of facility components (including pipes, ducts and boilers) conducted in accordance with Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B) is not subject to the requirements of Section 5.5, but must still comply with Sections 5.1 through 5.4 of these regulations.
- (C) Spill response activities that are subject to the requirements of Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B) are not subject to the requirements of Section 5.5, but must still comply with Sections 5.1 through 5.4 of these regulations.
- (D) Ambient occurrences of asbestos in soil that are not due to site specific activities are not subject to the requirements of this Section 5.5. Ambient occurrences of asbestos may include, but are not limited to, naturally occurring asbestos or distribution of asbestos from normal wear of automotive products.

- (E) De minimis projects involving excavations with a total volume of less than 1 cubic yard of soil using low-emission excavation methods such as hand held tools or light equipment.
- (F) Projects conducted directly by a homeowner on their primary residence, including residential landscaping projects and other private residential soil-disturbing projects conducted after the primary dwelling is built, e.g. planting trees, digging holes for fence posts, installing sign posts, gardening, other projects done by private individuals on their primary place of residence.

5.5.3 RESPONSE FOR UNPLANNED ASBESTOS DISCOVERY

Properties where visible material containing asbestos or asbestos-contaminated soil is unexpectedly encountered during soil-disturbing activities are subject to the following requirements:

- (A) IMMEDIATE ACTIONS: Immediate actions shall be taken by the person conducting the soil-disturbing activity, or representative of the owner or operator, to prevent release of, and/or exposure to, asbestos. These actions shall include, but not be limited to, the following:
 - (1) Stopping all soil-disturbing activities, related to asbestos-contaminated soil, until the 24-hour notification requirements in Section 5.5.3(B), and the interim action requirements in Section 5.5.3(C), are met. In the event of an emergency in which a soil disturbing activity must continue or commence at once, notification shall be made as soon as possible, but within 24 hours of discovery.
 - (2) Taking measures to prevent site access by unauthorized persons, and minimize the risk of asbestos exposure.
 - (3) Conducting surface soil stabilization such as covering with tarps or dust suppressant.
- (B) 24-HOUR NOTIFICATION REQUIREMENTS: The person who discovers the presence of, or has knowledge of the presence of, asbestos-contaminated soil (including the representative of the owner or operator), shall notify the Department's Hazardous Materials and Waste Management Division within 24 hours of the discovery of visible material containing asbestos in soil or asbestos-contaminated soil during a soil-disturbing activity. This notification shall include, but not be limited to, the following:
 - (1) Property location.
 - (2) General site description.
 - (3) Description of activities resulting in the discovery of asbestos-contaminated soil.
 - (4) Description of type and amount of material containing asbestos or asbestos-contaminated soil encountered.
 - (5) Description of any access and emission controls already implemented at the site.
 - (6) Property representative's name and phone number.
 - (7) Contact name and phone number for the party performing soil-disturbing activities.
- (C) INTERIM ACTIONS: Interim actions, including characterization to support the management practices, shall be taken by the owner or operator to prevent the release of, and/or exposure to, asbestos until such time as an asbestos Soil Characterization and Management Plan, in accordance with Section 5.5.4(B) is approved by the Department.

Such interim actions shall include, but are not limited to, measures listed in Section 5.5.4(B)(5)(c). To minimize potential delays, site owners and operators may proactively collaborate with the Department, in advance of any soil-disturbing activities, to jointly develop approved standard procedures that site owners and operators will implement as needed for all future applicable soil-disturbing activities.

- (D) Once the requirements of Sections 5.5.3(A),(B),and(C) are completed, soil disturbing activities can proceed in accordance with applicable requirements.

5.5.4 RESPONSE FOR PLANNED ASBESTOS MANAGEMENT

Planned soil-disturbing activities in areas of known or suspected asbestos-contaminated soil, or material containing asbestos, are subject to the following requirements:

- (A) 10 Working Day Notification Requirements: The Department's Hazardous Materials and Waste Management Division shall be notified at least 10 working days prior to any planned soil-disturbing activity, or a shorter time as approved by the Department, at sites that are subject to this Section 5.5. This notification shall include, but not be limited to, the following:

- (1) Property location.
- (2) General site description.
- (3) A Soil Characterization and Management Plan, in accordance with Section 5.5.4(B).
- (4) Property representative's name and phone number.
- (5) Contact name and phone number for the party performing soil-disturbing activities.

- (B) SOIL CHARACTERIZATION AND MANAGEMENT PLAN: At least 10 working days prior to any soil disturbing activity in an area with known or potential material suspected of containing asbestos in or on the soil, or asbestos-contaminated soil, a Soil Characterization and Management Plan shall be submitted to the Department for review and approval. The Department will use its best efforts to review and respond to the plan within ten (10) working days of receipt. The Soil Characterization and Management Plan shall include, but not be limited to, the following:

- (1) Property location.
- (2) General site description, including a description of the types of known or potential material suspected of containing asbestos, or asbestos-contaminated soil, and the location on the site.
- (3) Description of any proposed soil sampling or soil characterization, including:
 - (a) Work practices to be utilized during any proposed soil sampling or characterization that will eliminate or minimize opportunity for asbestos fiber release, and/or dust emissions.
 - (b) The location of any proposed sampling.
 - (c) Proposed sampling plan and methodology.
 - (d) Proposed analytical method.

- (4) Description of planned soil-disturbing activities.
- (5) Description of proposed exposure mitigation and asbestos fiber control measures, including:
 - (a) Measures to prevent site access by unauthorized persons, and minimize the risk of asbestos exposure.
 - (b) An air monitoring plan that demonstrates dust-control measures to ensure the safety of people in and around the work area and prevent release of asbestos fibers outside the work area. The air monitoring plan shall include a contingency plan for immediate work stoppage, or modification of dust control measures, in the event that approved measured or visible dust limits, as defined in the air monitoring plan, are exceeded in or around the work area.
 - (c) An emissions control plan that describes work practices that will be implemented to prevent the release of and/or exposure to asbestos fibers. The emissions control plan shall include any of the following measures, as appropriate:
 - (i) Assuring that the soil is adequately wet (as that term is defined in Section 1.2 of 6 CCR 1007-2), stabilized, or covered during soil disturbing activities.
 - (ii) Erecting wind fences around the area(s) being disturbed that contain asbestos-contaminated soil during the entire time that it is being disturbed.
 - (iii) Establishing equipment decontamination procedures and/or track-out prevention measures.
 - (iv) Covering soil piles or inactive working surfaces with tarps or dust suppressants.
- And may also include:
 - (v) Erecting a structure maintained at a negative pressure differential sufficient to contain all dust, with off-gas from the evacuation system treated with HEPA filtration.
- (d) A plan for filling, covering, or otherwise mitigating possible exposure to asbestos fibers from any remaining asbestos-contaminated soil that has been exposed by the soil-disturbing activity, but is not disturbed, such as an excavation side-wall or bottom. At a minimum, covering shall constitute paving or covering asbestos-contaminated soil with an amount of clean soil appropriate to future uses.
- (e) A plan for disposal of asbestos waste and/or asbestos-contaminated soil, which shall include:
 - (i) Characterization of the asbestos waste and/or disturbed soils, if appropriate.
 - (ii) Segregation of the asbestos waste and/or disturbed soils, if

necessary.

(iii) Disposal destination for any asbestos waste and/or asbestos-contaminated soil.

(iv) Notification of receiving facility.

To minimize potential delays, site owners and operators may proactively collaborate with the Department, in advance of any soil-disturbing activities, to jointly develop approved standard procedures that site owners and operators will implement as needed for all future applicable soil-disturbing activities.

(C) Once the notification requirements of Section 5.5.4(A) are completed, and the Soil Characterization and Management Plan required in Section 5.5.4(B) is approved, soil disturbing activities can proceed in accordance with applicable requirements.

5.5.5 REMEDIATION OF ASBESTOS- CONTAMINATED SOIL.

(A) If the owner of a property chooses to remediate (rather than just manage) all or a portion of the property containing asbestos-contaminated soil, an Asbestos Remediation Plan shall be submitted to the Department's Hazardous Materials and Waste Management Division for review and approval prior to commencement of soil disturbing activities. The Asbestos Remediation Plan shall comply with this Section 5.5 and include, but not be limited to, the following:

(1) a Soil Characterization and Management Plan, submitted in accordance with Section 5.5.4(B).

(2) A detailed description of planned remediation activities, including proposed depth and areal extent of remediation, and work practices to be implemented.

(3) The proposed use of the property and area of remediation.

(4) Any planned engineering controls to prevent exposure to any asbestos left in place.

(B) The Department shall use its best efforts to provide written notification that an Asbestos Remediation Plan has been approved or disapproved within no more than forty-five (45) days after a request by a property owner, unless the property owner and the Department agree to an extension of the review to a date certain.

5.5.6 TRAINING AND CERTIFICATION REQUIREMENTS .

(A) The following minimum training requirements shall apply to any person performing work subject to these regulations, pursuant to the Applicability and Exemption provisions of subsections 5.5.1 and 5.5.2 of this regulation:

(1) Each individual performing soil-disturbing activities shall complete an on-the-job asbestos-contaminated soil awareness training that provides information necessary to perform their duties in a way that ensures compliance with the requirements of this Section 5.5. This training must be conducted by an asbestos Supervisor, Building Inspector or Project Designer who has been certified in accordance with Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B), and who has a minimum of six (6) months experience in asbestos-contaminated soil management.

- (2) Each individual performing soil-disturbing activities in an area with asbestos waste or asbestos-contaminated soil shall complete asbestos awareness training in accordance with the Occupational Safety and Health Administration (OSHA) standards set forth at 29 CFR 1926.1101(k)(9)(vii)(2005)(not including later amendments or additions) and asbestos-contaminated soil training that provides information necessary to perform their duties in a way that ensures compliance with the requirements of this Section 5.5. The asbestos-contaminated soil training must be conducted by an asbestos Supervisor, Building Inspector or Project Designer who has been certified in accordance with Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B), and who has a minimum of six (6) months experience in asbestos-contaminated soil management.
- (3) Inspection and identification of asbestos in soil shall be conducted by an asbestos Building Inspector who has been certified in accordance with Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B), and who has a minimum of six (6) months experience in asbestos-contaminated soil inspections.

5.5.7 DISPOSAL OF ASBESTOS- CONTAMINATED SOIL

- (A) Asbestos-contaminated soils containing visible friable asbestos must be transported and disposed in a leak tight container as friable asbestos waste in accordance with the requirements of Section 5.3 of this Part 5. Documentation stating that the soil originating from the site shall not be used as daily cover or sold as clean fill must accompany each load of asbestos-contaminated soil removed from the site.
- (B) Asbestos-contaminated soil containing only visible non-friable asbestos that has not been rendered friable must be transported in a leak tight container and disposed of as non-friable asbestos in accordance with Section 5.2 of this Part 5. Documentation stating that the soil originating from the site shall not be used as daily cover or sold as clean fill must accompany each load of asbestos-contaminated soil removed from the site.
- (C) Asbestos-contaminated soils containing no visible asbestos must be transported in a leak tight container and disposed in a manner similar to non-friable asbestos waste, as described in Section 5.2 of this Part 5. Documentation stating that the soil originating from the site shall not be used as daily cover or sold as clean fill must accompany each load of asbestos-contaminated soil removed from the site.
- (D) Soils that are not asbestos-contaminated, based on analysis showing no detectable amounts of asbestos, may be replaced into the disturbed area as needed, used as fill, or disposed as solid waste.

5.5.8 FEES.

The Department shall collect fees, from the owner, operator, or person conducting the soil-disturbing activity, based on total documented costs, in accordance with Section 1.7.2, for the review of the Soil Characterization and Management Plan, related documents, and the performance of oversight activities by the Department.

SECTION 6 INCINERATOR ASH DISPOSAL SITES AND FACILITIES

6.1 GENERAL REQUIREMENTS FOR MANAGEMENT OF SOLID WASTE INCINERATOR ASH

- 6.1.1 In addition to applicable requirements in the preceding sections of these regulations, this Section 6 shall apply to the management and disposal of solid waste incinerator ash.

- 6.1.2 Solid waste incinerator ash must either be beneficially used or reused, as defined in paragraph 6.1.3, or finally disposed in accordance with paragraphs 6.1.4 through 6.2.10.
- 6.1.3 Beneficial use or reuse of solid waste incinerator ash must receive approval from both the Colorado Department of Health and the county. In order to constitute beneficial use the applicant must demonstrate:
- (A) That the waste material can meet the same specifications as alternative non-waste materials; and
 - (B) That the beneficially used waste materials will not release contaminants into the environment.
- 6.1.4 Solid waste incinerator ash must be disposed of only at approved or designated solid waste disposal sites and facilities. Sites not approved to take solid waste incinerator ash on a continuous basis must receive approval from the Department and the local governing body having jurisdiction. A substantial change in operations may be required prior to accepting the residual ash for disposal at the facility.
- 6.1.5 All solid waste combustion ash and associated waste water and fugitive dust handling and disposal shall comply with all applicable laws and regulations, and with all applicable local zoning laws and ordinances.
- 6.1.6 Residual ash shall be dewatered to remove any free liquids prior to shipment to a disposal site. The ash residue must be wet enough so the surface of the ash remains damp after unloading at a landfill until soil cover material can be applied.
- 6.1.7 Transportation of ash shall occur in equipment designed and utilized to prevent leakage, spillage or dispersion of the material during transportation.
- 6.1.8 The ash must be covered daily or less frequently as approved by the Department considering factors such as the type of ash, the climate and hydrogeology of the site and size of the active area. In any regard, the ash must be covered at intervals sufficient to prevent infiltration of precipitation and fugitive dust problems from the ash.

6.2 MUNICIPAL SOLID WASTE INCINERATOR ASH DISPOSAL STANDARDS

- 6.2.1 These regulations apply to the management and disposal of municipal solid waste incinerator ash, except as provided for in 6.2.2 for facilities in operation prior to adoption of these regulations.
- 6.2.2 Those sites and facilities in operation prior to adoption of these regulations, must comply with Sections 6.1 of these regulations and may be required to come into compliance with all other regulations in this section applicable to the management and disposal of municipal solid waste incinerator ash upon a determination by the Department that such sites and facilities may be causing impact of existing or future uses of surface or ground water.
- 6.2.3 Municipal solid waste incinerator ash must be disposed of in lined monofills having leachate detection and collection systems. The Department may waive the requirement of monofilling on a case-by-case basis if, after taking into consideration factors such as ash volume, physical and chemical characteristics of the ash including toxicity, leaching potential and site characteristics, the operator can demonstrate that codisposal with solid waste would provide the degree of environmental protection equal to that provided by monofilling.
- 6.2.4 Plans and specifications for the liner and leachate collection system shall be included in the facility engineering report. The liner and leachate collection system must meet the following minimum standards:

- 6.2.5 The liner shall be constructed on a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure due to settlement, compression or uplift.
- 6.2.6 The liner shall consist of a minimum of 2 feet compacted clay below the leachate collection system, with 10^{-7} cm/sec permeability or an equivalent liner which includes a synthetic material. The liner must be installed using quality control measures specified in the facility engineering report to ensure attainment of the design permeability and to prevent damage to the liner during construction and during the active life of the landfill.
- 6.2.7 The system for the collection of leachate shall conform to the following standards:
- (A) Protective cover shall be provided which allows for the flow of any leachate generated by the ash to the collection layer; and prevents damage to the liner system.
 - (B) The collection system shall be designed to ensure that liquids and leachate will drain continuously from the protective cover to the collection sump or point without ponding or accumulating on the liner and shall have adequate provisions for maintenance and cleaning.
 - (C) The leachate collection and removal system must be constructed of materials that are: (1) chemically resistant to the leachate which is expected to be generated and (2) of sufficient strength and thickness to prevent collapse under the pressures exerted by the overlying ash, cover materials, and by equipment used at the landfill.
- 6.2.8 At least two (2) feet of compacted clay of 10^{-7} cm/sec permeability and one foot of soil cover must be placed over the disposal site at closure. Final grades and cover design shall ensure proper drainage to prevent infiltration of water and provide stabilization to control erosion and maintain the integrity of the cap at closure.
- 6.2.9 A plan for monitoring of leachate in the collection system and procedures for handling, treatment and disposal must be contained in the facility operations report.
- 6.2.10 Monitoring of the leachate detection and collection system and groundwater monitoring shall continue through post closure for a minimum of twenty (20) years.

SECTION 7 REGULATIONS FOR TRANSFER STATIONS

7.1 PURPOSE, SCOPE AND APPLICABILITY:

- (A) The purpose of this section is to establish minimum health and safety standards for the operation of transfer stations. The criteria apply to all transfer stations at which refuse generated off-site awaits transportation to approved solid waste disposal sites and facilities. At such sites, refuse may be transferred from one type of containerized collection receptacle, is processed by shredding, baling, or compaction, and then placed into another receptacle. Other waste management and disposal activities conducted at the site of the transfer station may require regulation by the Department and a certificate of designation from the local governing body having jurisdiction.
- (B) A transfer station shall not be deemed to be a solid waste disposal site and facility and therefore, such a facility shall not be required to apply for and obtain a certificate of designation as outlined in these regulations. The governing body having jurisdiction can request, in writing, that the Department conduct a technical review of the site and facility documents and its operation plan. The Department shall be notified, by the governing body having jurisdiction when a permit approving a transfer station is issued. A copy of the approved operations plan shall be maintained

at the transfer station.

- (C) An intermediate processing facility is a transfer station under these regulations and a material recovery facility is a recycling facility under Section 8 of these regulations.
- (D) Only residential and commercial waste shall be accepted at transfer stations. Wastes such as medical waste, asbestos waste and, contaminated soil shall not be accepted at transfer stations unless the transfer station is specifically designed and approved for these wastes.
- (E) Transfer stations shall comply with the health laws, standards, rules, and regulations of the Department, the storm water rules of the Water Quality Control Commission, the Air Quality Control Commission, and all applicable local laws, ordinances and regulations.
- (F) In conformance with Section 1.5.2, portions of these requirements may be waived or modified for small rural transfer stations as long as the performance of the site under the altered requirements is as protective of public health and the environment as these regulations.

7.2 OPERATING PLAN CRITERIA

Owners or operators of all new transfer stations shall develop an operation plan that contains, as a minimum, descriptive responses of compliance to this subsection.

7.2.1 General data and maps

- (A) Name(s) and address(es) and telephone number(s) of the owner /operator. Name and address and phone number of the person(s) operating the facility and having the authority to take corrective action in an emergency.
- (B) Facility mailing address, county and legal description including 1/4 section, section, township and range.
- (C) Regional map depicting service area, existing and proposed.
- (D) Vicinity map showing access and service roads, zoning and land use, residences, water wells and the location of all surface water bodies, the location of 100 year flood plain boundaries, and all manmade or natural features relating to the facility within a 1/2 mile radius.
- (E) Site map showing adjacent properties including land use, property owners names and addresses, site property boundaries and area (acres). If proposed site is adjacent to public roads or streets, include the properties across the street or road. The map should show the present site, conditions and the projected site utilization including all site structures (such as buildings, fences, gates, entrances and exits, parking areas, on-site roadways, and signs) and the location of all water supplies and utilities. This site map shall be certified by a state licensed surveyor or engineer.
- (F) Site maps and drawings showing all the proposed, structures -and areas designated for unloading, baling, compacting, storage, and loading, including the dimensions, elevations, and floor plans of these structures and areas, including the general process flow.
- (G) Facility's drainage system and water supply system.

7.2.2 Design criteria

(A) Unloading and loading areas shall be:

- (1) Adequate in size to facilitate efficient unloading from the collection vehicles and the unobstructed movement of vehicles;
- (2) Constructed of concrete or asphalt paving material and equipped with adequate drainage structures;
- (3) Solid waste handling shall be confined to the smallest practical area. Such handling shall be supervised by competent operating personnel who shall be familiar with proper operational procedures;
- (4) Sufficient internal storage areas to provide for incoming solid waste;
- (5) Exhaust removal systems shall be installed in enclosed areas; and
- (6) Measures shall be provided to prevent backing into pits while unloading.

(B) On-site roads

- (1) Designed to accommodate expected traffic flow in a safe and efficient manner;
- (2) The road surface design shall be suitable for heavy vehicles and the road base shall be capable of withstanding expected loads;
- (3) Passable, in all weather conditions, by loaded collection and transfer vehicles. Provisions shall be made for de-icing ramps during winter months; and
- (4) Where public dumping is allowing, separate access for passenger vehicles shall be provided.

(C) Equipment Number, description and uses of all equipment projected to be employed including the design capacity.

(D) Gate and fencing Types and heights of suitable gate and fencing material to be placed on site, to limit unauthorized persons from access to the facility when the facility is closed.

(E) Signs A sign shall be posted, at all access points to the facility, with the hours of operation, the types of solid waste accepted and not accepted, the operating hours the facility accepts wastes, and emergency telephone numbers of a responsible party.

(F) Buffer zones Buffer zone of 200 feet around the active operating area to the nearest property line in residential zoned areas, or as otherwise established by the governing body having jurisdiction.

7.2.3 Operation standards

(A) Waste characterization The types, composition, and expected daily volume of all solid waste to be accepted at the facility in cubic yards or tons/per day, the maximum time any such waste will be stored, and the proposed capacity of the facility.

(B) Supervision Facilities with permanent continually operating mechanical equipment shall have an attendant on duty at all times the facility is open to the public.

(C) Personnel The number, classification, and job descriptions of personnel to be employed at

the facility when operating at full capacity. A personnel training plan which includes recognizing unauthorized waste such as PCB's and hazardous wastes, equipment operation, and any other personnel concerns.

- (D) Nuisance conditions All reasonable measures shall be employed to collect, properly contain, and dispose of scattered litter, including frequent policing of the area, and the use of wind screens where necessary. The facility shall be managed in such a manner that noise, dust and odors do not constitute a hazard to human health. The facility shall be managed in such a manner that the attraction, breeding and emergence of birds, insects, rodents and other vectors do not constitute a health hazard.
- (E) Off-site water Control measures shall be provided to protect surface and ground waters, including run-off collection and discharge, designed and operated to handle a twenty-four (24) hour, twenty-five (25) year storm and equipment cleaning and washdown water.
- (F) Fire protection Fire protection equipment shall be available at all times. A fire protection plan including provisions to prevent the spread of fire to adjoining property shall be approved by the local fire department.
- (G) Operational records Records shall be maintained for all facilities. These records shall include a daily log of the quantity of solid waste received and transported, as-built construction details, and variations from approved operations procedures. Records shall be kept on-site whenever practicable or as otherwise approved.
- (H) Contingency plan Contingency plans specifying the procedures to be followed to handle situations such as the following shall be available at all times to the transfer station attendants:
 - (1) Hazardous material incident, including emergency response contacts, equipment, identification of trained personnel, and notification procedures;
 - (2) Contamination of surface water or ground water;
 - (3) Nuisance conditions on site or confirmed beyond the site boundary; and
 - (4) Alternate solid waste handling system for periods of inability to operate or delays in transporting solid waste due to fires, unusual traffic conditions, equipment breakdown, hot loads, or other emergencies or undesirable conditions.
- (I) Cleaning facilities handling more than 100 cubic yards of waste per day shall be cleaned daily of all loose materials and litter, by wash-down or other approved method, to prevent odors and other nuisance conditions. All residuals shall be properly removed and disposed. All boxes, bins, pits or other container type used shall be cleaned on an approved schedule.
- (J) Standing water All floors shall be free from standing water. All drainage from cleaning areas shall be discharged to sanitary sewers or other methods that meet local pre-treatment standards.
- (K) Storage adequate Storage space for incoming solid waste shall be available at the transfer station. Solid wastes should be loaded into the containerized collection receptacle on the same day it arrives at the transfer station. Uncompacted wastes will not be allowed to remain on the tipping floor overnight. Removal of all putrescible solid waste from the transfer station whenever transfer containers are full, or weekly, whichever comes first, is also required. Uncleaned transfer vehicles containing putrescible material shall not be

parked on public streets or roads except under emergency conditions. Adequate off-street parking for facility vehicles shall be provided.

- (L) All solid waste received at a transfer station shall be transferred as soon as practicable. All solid wastes arriving at the transfer station that are not transferred within twenty-four (24) hours of receipt shall be placed in closed containers or in totally enclosed buildings, structures, or other means of cover acceptable to the Department, that deter water, birds, insects, rodents and other vectors from reaching wastes.
- (M) Final disposal All solid waste passing through the transfer station shall be ultimately treated or disposed of in an approved solid waste disposal site and facility.
- (N) Water supply The amounts-and source-of water, for--use on site for the control of nuisance conditions, fire protection, construction purposes and personnel use shall be presented.

7.2.4 Closure plans for final closure of the transfer station shall include a plan for the removal of all stored solid wastes and washdown liquids. The Department and the local governing authority shall be notified, in writing, of temporary or permanent closure of the transfer station.

SECTION 8 RECYCLING

8.1 PURPOSE

The purpose of this section is to provide a regulatory structure for facilities that recycle solid waste that comprises recyclable materials. These regulations are intended to be self-implementing. Recycling facilities shall register with Department and report annually to the Department per these regulations. No permit from the Department is required. To be considered a recycling facility, the facility must recycle material at rates established in these regulations. Criteria that the Department will consider in making determinations regarding recycling facilities include, but are not to be limited to:

- (A) Adherence to established engineering or other appropriate specifications;
- (B) Adherence to established product, end user specifications or customer conditions of acceptance;
- (C) Environmental impacts relative to those expected from available commercial products;
- (D) Demonstrated benefit associated with the use; and
- (E) Actual use as a substitute for, or in conjunction with, a commercial product or raw material.

8.2 SCOPE AND APPLICABILITY

8.2.1 The Department recognizes that many materials that are found in the solid waste stream have the potential to be recycled or reused in commerce. Therefore no specific list of recyclable materials is established by these regulations. However, a recycling facility is required to meet the minimum standards set forth in these regulations when recycling a recyclable material.

8.2.2 (A) Recycling activities that qualify for the statutory exemption from the requirement to obtain a certificate of designation, as found in C.R.S. § 30-20-1022(5), are covered by this section 8.

- (B) Facilities with recycling activities that qualify for the statutory exemption from the requirement to obtain a certificate of designation are not required to collect or remit to the state the fees defined in C.R.S. § 25-16-104.5, for those wastes that are recycled.

8.2.3 For facilities with multiple solid waste management activities, including recycling, the regulations of

this section 8 apply only to the recycling activities.

8.2.4 This section 8 does not apply to any facility where a waste, or group of wastes is likely to cause ground water contamination or nuisance odors.

8.2.5 If a facility with a recycling activity fails to comply with this section 8, that activity shall be subject to all other applicable provisions of these regulations (6 CCR 1007.2).

8.2.6 At the termination of a recycling activity, a facility must either close in accordance with this section 8 or obtain a certificate of designation for solid waste disposal.

8.2.7 Exemptions. The following activities and/or facilities are not subject to the regulations of this section 8:

(A) Drop-off or buy-back centers for recyclable materials are not subject to these regulations, including household hazardous waste facilities.

(B) Recycling facilities that are located on the same site where the waste is generated, and that recycle or store only waste from that site (examples are: an office building that stores materials for routine pick-up by a recycler or a construction project that is processing materials derived from the project).

(C) Businesses that recycle materials only as a side-line or by-product of their normal business activities (examples are: a gravel operation that brings in concrete or asphalt rubble for eventual grinding into recycled aggregate or highway construction projects that process concrete and asphalt as part of the overall project).

(D) Composting facilities that are regulated under section 14 of these regulations.

(E) Facilities that collect and process automobiles, appliances or scrap metal components.

8.3 REQUIREMENTS FOR RECYCLING FACILITIES

8.3.1 All recycling facilities are subject to the following requirements:

(A) After an initial accumulation period a recycling facility must be able to show that the quantity of recyclable materials that were recycled during each successive calendar year was at least 75% of the quantity of recyclable materials in inventory. The accumulation period is to be based on a 3-year rolling average of the facility's stock of the recyclable material at the end of the previous calendar year, in order to allow for variations in the market.

(B) Upon filing a written justification to the Department, a recycling facility may implement a commodity and site-specific variance to the accumulation period, and/or the recycling rate, and/or a material-specific variance to the accumulation period and/or recycling rate. The Department reserves the right to develop criteria to challenge such a submittal based on the grounds established in section 8.1 (A-E) listed above and/or the facility is operating in a manner that is producing nuisance conditions.

8.4 REPORTING AND RECORDKEEPING

8.4.1 (A) Existing recycling facilities shall submit a notification to the Department one hundred eighty (180) days after the effective date of this section 8, and new recycling facilities shall submit upon their opening a notification which contains at least the following information:

(1) The name and address of the facility, including a business and corporate name as

necessary;

- (2) The name and address of the owner and the operator;
- (3) The emergency contact information for a 24-hour contact; and
- (4) The types of recyclable material recycled or reused at the facility.

(B) On or before the first of May of each subsequent, year, each recycling facility shall submit to the Department an annual report for the previous calendar year containing at least the following information:

- (1) The name and address of the facility including a business and corporate name as necessary;
- (2) The name and address of the owner and the operator;
- (3) The emergency contact information for a 24-hour contact;
- (4) The types of recyclable material recycled or reused at the facility; and
- (5) The amount of each recyclable material, by weight or by volume.

8.4.2 All information required to be kept under these regulations -must be furnished upon request or be made available at all reasonable times for inspection.

8.4.3 Facilities may request confidential business protection on volume/quantity data submitted per C.R.S. § 24-72-204(3) (a) (IV).

8.5 MINIMUM SITE AND FACILITY STANDARDS

All recycling facilities shall comply with the following standards.

8.5.1 All recycling facilities shall-be operated and managed to minimize the potential for release of contaminants to ground water and to minimize the creation of dust and odors or other nuisance conditions.

8.5.2 Recycling facilities shall comply with the health laws, standards, rules, and regulations of the Department, the Water Quality Control Commission, the Air Quality Control Commission, and all applicable local laws and ordinances.

8.5.3 Recycling facilities shall be adequately fenced or secured.

8.6 CLOSURE OF RECYCLING FACILITIES

8.6.1 No person shall close a recycling facility without notifying the Department, in writing in advance of the closure date.

8.6.2 The owner or operator of a recycling facility shall notify the facility's customers in advance of the proposed closure date by placing signs of suitable size at the entrance to the facility and take other reasonable precautions to prevent further use of the site and facility for unauthorized disposal.

8.6.3 All solid waste and all other materials shall be removed from the facility prior to closure and potential nuisance conditions shall be addressed. All wastes shall be taken to an appropriate solid

waste site and facility for proper management or disposal.

SECTION 9 WASTE IMPOUNDMENTS

9.1 REGULATED FACILITIES

These Section 9 regulations apply to waste impoundments that store, treat or dispose of liquid, semisolid or solid wastes, except as provided in 9.1.4 for facilities in operation prior to adoption of these regulations. Commercial exploration and production (EP) waste impoundments are regulated under Section 17 of these Solid Waste Regulations. *[Eff. 12/30/2008]*

9.1.1 These Section 9 regulations do not apply to wastes which: *[Eff. 12/30/2008]*

- (A) Are subject to a permit issued pursuant to the "Colorado Mined Land Reclamation Act" , CRS 1973, 34-32-101, et seq., as amended; or
- (B) Are subject to license issued pursuant to the "Radiation Control Act" , CRS 1973, 25-11-101, et seq., as amended; or
- (C) Are subject to a certificate of designation or permit issued pursuant to the "Hazardous Waste Act" , C.R.S 1973, 25-15-191, et seq., as amended; or
- (D) Are industrial discharges which are point sources subject to permits under the provisions of the "Colorado Water Quality Control Act" , CRS 1973, 25-8-101, et seq., as amended; or
- (E) Are subject to a consent order, decree or agreement or a written cooperative agreement issued pursuant to the "Solid Waste Disposal Sites and Facilities Act" , CRS 1973, 30-20-101, et seq., as amended, to the extent that the treatment, storage or disposal of such wastes in a waste impoundment is approved by the Department pursuant to such consent order, decree, agreement, or written cooperative agreement;
- (F) Are subject to an uncontested order, a consent order, decree or agreement; or a written cooperative agreement issued pursuant to the federal. "Comprehensive Environmental Response Compensation and Liability Act of 1980" , as amended, to which the Department is a signatory party, to the extent that the treatment, storage or disposal of such wastes in a waste impoundment is approved by the Department pursuant to such uncontested order, consent order, decree, agreement, or written cooperative agreement;
- (G) Will be beneficially reused; *[Eff. 12/30/2008]*
- (H) Are agricultural wastes; *[Eff. 12/30/2008]*
- (I) Are subject to the commercial exploration and production (EP) waste impoundment regulations under Section 17 of these Solid Waste Regulations; or *[Eff. 12/30/2008]*
- (J) Are subject to the requirements for oil and gas liquid waste impoundments regulated by the Oil and Gas Conservation Commission. *[Eff. 12/30/2008]*

9.1.2 RESERVED *[Eff. 12/30/2008]*

9.1.2 RESERVED *[Eff. 12/30/2008]*

9.1.3 The following listed parts of Section 9 of these regulations do not apply to the noted classes of waste impoundments.

Class I:	9.2.3	9.2.4	9.3.2
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Class II:	9.2.2	9.2.4	9.3.1
.	9.8.5	.	.
Class III:	9.2.2	9.2.3	9.3.1
.	9.3.2	9.4	9.5.3
.	9.6	9.7.3	9.8.5
.	9.8.8	9.9.2	9.9.3

9.1.4 Those sites and facilities in operation prior to adoption of these regulations may be required to come into compliance with these regulations upon a determination by the Department that such sites and facilities are causing impairment of existing or future use of surface water or ground water or if the facility is expanded, added to or otherwise modified.

9.1.5 Surface and ground water monitoring may be required by the Department at existing sites where seepage from an impoundment and impairment of existing or future use of surface or ground water are determined to be probable.

9.2 IMPOUNDMENT CLASSIFICATIONS

In addition to applicable requirements in the preceding sections of these regulations, Sections 9.1 through 9.10 shall apply to waste impoundments which are regulated under the "Solid Waste Disposal Sites and Facilities Act" .

9.2.1 To determine whether an impoundment is in Class I, II or III as described in Sections 9.2.2, 9.2.3 and 9.2.4, herein, the following criteria shall be utilized:

(A) The potential of the site as an aquifer recharge area;

(B) The quality of the water in the highest aquifer according to the following parameters:

(1) Total Dissolved Solids;

(2) Total Organic Carbon;

(3) Total Organic Halogen;

(4) Ph;

(5) Phenolic Compounds;

(6) Chloride;

(7) Iron;

(8) Lead;

(9) Potassium;

(10) Sodium;

(11) Calcium;

(12) Sulfate and all other known or probable constituents of the wastes which will be contained in the impoundment.

- (C) Existing or future uses of any surface or ground water which could be impaired by seepage from the impoundment;
- (D) The constituents of the waste, their toxicity, mobility and persistence; and
- (E) The geologic and hydrologic characteristics of the site.

9.2.2 An impoundment shall be in Class I (no seepage allowed beyond liner) if it:

- (A) Is located in a recharge area for an underground source of drinking water or over any unconfined aquifer; and
- (B) Seepage of waste or constituents from the impoundment would impair existing or future use of ground water if allowed to reach that ground water.

9.2.3 An impoundment shall be in Class II (Controlled seepage) if it:

- (A) Is located in a recharge area for an underground source of drinking water or over any unconfined aquifer, or in an area where no saturated zone exists between the surface and bedrock but the Class III criteria are not met; and
- (B) Seepage of waste or constituents from the impoundment would impair existing or future use of ground water, if constructed without a liner.

9.2.4 An impoundment shall be in Class III (unrestricted seepage) if it:

- (A) Is located outside a recharge area for an underground source of drinking water or in an area where no saturated zone exists between the surface and continuous strata of competent bedrock with an in-situ permeability of 1×10^{-6} cm/sec or less and minimum thickness of fifty feet (50Ø); or
- (B). Is located above an aquifer where impairment of existing or future use of ground water will not occur due to unrestricted seepage of the waste or constituents intended for storage or disposal in the impoundment.

9.3 CLASS DESIGN STANDARDS

9.3.1 (A) Class I impoundments shall incorporate:

- (1) Double liners with a highly permeable collection layer between;
- (2) Sump and access piping to allow detection and collection of any leakage through the upper liner.
- (B) Class I impoundment operation plans must contain a contingency plan for action to be taken if leakage is detected in the liner sump, requiring written notification within fifteen (15) working days of the Health Departments and either:
 - (1) Closure and emptying of the impoundment to repair leaks; or
 - (2) Institution of daily removal of liquid from the sump, measurement and recording of volume removed, and a monitoring program to detect any leakage through the second liner.
- (C) If such leakage is detected, the impoundment shall be immediately closed and the contents

removed to another approved impoundment. A detailed written assessment of the impact of escaped waste or constituents shall, then, be required of the operator within forty five (45) days or less, as required by the health departments. If this option is specified in the original application, the monitoring system must be installed when the impoundment is constructed.

9.3.2 (A) Class II impoundments shall incorporate:

- (1) Single layer liners designed and constructed to prevent or restrict seepage from the impoundment to a rate which will not cause impairment of existing or future use of ground water beneath the site; and
- (2) Monitoring systems such as underdrainage and sump, cut off trench or wells located to enable detection and assessment of the controlled seepage impact on the receiving aquifer.

(B) Class II impoundment operation plans must contain:

- (1) Methods for assessing the impact of seepage on the receiving aquifer based on a schedule of periodic sampling of ground water which is or may be impacted; and
- (2) A contingency plan for action to be taken if the quantity or quality of seepage escaping from the impoundment exceeds the approved design limits. The plan shall include the requirement that the operator notify the health departments in writing within fifteen (15) working days of the detection of exceedance of the design seepage rate or allowable seepage quality and within forty-five (45) days submit a detailed written assessment of the impact of the seepage on the receiving aquifer and proposed remedial action.

9.4 LINER DATA

Lining material for waste impoundments shall be compatible with wastes to be received, to be determined by manufacturer test data for synthetic material or laboratory testing of any clays or other material proposed as liners.

9.4.1 Minimum testing of clay or other material shall include:

- (A) Test for dispersive reaction in the waste to be impounded;
- (B) Moisture-density relations (ASTM D698);
- (C) Elevated pressure permeability testing of clay or other material compacted to 95% of optimum, first with one hundredth Normal (0.01N) calcium sulfate solution until constant permeability values are obtained, followed by passage of at least two pore volumes of liquid from the waste to be impounded, at least one other sample compacted to 90% of optimum; and
- (D) Atterberg limits (ASTM D423 and D424).

9.4.2 Uniformity of composition of a clay or other soil deposit proposed for use as liner shall be demonstrated by determination of engineering properties for samples representative of the total volume of the deposit to be used.

9.5 GENERAL DESIGN STANDARDS

Waste impoundments shall be designed to perform as classified.

- 9.5.1 All impoundments shall be equipped with a fixed clearly visible gauge to indicate the depth of waste to the nearest five hundredths (0.05) of a foot. The elevation of the floor of the impoundment and a permanently fixed bench mark on the site shall be indicated on the plans, to enable checking of gauge setting.
- 9.5.2 Embankments shall be designed to minimize erosion and to withstand all forces from impounded wastes.
- 9.5.3 Clay soil liners shall be protected from erosion, desiccation or drying by soils or synthetic covers and influent energy dissipation devices or pads.
- 9.5.4 The maximum design depth of waste shall be controlled by the permeability of the liner, class design and operation requirements, consideration of the efficiency of evaporation and allowance for a minimum two feet (2') of free board.
- 9.5.5 Monitoring wells or sump access pipes shall be lockable, and be constructed with materials which will not interface with monitoring of the facility.
- 9.5.6 (A) All waste impoundment facilities which use evaporative treatment shall acquire standard Class A pan evaporation and precipitation data from the nearest National Weather Service station or other reliable source of data, to be used in the calculations specified in Section 9.9.1.

(B) Differences expected in precipitation or evaporation between the data collection station and the impoundment shall be clearly indicated in the facility engineering report and operation plan. The operator shall maintain, a precipitation gauge on-site, to check the applicability of data from other sources.
- 9.5.7 All waste impoundment facilities shall be provided with a means of quickly and accurately determining the total volume of wastes, in each impoundment and the exposed surface area by correlation with the depth of wastes. The preferred means is a table listing depths from zero in five hundredths (0.05) of a foot graduations up to the total design depth, with the correlated volume impounded and the surface area at each depth.
- 9.5.8 All impoundment facilities shall have upgradient and downgradient monitoring wells completed to an appropriate impervious layer or to bedrock which underlies either the unsaturated zone or saturated receiving aquifer to confirm the permeability of bedrock or quality of aquifer water and to allow sampling of recharge or seepage from the impoundment.
- 9.5.9 Facilities which include tanks must include plans and specifications for the tanks and associated piping in the facility engineering report.

9.6 LINER INSTALLATION

Waste impoundments shall be constructed according to detailed plans and using quality control measures specified in the facility engineering report to ensure attainment of design permeability and prevent mechanical or chemical degradation of liners during construction and active life. United States Environmental Protection Agency (USEPA) publication SW-870 (1983) is recommended for general construction guidelines.

- 9.6.1 Synthetic liners shall be installed according to the manufacturer's instructions, which shall be submitted as part of the facility engineering report.
- 9.6.2 Clay or soil liners shall be installed according to the recommendations of a qualified and

experienced engineer or geologist, which shall be submitted as part of the facility engineering report.

- 9.6.3 Construction of liners shall be inspected by an experienced soil technician, engineer or geologist whose report, including daily visual observations, moisture, density and permeability (if recommended) test results, shall be submitted to the health departments.

9.7 OPERATION STANDARDS

Operation of waste impoundments shall be in accordance with approved plans and the minimum standards of these regulations.

- 9.7.1 No incompatible wastes shall be commingled in the same impoundment.
- 9.7.2 Disposal of any waste streams significantly different from those originally approved shall constitute a substantial change in operation.
- 9.7.3 The integrity of liners shall be maintained by prevention of damage through uncontrolled or improper discharge of wastes into the impoundment, vehicle traffic, dredging of settled sludge, skimming of oil, maintenance of spray systems or other actions.
- 9.7.4 (A) Waste impoundment facilities which are required to obtain a certificate of designation shall maintain at least one operator on the site and in charge of all activities during scheduled open hours.
- (B) Facilities that receive wastes directly into tanks or tank systems for processing are not required to meet the requirements of section 9.7.4(A) provided that the following conditions are satisfied:
- (1) Procedures and physical systems are in place to limit access to the facility to authorized transporters familiar with off-loading procedures;
 - (2) The tanks or tank systems are designed and constructed to prevent and contain spills and to prevent overfilling; and
 - (3) The requirements of sections 9.7.4(B)(1) and (2) are included in the operation plan approved by the Department
- 9.7.5 **All impoundments operated as evaporative treatment or disposal facilities shall be maintained as free as possible from oil or other surface scum.**

9.8 MONITORING

Monitoring plans and schedules for waste impoundment facilities shall be specified in the operation plan and adhered to throughout the active life closure period. All chemical analyses shall be submitted to the health departments within thirty (30) days after receipt by the operator.

- 9.8.1 Each waste stream entering a waste impoundment facility which is required to obtain a certificate of designation shall be tested at least annually by the operator to demonstrate conformance with the original analyses by taking an unannounced grab sample from trucks entering the facility and conducting analyses for the original or approved amended list of parameters. If any waste is found to differ significantly from the original analysis, the health departments shall be notified in writing within fifteen (15) working days.
- 9.8.2 (A) Each truckload of waste entering a commercial waste impoundment facility which is required to

obtain a certificate of designation shall be registered, with the following information entered on a single receipt: (1) Date and time, (2) Receiving impoundment identification, (3) Quantity, (4) Type of waste, (5) Location produced, (6) Owner and/or lessee where produced, (7) Hauler and truck number, (8) Driver's name and signature,

(B) Individual load receipts shall be maintained for at least two (2) years, monthly summaries for the life of the facility.

(C) Monthly summaries for each impoundment shall contain the following: (1) Total volume of each waste stream disposed, (2) Waste stream identification(s).

9.8.3 At least one sample of the contents of each Class I or II impoundment shall be analyzed annually for the original or amended list(s) of characteristic parameters for all waste streams placed in the impoundment. Samples from Class III impoundments shall be taken and analyzed quarterly. If the impounded wastes are subject to stratification, a separate sample shall be taken from representative levels, including settled sludge and oil or other surface scum. Measurement of the thickness of each layer shall be performed as part of this analysis.

9.8.4 Records shall be maintained to fully document any damage and repairs to embankments or liners, personal injury accidents, spills, detection of liquids in sumps, fires or explosions. Written notification shall be submitted to the health departments within fifteen working days after discovery of such liner damage or other event which affects the operation of the facility.

9.8.5 Class I liner sumps shall be inspected weekly for presence of any liquids. If liquids are found, samples shall be analyzed immediately, and thereafter monthly samples shall be analyzed for the original or approved amended list(s) of parameters for all wastes in the impoundment.

9.8.6 Monitoring wells for Class I and II impoundments shall be sampled quarterly unless more frequent sampling is required by a remedial action or special investigation program. Monitoring wells for Class III impoundments, if required by the Department, shall be sampled at least annually.

Analyses of well samples shall include indicator parameters determined as appropriate after initial waste and aquifer water analyses are submitted for review.

9.8.7 Frequent general inspection and written documentation of the condition of impoundment embankments and related piping or structures by the operator, shall be specified in the facility operation plan. The inspection plan shall include requirements to look for any ground movement, cracks, erosion, leaks, rodent burrows, vegetation growing on a liner soil cover, or other problems which may affect the integrity of an impoundment.

9.8.8 Clay or other soil liner material which has been continuously exposed to impounded wastes shall be sampled and tested for permeability as specified in Section 9.4.1 at intervals of not more than five (5) years. Sampling points shall be repaired as specified in the facility engineering report.

9.9 RECORDKEEPING AND CALCULATIONS

Monthly summary records shall be maintained until final closure of the facility (Section 9.10.1) documenting the origin, volume in storage, shipment to other facilities, and rate of disposal of all wastes. All records, including but not limited to facility inspection logs, daily depth readings, precipitation, waste and monitoring analyses, and load receipts shall be maintained available for inspection by representatives of the health departments at all times.

9.9.1 The operator of a facility employing evaporative treatment shall calculate and record on a quarterly basis:

- (A) The total volume of wastes and precipitation added to each impoundment (Volume A);
- (B) The total pan evaporation during the quarter at the Weather Service or other station specified according to Section 9.5.6, multiplied by the appropriate "Lake Evaporation Coefficient" (as recommended by the consultant), then multiplied by the average surface area of each impoundment during the quarter, to give the maximum possible volume of evaporate loss (Volume B) ;
- (C) The total change in volume of wastes stored in each impoundment by two methods:
 - (1) Volume on first day of quarter subtracted from the volume on the last day of the quarter (from depth readings); and
 - (2) Maximum evaporative loss (Volume B) subtracted from the total added (Volume A). Seepage shall be neglected in this calculation.

9.9.2 If the volume change found according to depth readings is equal to or greater than the change calculated from the addition and evaporation data, the health departments shall be "notified in writing within fifteen (15) working days. Class III impoundments area exempt from the notification requirements.

9.9.3 Observed volume losses more than twenty percent (20%) greater than that predicted from calculations performed in accordance with 9.9.1 for Class I and II impoundments indicate probable liner failure. In such instances, no wastes shall be added to the impoundment for a minimum one (1) week observation period, even though monitoring wells or sumps may not indicate leakage or contamination.

9.10 CLOSURE

In addition to the requirements of Section 3.5 and 3.6 of these regulations, the facility closure plan shall contain provisions for testing residual sludge for hazardous characteristics and for final disposal of the sludge.

9.10.1 Operators of all impoundment facilities regulated under the "Solid Waste Disposal Sites and Facilities Act" (including existing facilities) shall submit a report to the health department at the time of final closure which summarizes the total volume of each waste stream disposed in each impoundment and identifies the person (s) responsible for post closure control of the site.

SECTION 10 SCRAP TIRE FACILITIES

10.1 GENERAL PROVISIONS AND APPLICABILITY

- (A) All scrap tire facilities that are not regulated under the Recycling Section 8 of these regulations shall have a certificate of designation. On-site disposal shall comply with the applicable provisions of the Solid Waste regulations and shall occur at approved solid waste disposal facilities.
- (B) This section 10.0 does not apply to facilities that recycle scrap tires in compliance with Section 8.0 of these Regulations.

10.2 STANDARDS FOR SCRAP TIRE DISPOSAL FACILITIES

10.2.1 (A) When applying for a certificate of designation, the operator of a scrap tire disposal facility shall submit a plan for approval by the Department and the local governing body. The plan shall describe, in detail, the nature of the activity, the types and capacities of equipment that will be used, all methods of processing and storage, the means to be used to track inventory on a

volume or weight basis, and the proposed method and procedures for closure.

(B) Financial assurance for closure and post-closure care per Section 1.8 of these regulations is required of all scrap tire disposal facilities.

(C) Portions of Section 2 apply to scrap tire facilities as applicable to the nature of material being managed and the site-specific characteristics and that are not duplicated in this Section 10. Subsection 2.3 does not apply to scrap tire facilities.

10.2.2 An annual report shall be submitted by the facility to the Department and the local governing body by May 1 of each year. The report shall state the amounts of scrap tires received at the facility, processed, disposed of on-site, and shipped off-site for the preceding calendar year.

10.2.3 The facility shall maintain all-weather access roads to those areas of active operation and as necessary to meet the fire control plan required by subsection 10.2.9 of these Regulations.

10.2.4 The facility shall collect litter in order to avoid a fire hazard or a nuisance and control the growth of vegetation to minimize potential fuel sources.

10.2.5 Adequate fencing, natural barriers or other security measures to preclude public entry shall extend around the entire perimeter of the facility and shall include a lockable gate or gates.

10.2.6 Prominent signs shall be posted in public view at the entrance to the facility with the name of the facility, the hours which the facility is open for public use, a listing of the wastes accepted at the facility, and a phone number for a 24-hour emergency contact. A copy of the Certificate of Designation resolution or the Certificate of Designation must be available for inspection at the site.

10.2.7 The operator shall maintain a working telephone at the facility.

10.2.8 (A) The operator of a scrap tire facility shall have a written vector control plan that shall be submitted to the Department and the local governing body.

(B) If pesticides are used in vector control efforts, they shall be used in accordance with the Pesticide Applicator's Act, C.R.S. § 35-10-101.

10.2.9 (A) The operator shall submit a fire control plan to the Department and the local governing body specifying the facility's fire lane locations and widths, the means that are assumed to be used to extinguish fires, and designation of a facility emergency coordinator. This plan shall be in accordance with local fire codes and the plan shall be written by a qualified professional and submitted to and approved by the local fire control authority. A copy of the local fire control authority approval shall be forwarded to the Department.

(B) The minimum standards to be allowed for tire pile storage will be as follows:

(1) In no case shall storage piles of whole tires, tire bales, or tire shreds that are stored on open ground, as opposed to storage in open pits or cells, be larger than 50 feet in width and no higher than 15 feet above grade. An approved field measurement system must be employed to facilitate estimates of pile dimensions.

(2) A minimum of 40 feet shall be maintained between piles of whole, shredded, or baled tires to allow access for fire fighting equipment.

(3) A minimum distance of 50 feet of clear area is to be maintained from all property

lines.

10.2.10 The facility shall immediately notify the local health department and the Colorado Department of Public Health and Environment in the event of a fire or other emergency. Within two weeks of this notification, the facility shall submit a report on the emergency to the Department and the local governing body. This report shall describe the origins of the emergency, the actions that have been taken, actions that are currently being taken or are planned, results or anticipated results of these actions, and an approximate date of resolution of the problems generated by the emergency.

10.2.11 During all stages of operation the facility shall have an attendant who is responsible for site activities.

SECTION 11 SOLID WASTE INCINERATION FACILITIES

11.1 GENERAL PROVISIONS

The following provisions apply to solid waste incineration facilities and privately operated Solid Waste-to-Energy facilities not under contract to a county and/or municipality. Solid Waste-to-Energy incineration facilities sited and operated by a county and/or municipality are regulated under the Solid Waste-to-Energy Incineration Systems Act and regulations promulgated thereunder. Approval by the Hazardous Materials and Waste Management Division shall not relieve the applicant from its obligation to comply with the requirements of other public agencies including but not limited to the Air Pollution Control Division, the Water Quality Control Division and local government permitting and zoning authorities.

11.1.1 The Department shall approve or deny the facility within 180 days of the application being determined complete by the Department. The Department will make the determination as to whether or not the application is complete within 30 days of receipt. If the application is deemed incomplete, the Department shall notify the applicant of such deficiencies. The applicant must submit the required information within 20 days or the application will automatically be denied.

11.2 ENGINEERING DESIGN AND OPERATION REQUIREMENTS:

The engineering design and operations report shall include at a minimum, the following:

11.2.1 General Information

- (A) Name, address and telephone number of the owner and operator of the solid waste incineration facility.
- (B) Location of the site and facility giving the county and legal description of the facility, mailing address, and township, section and range to the nearest one-quarter ($\frac{1}{4}$) of a quarter-section.
- (C) Area of the site.
- (D) General description of the solid waste incineration facility.
- (E) Discussion of the facilities service area, including transportation corridors and surrounding access.
- (F) Listing of all permits or construction approvals received or applied for including:
 - (1) Water Quality Permits;

- (2) Air Quality Permits;
- (3) Local Wastewater Treatment or other Local Permits.

11.2.2 Maps and related information:

- (A) The application shall contain a topographic map which shows names of present land owners, property boundaries, including easements, rights of way, internal access roads, and other property interests for the proposed solid waste incineration site and adjacent area; and a description of title, deed, liens or usage restrictions affecting the proposed solid waste incineration facility.
- (B) Other major maps and documentation shall be provided to show:
 - (1) The land use, zoning and population densities of the area within one mile of the proposed facility.
 - (2) The regional and site drainage conditions including the location of any floodplain boundaries, springs, streams, lakes, wetlands, constructed or natural drains and irrigation ditches located on the proposed site and or adjacent area which could affect the site;
 - (3) Counties and municipalities in which the site and facility is proposed to be located.
 - (4) The location of barriers, fences and other similar structures;
 - (5) All solid waste storage and loading areas;
 - (6) The location of any scales and weigh stations to be used in the operation;
 - (7) The location, size and use of buildings and related facilities which will be used in the operation, including their horizontal and vertical dimensions;
 - (8) Utilities to be installed at the facility.
- (C) The applicant shall submit all construction plans, cross-sections, specifications and details.
- (D) The Department may request additional information if necessary to complete its review of the facility.

11.2.3 Engineering Design Information The application shall contain a detailed description of:

- (A) The waste stream including sources, general waste composition, estimated volumes of solid waste to be processed, recycled or landfilled, estimated BTU values and estimated seasonal and compositional variability of the waste stream or specifications, volumes and estimated BTU values for refuse derived fuel if used in place of unprocessed solid waste.
- (B) A flow chart showing the mechanical components of the system and a materials balance depicting all process variables including waste volumes, energy, ash, air and water inputs and outputs.
- (C) Expected materials to be stored prior to sale, recycling or disposal, the minimum and maximum volumes and weight, minimum and maximum time frames for storage and specific plans for separation and storage of these materials and for disposal of any bulky, unmarketable or noncombustible items.

- (D) The orientation, interior dimensions and specifications of the tipping floor, storage area and ingress and egress there to.
- (E) The size, type, capacity and general specifications and anticipated performance of equipment for the handling, processing and storage of waste, energy recovery, air emissions control and process monitoring systems.
- (F) Any water collection, storage, treatment or discharge facilities to be used in the process.
- (G) Identification of sufficient support equipment to maintain operation of equipment functions.
- (H) The anticipated recovery rate of marketable materials or energy.
- (I) A detailed engineering description of the incinerator including:
 - (1) Type of incinerator and manufacturer's name and model number;
 - (2) Construction materials and specifications;
 - (3) Description of auxiliary fuel system and type of auxiliary fuel to be used;
 - (4) Capacity of feed charging system;
 - (5) Description of the combustion control system: air control, warning systems, auxiliary fuel/waste feed cutoff, waste moving/mixing system;
 - (6) The design and operating conditions for the proposed incinerator for the most efficient combustion of solid waste including:
 - (a) Expected carbon monoxide (CO) level in the stack exhaust gas
 - (b) Waste feed rate
 - (c) Combustion zone temperature and location and method of measurement.
 - (d) Expected stack gas volume, flow rates and temperatures.
 - (e) Computed residence time for waste in the combustion zone
 - (f) Proposed waste feed cut off-limits based on identified significant operating parameters.
 - (g) Air pollution control equipment, operations variables and normal operating ranges, methods of monitoring, and actions to be taken in the event the equipment and instruments exceed normal operating ranges.
- (J) The actual or expected physical and chemical composition of the ash or residue produced by operation of the facility including moisture density relationships, particle size distribution, volume and weight of ash generated.
- (K) The proposed location and method for disposal, storage or processing of the ash, scrubber residue, or quench or wash water produced by operation of the facility.
- (L) A plan for disposal or processing of waste if the facility is temporarily shut down. A description of the maintenance plan, design redundancy, and plans to minimize unscheduled

downtime.

- (M) Utilities to be installed at the facility.
- (N) Plans and designs for operating and maintaining the proposed facility to prevent fires, explosions, emissions of toxic gases or other emergencies.
- (O) A closure plan for decommissioning of the facility addressing removal of all unprocessed solid waste, ash, wash water or any other process residuals.
- (P) Other information the Department may require including, but not limited to, calculations and drawings.

11.2.4 Facility Operating Plan The application shall contain a facility operating plan which includes:

- (A) A narrative description of the general operating plan for the proposed facility, including hours of operation, daily operational methodology, procedures for facility start-up, scheduled and unscheduled shutdown operations, including utilization of process and instrumentation controls for start-up and shutdown, anticipated throughput design capacity, and expected life of the facility.
- (B) Provisions for alternative waste handling or disposal during periods when the facility is not in operation, including procedures to be followed in case of equipment breakdown, such as the use of standby equipment, extension of operating hours or arrangements for diversion of waste to other facilities.
- (C) Description of procedures to be used for removal of solid waste or ash from the system in the event of mechanical system breakdown.
- (D) An operational safety, fire prevention and contingency plan to minimize hazards to human health and the environment resulting from fires, explosions, or release of pollutants into the air, onto the soil or into ground or surface water.
- (E) Provisions assuring that the facility does not accept hazardous waste and also assuring that only wastes approved by the Department are accepted by the facility.
- (F) The number, classification and job descriptions of personnel projected to be employed at the facility when operating at full capacity.
- (G) A plan for hiring and training equipment operators and other personnel in the design and operation of the facility.
- (H) Measures to prevent hazards or nuisances from vectors, litter, odors, dust, noise or other potential sources.
- (I) An inventory and location of all facility records and as built drawings.
- (J) Provisions for providing monitoring results to the Department.

11.3 OPERATING REQUIREMENTS

- 11.3.1 The solid waste program of the Department and the local governing body having jurisdiction shall be notified in writing of the anticipated date of initial start-up of the facility not more than 60 days nor less than 30 days prior to such date and shall be notified in writing of the actual date of commencement of start-up within 15 days after such date.

11.3.2 A solid waste incineration facility must be operated in accordance with the operating procedures specified in the approved engineering design and operations report and in the air emissions permit. Facilities incinerating solid waste not typical of municipal solid waste will be evaluated on a case-by-case basis for specific handling and combustion requirements to ensure the waste is handled and burned in a manner that minimizes possible environmental or health impacts.

11.3.3 Design, Construction, Operation and Monitoring of Solid Waste Incineration Facilities

All solid waste incineration facilities shall be designed, constructed, operated, and monitored in compliance with all applicable requirements of the Colorado Air Pollution Prevention and Control Act, §§ 25-7-101 to 610, C.R.S., and its implementing regulations promulgated by the Air Quality Control Commission, 5 CCR 1001-1 to 22. All monitoring results shall be reported quarterly to the Department and the local governing body having jurisdiction, except that upset conditions, and corrective action taken in response to the upset condition, shall be reported to the Department and the local governing body having jurisdiction as soon as possible, but no later than one business day after the occurrence of the upset condition.

11.3.4 No hazardous waste as defined in Section 25-15-101(9) C.R.S. (1989) of the Colorado Hazardous Waste Act may be received at the solid waste incineration facility.

11.3.5 "Wastes" that are incinerated at solid waste incineration facilities must have specific approval from the Hazardous Materials and Waste Management Division and the Air Pollution Control Division with the exception of asbestos, which must be handled and disposed of according to Section 5 of the Colorado Regulations pertaining to Solid Waste Disposal Sites and Facilities.

11.3.6 Municipal solid waste must be stored inside an enclosed structure or building under negative air pressure which provides a minimum of three days storage, considering both volume (cubic yards) and weight (tons) at the installed design capacity of the combustion units. Storage of recovered or rejected, oversized and bulky non combustible material must be in accordance with the approved engineering design and operations plan for the facility.

11.3.7 All solid waste shall be handled in such a way as to maximize complete combustion of the waste and minimize any potential for fire, explosion, safety hazard or adverse public health effects. Adequate visual screening must be conducted to ensure removal of hazardous or other unacceptable wastes such as large bulky appliances, asbestos not approved for incineration at the facility.

11.3.8 Operations must be conducted in such a way as to prevent litter and nuisance conditions from occurring. Refuse should be confined to the tipping area and utilized on a first-in first-out basis.

11.3.9 Floors must have adequate drainage and be free of standing water.

11.3.10 The facility must be inspected daily or more frequently as necessary to detect problems with vectors, litter, fugitive dust, odors or equipment malfunctions, with inspection records maintained and corrective action implemented when problems are detected.

11.3.11 Discharge of quenching and/or scrubber water must be in compliance with all state and local water quality control regulations and sewer district requirements.

11.3.12 The alternative waste handling or backup disposal plan as approved in the Engineering Design and Operations report must be implemented for periods of facility shutdown.

11.3.13 Access to the facility must be controlled at all times to preclude unauthorized disposal.

11.3.14 All equipment operators and personnel shall be trained in the design and operation of the facility.

- 11.3.15 Ash shall be handled in closed conveyors and containers at the facility and shall be stored and transported in a manner to prevent leakage and dispersal.
- 11.3.16 No person shall close an approved solid waste incineration facility without notifying the Department and the local governing body having jurisdiction in writing at least 120 days prior to the closure date.
- 11.3.17 The facility shall be closed in accordance with all new applicable regulations in effect at the time of closure and with the closure plan, which if amended, must be submitted for review and approval by the Department 120 days prior to closure.
- 11.3.18 The operator of an approved municipal Solid Waste-to-Energy facility shall notify the general public at least 60 days in advance of the proposed closure date by placing signs of suitable size at the entrance of the facility.

11.4 RECORDS

- 11.4.1 The following records must be maintained by the facility and made available to the Department and the local governing body having jurisdiction.
- (A) Operating records - (1) A daily log or an equivalent tracking system must be maintained by the facility operator to record operational information such as: (A) Hours of operation; (B) Total number of incoming vehicles using the facility; (C) Quantities of refuse derived fuel, residential and commercial refuse received, industrial other waste streams, and residues or recyclables shipped for disposal or recycling; (2) Records to identify sources of the incoming waste and to support the mechanism to preclude hazardous or unacceptable wastes from entering the facility; (3) Equipment maintenance or replacement; (4) Variations from approved operational procedures; (5) Inspections performed at the facility and any necessary action taken in response to them.
 - (B) Monitoring Records - The operator must maintain records of all stack tests and continuous monitoring results for the facility operations, any testing of ash residues, and information regarding water discharges pursuant to city ordinances, pretreatment standards or COPDES permits.
 - (C) Personnel Training Records
 - (D) Other Records:
 - (1) As-built construction details;
 - (2) Contingency plans and emergency procedures;
 - (3) Maintenance plans and schedules

11.5 REQUIREMENTS FOR MANAGEMENT OF RESIDUAL ASH FROM SOLID WASTE INCINERATION FACILITIES.

- 11.5.1 All residual ash from solid waste incineration facilities and associated waste water and fugitive dust handling and disposal shall comply with all applicable laws and regulations, and with all applicable local zoning laws and ordinances.
- 11.5.2 Residual ash shall be dewatered to remove any free liquids prior to shipment to a disposal site in accordance with the approved engineering design and operations plan for the incineration facility.

- 11.5.3 Transportation of ash shall occur in equipment designed and utilized to prevent leakage, spillage or dispersion of the material during transportation.
- 11.5.4 Residual ash from solid waste incineration facilities must either be beneficially used or reused, as defined in paragraph 11.5.5, or finally disposed in accordance with all applicable Solid Waste Disposal Sites and Facilities Act regulations.
- 11.5.5 For beneficial use or reuse of residual ash from a solid waste incineration facility to be approved by the Department after consultation with the local governing body having jurisdiction, the following must be demonstrated by the applicant:
- (A) That the waste material can meet the same specifications as alternative non-waste materials, and
 - (B) That the beneficially used waste materials will not release contaminants into the environment.

SECTION 12 WATER TREATMENT PLANT SLUDGE

12.1 GENERAL PROVISIONS

The following general provisions apply to all water treatment plant sludge disposal facilities except as provided in 12.1.4 for facilities in operation prior to adoption of these regulations.

- 12.1.1 (A) Any person who disposes of water treatment plant sludge, receives water treatment plant sludge for disposal or permits water treatment plant sludge to be disposed of on any facility or property which he operates or possesses shall do so in compliance with the requirements of Sections 1 through 3, and 12 of these regulations.
- (B) If a conflict exists between the requirements of Sections 1 through 3 and the requirements of this Section 12, the requirements of Section 12 shall control.
- (C) Notwithstanding the provisions of (A) and (B) Above, a person who disposes of water treatment plant sludge, receives water treatment plant sludge for disposal or permits water treatment plant sludge to be disposed of on any facility or property which he operates or possesses is not required to comply with subsections 1.4.4, 2.1.8, 2.1.9, 2.3, 3.1.1 of these regulations.
- 12.1.2 Each water treatment plant sludge disposal facility shall comply with Colorado health laws and with the standards, rules and regulations of the Department and the water quality control commission and with all applicable local zoning laws and ordinances.
- 12.1.3 These regulations do not apply to water treatment plant sludges which are beneficially used under the authority of the Colorado Domestic Sewage Sludge Regulations.
- 12.1.4 (A) Surface and ground water monitoring may be required by the Department at existing facilities where impairment of existing or future use of surface or ground water is determined to be probable.
- (B) Those facilities in operation prior to adoption of these regulations may be required to come into compliance with these regulations upon a determination by the Department after consultation with the local governing body having jurisdiction that such facilities are causing impairment of existing or future use of surface water or ground water.

12.2 APPLICATION INFORMATION ALTERNATIVES

For the purposes of this Section 12 only as applied to the disposal of water treatment plant sludge, a person who disposes of water treatment plant sludge, receives water treatment plant sludge for disposal or permits water treatment plant sludge to be disposed of on any facility or property which he operates or possesses shall also comply with the following modifications to Sections 2 and 3 of these regulations:

- 12.2.1 If the total alpha activity of the sludge exceeds 40 picocuries per gram of dry sludge, the sludge generator shall contact the Department's Radiation Control Division for further disposal guidance.
- 12.2.2 A facility that operated as a water treatment sludge landfill shall: provide compacted fill material; provide adequate cover with suitable material; provide surface drainage designed to prevent ponding of water, wind erosion; prevent water and air pollution; and upon being filled, shall be left in a condition of orderliness and aesthetic appearance capable of blending with the surrounding area. In the operation of such a site and facility, the sludges shall be distributed in the smallest area consistent with handling traffic to be unloaded and shall be placed in the most dense volume practicable.
- 12.2.3 Adequate fencing, natural barriers or other security measures to preclude public entry shall extend around the entire perimeter of the facility and shall include a lockable gate or gates.
- 12.2.4 All ground water monitoring points shall be installed in accordance with applicable rules and regulations of the "Water Well and Pump Installation Contractor's Act," Title 37, Article 91, Part 1, CRS 1973 as amended. The facility operator shall be responsible for conducting a program of ground water sampling to document and monitor the water quality in such wells.
- 12.2.5 Ground water quality concentrations shall be monitored regularly, as deemed necessary by the Department on a site specific basis.
- 12.2.6 The type and quantity of material to be used as intermediate cover shall be identified in the engineering design and operations report of each water treatment plant sludge facility.
- 12.2.7 The following information shall be provided in the engineering design and operations report of each water treatment plant sludge facility: the type and quantity of material that will be required for use as a liner, if a liner is required; and the type and quantity of material that will be required for use as final cover, including its compaction density, moisture content specifications and the design permeability.
- 12.2.8 Maps and plans, drawn to a convenient common scale, showing the location and depth of cut for liners (if required), shall be submitted as part of the engineering design and operations report.
- 12.2.9 Maps and plans, drawn to a convenient common scale, showing the intermediate and final cover, shall be submitted as part of the engineering design and operations report.
- 12.2.10 Maps and plans, drawn to a convenient common scale, showing the location of all proposed monitoring points for surface water and ground water, shall be submitted as part of the engineering design and operations report.
- 12.2.11 Construction details for all proposed monitoring points for surface water stations and ground water monitoring wells shall be submitted as part of the engineering design and operations report.
- 12.2.12 The daily operating hours of the facility, the frequency of operation including the number of days per month and the number of months per year, the daily volume in cubic yards to be received on operating days, and the expected life of the site shall be included in the engineering design and operations report.
- 12.2.13 The engineering design and operations report shall specify the systems of records to be

maintained documenting incoming waste volumes, water quality monitoring results, as-built construction details and variations from approved operating procedures.

12.2.14 The amounts and sources of water to be used on-site for the control of nuisance conditions, construction purposes, and personnel use shall be identified in the engineering design and operations report.

12.2.15 Provisions for the monitoring of ground water and surface water after closure shall be identified in the engineering design and operations report.

12.3 SLUDGE ACCEPTANCE CRITERIA

In addition to compliance with Sections 1 through 3 of these regulations, a person who disposes of water treatment plant sludge, receives water treatment plant sludge for disposal or permits water treatment plant sludge to be disposed of on any facility or property which he operates or possesses shall also comply with the following:

12.3.1 Facilities shall not accept water treatment plant sludges containing any free liquids. U.S. Environmental Protection Agency laboratory method 9095, the "Paint Filter Liquids Test", shall be used to determine compliance with the requirements of this subsection.

12.3.2 Facilities shall not accept water treatment sludges having a pH less than 6.0 standard units.

12.3.3 No water treatment plant sludge disposal facility shall accept waste of any other kind without approval from the County Board of Commissioners or City governing body and the Department.

SECTION 13 INFECTIOUS WASTE DISPOSAL

13.1 (A) **REGULATED FACILITIES** These regulations apply to all sites and facilities that store, treat, process or dispose of infectious wastes, as defined in 25-15-401 et seq. Such infectious waste disposal facilities shall be regulated by the Colorado Department of Health in cooperation with either the county or municipality whichever has jurisdiction over the site and facility.

(B) Under no circumstance shall a facility that stores, collects, treats, processes or disposes of infectious wastes become a health or environmental hazard or allow nuisance conditions as defined in Subsection 1.2 of the regulations to develop.

13.2 EXEMPTIONS

Provisions in any section of these regulations notwithstanding, the following sites and facilities shall be approved sites and facilities for which it shall not be necessary to obtain a certificate of designation, under the provisions of section 30-20-105 of the Solid Wastes Disposal Sites and Facilities Act providing that all applicable water quality, and air quality regulations are met:

13.2.1 Those facilities that operate equipment or a facility for treatment of infectious wastes generated on site and such other infectious wastes as are generated through the normal operation of their business or occasional treatment of infectious waste as a community service and comply with Title 25 Article 15 Sections 401 through 407, Colorado Revised Statutes shall be exempt from these regulations.

13.2.2 Those facilities that have been exempted under Section 1.4.5 of these regulations.

13.2.3 Disposal of household infectious waste shall be exempt from these regulations.

13.3 CERTIFICATE OF DESIGNATION REQUIRED

No person shall operate a solid waste disposal site or facility which stores, collects, treats, processes or disposes of infectious wastes without first submitting the necessary application for a certificate of designation for review of the county or municipality and to the Colorado Department of Health and having obtained a certificate of designation from a county or an equivalent approval permit from a municipality.

- 13.3.1 Before receiving infectious wastes as a new waste stream and beginning to store, treat, process or dispose of infectious waste, the owner or operator of a solid waste disposal site or facility for which a certificate of designation has been issued shall apply to amend that certificate of designation.
- 13.3.2 A facility that has been in the business of treating infectious waste prior to the promulgation of these regulations and does not possess a certificate of designation shall apply for a certificate of designation by October 1, 1990. If a certificate of designation has not been granted within one year of application and the applicant has pursued a certificate of designation, the Department may grant an extension to operate upon request of the applicant.
- 13.3.3 If an application for a certificate of designation is denied, the facility making such an application shall immediately cease accepting infectious waste and arrange for the disposal of all remaining wastes at the site or facility in accord with the provisions of these regulations.
- 13.3.4 An existing facility shall comply with local government regulations and Sections 13.3, 13.4, 13.5 and 13.6, 13.7, 13.8 of this section. The Colorado Department of Health shall review required information to determine technical compliance. Review by the Department shall not be in lieu of local zoning or land use review nor shall technical approval by the Department supersede local zoning or land use decisions.

13.4 APPROPRIATE TREATMENT METHODS

Acceptable method of treatment shall be those methods that will render infectious wastes noninfectious. Such methods may include but not be limited to incineration, autoclaving, decontamination, sterilization or another method that may be approved of by the Department or by reference in Title 25 Article 15 Sections 401 through 407, Colorado Revised Statutes, that will not present an endangerment to facility personnel or the public.

13.4.1 Incinerators

- (A) The siting and operation of an infectious waste incinerator shall comply with 13.4, 13.5, 13.6, and 13.7 of these regulations. However, the solid waste program of the Department shall require a new facility to comply with portions of Section 11 (Regulations for Solid Waste Incineration Facilities) as appropriate. If conflicts or overlap exists between the Division's regulations and those of the Air Quality Control Division and the Water Quality Control Division, the more stringent provisions shall apply. (b) Ash from an infectious waste incinerator shall be tested in order to assure that it is nonhazardous. The frequency and methodology of treatment shall be established in the Design and Operation Plan.

13.4.2 Autoclaves Operating procedures for autoclaves shall include, but not be limited to the following:

- (A) Adoption of standard written operating procedures for each autoclave including time, temperature, pressure, type of waste, type of container, closure on container, pattern of loading, water content, and maximum load quantity.
- (B) Check of recording and/or indicating thermometers during each complete cycle to ensure the attainment of a temperature of 121° Celsius (250° F) for one-half hour or longer, depending on quantity and compaction of the load, in order to achieve decontamination of the entire load. Thermometers shall be checked for calibration at least quarterly.

- (C) Use of heat sensitive tape or other device for each container that is processed to indicate the attainment of adequate sterilization conditions.
- (D) Use of biological indicator Bacillus stearothermophilus placed at the center of a load processed under standard operating conditions at least once a month to confirm the attainment of adequate conditions.
- (E) Maintenance of records of procedures specified (A), (B), (C), and (E) above for period of not less than one year.

13.4.3 Discharge to a sewage treatment system that provides secondary treatment of waste is permitted only if the waste is liquid or semi-solid and only after notifications of and written permission from the wastewater treatment operator.

13.4.4 Infectious waste consisting of recognizable human anatomical remains shall not be disposed of by burial at a landfill disposal facility, but shall be disposed of by incineration or interment.

13.5 RECORDKEEPING

The following records must be maintained by the facility and made available to the Department upon request. These records shall be kept by the infectious waste disposal facility regardless of the origin of the waste for period of not less than two years.

13.5.1 An infectious waste storage, processing, treatment or disposal facility shall maintain adequate records pertaining to the volume, type of waste, generator name and address, type of transport, container types, treatment and disposal methods, dates of pick-up, treatment and disposal.

13.5.2 Operating records A daily log or an equivalent tracking system shall be maintained by the facility operator to record operational information such as:

- (A) Hours of operation;
- (B) Records to identify sources of incoming waste and to support the mechanism in force to preclude hazardous or unacceptable wastes from entering the facility;
- (C) Equipment maintenance or replacement;
- (D) Variations from approved operational procedures;
- (E) Inspections performed at the facility and any necessary action taken in response to them;
- (F) Deviation from operating permit limits or conditions of the certificate of designation, or similar imposed conditions as well as corrective actions taken.

13.5.3 MONITORING RECORDS

- (A) The operator must maintain records of all stack tests and continuous monitoring results for the facility operations, as applicable to the type of treatment system in use.
- (B) The operator must maintain records of any testing of ash residues, and information regarding water discharges pursuant to local ordinances, pretreatment standards or CPDES permits.
- (C) The operation must maintain records of unauthorized wastes received and returned to the generator or source.

13.6 ENGINEERING DESIGN AND OPERATION REQUIREMENTS FOR INFECTIOUS WASTE FACILITIES

The application shall include an engineering design and operations report which shall include at a minimum, the following:

13.6.1 General Information

- (A) Name, address and telephone number of the owner and operator of the infectious disposal waste facility.
- (B) Location of the site and facility giving the county and legal description of the facility, mailing address, and township, section and range to the nearest one-quarter ($\frac{1}{4}$) of a quarter-section.
- (C) Area of the site.
- (D) General description of the infectious waste disposal facility.
- (E) Discussion of the facility's service area, including transportation corridors and surrounding access.
- (F) Listing of all permits or construction approvals received or applied for including:
 - (1) Water Quality Permits;
 - (2) Air Quality Permits;
 - (3) Local Wastewater Treatment or other Local Permits.

13.6.2 Maps and related information The application shall contain a topographic map which shows the following:

- (A) Names of present land owners, property boundaries, including easements, rights of way, and other property interests for the proposed infectious waste disposal facility site and adjacent area; and a description of title, deed, liens or usage restrictions affecting the proposed infectious waste disposal facility.
- (B) The location of any floodplain boundaries, springs, streams, lakes, wetlands, constructed or natural drains and irrigation ditches located on the proposed site and adjacent area as applicable.
- (C) The location of access roads to and within the proposed site and area, including slopes, grades and lengths of the roads.
- (D) Any water diversion, collection, conveyance, treatment, storage and discharge facilities to be used.
- (E) All solid waste storage and loading areas.
- (F) The location, size and use of buildings and related facilities which will be used in the operation, including their horizontal and vertical dimensions.
- (G) The Department may request additional information if necessary to complete its review of the facility.

13.6.3 Engineering Design Information

The application shall contain a detailed description of:

- (A) The waste stream including sources, estimated volumes processed, landfilled or otherwise disposed of.
- (B) A flow chart showing the mechanical components of the system and a materials balance depicting all process variables including waste volumes, energy, ash, air and water inputs and outputs as applicable.
- (C) Expected materials to be stored prior to disposal, the minimum and maximum volumes and weight, maximum time frames expected for storage and specific plans for storage of these materials.
- (D) The floor plan of the facility and treatment area.
- (E) Floors must have adequate drainage and be free of standing water and constructed and maintained as a smooth, easily cleanable surface.
- (F) A detailed engineering description of the facility including: (1) Type of treatment method and manufacturer's name and model number; (2) Capacity of feed charging system; (3) Description of the control system: air control, warning systems, auxiliary fuel/waste feed cutoff, waste moving/mixing system, fuel system as applicable; (4) Computed residence time for waste in the treatment zone; (5) A closure plan for decommissioning of the facility addressing removal of all unprocessed solid waste, ash, wash water or any other process residuals; (6) Other information the Department may require including, but not limited to, calculations and drawings.

13.6.4 Facility Operating Plan The application shall contain a facility operating plan which includes:

- (A) A narrative description of the general operating plan for the proposed facility, including hours of operation, daily operational methodology, procedures for facility start-up, scheduled and unscheduled shutdown operations, including utilization of process and instrumentation controls for start-up and shutdown, anticipated throughout design capacity.
- (B) Provisions for alternative waste handling or disposal during periods when the facility is not in operation, including procedures to be followed in case of equipment breakdown, such as the use of standby equipment, extension of operating hours or arrangements for diversion of waste to other facilities and anticipated disinfection procedures/treatments for any partly treated waste.
- (C) An operational safety, fire prevention and contingency plan to minimize hazards to human health and the environment resulting from fires, explosions, or release of pollutants into the air, onto the soil or into ground or surface water.
- (D) Operations must be conducted in such a way as to prevent litter and nuisance conditions from occurring. Measures to prevent hazards or nuisance from vectors, litter, odors, dust, noise or other potential sources must be adopted.
- (E) The number, classification and job descriptions of personnel projected to be employed at the facility when operating at full capacity.
- (F) A plan for training equipment operators and other personnel in the design and operation of

the facility.

13.7 OPERATING REQUIREMENTS

- 13.7.1 The Division shall be notified in writing of the anticipated date of initial start-up of the facility not more than 60 days nor less than 30 days prior to such date and shall be notified in writing of the actual date of commencement of start-up within 15 days after such date.
- 13.7.2 A facility must be operated in accordance with the operating procedures specified in the approved engineering design and operations report and in other applicable permits.
- 13.7.3 Inspections of infectious waste disposal facilities shall be allowed as defined in Section 1.9 of the Regulations and as may be modified or amended herein and in the Certificate of Designation.
- 13.7.4 No hazardous waste as defined in Section 25-15-101(9) of the Colorado Hazardous Waste Act may be received or treated at an infectious waste disposal or treatment facility unless the facility possesses a valid hazardous waste permit.
- 13.7.5 Infectious waste to be stored longer than 48 hours must be stored inside an enclosed structure maintained at 45° F or less which provides a minimum of three days storage, considering both volume (cubic yards) and weight (tons). Untreated waste may not be stored longer than two weeks without written permission of the Department.
- 13.7.6 All infectious waste shall be handled in such a way as to maximize complete treatment of the waste.
- 13.7.7 The facility must be inspected daily by the operator or more frequently as necessary to detect problems with vectors, litter, fugitive dust, leaks or breakage of containers, odors or equipment malfunctions, with inspection records maintained for two years and corrective action implemented when problems are detected.
- 13.7.8 Access to the facility must be controlled at all times to preclude unauthorized access or disposal.
- 13.7.9 No person shall close an approved infectious waste disposal facility without notifying the Department and the local governing body having jurisdiction in writing at least 60 days prior to the closure date.
- 13.7.10 The facility shall be closed in accordance with regulations in effect at the time of closure and with the closure plan, which if amended, must be submitted for review and approval by the Department 60 days prior to closure.
- 13.7.11 The owner/operator of a proposed infectious waste disposal facility must notify state and local elected officials having jurisdiction at least 60 days in advance of the proposed opening of the facility.

13.8 TRANSPORTATION REQUIREMENTS

Transportation, handling and storage of untreated infectious wastes shall comply with the following minimum requirements:

- 13.8.1 Receptacles containing infectious waste must be clearly labeled with the biohazard symbol or with the words "infectious waste" printed in letters no less than one inch in height.
- 13.8.2 Infectious waste must be stored, packaged, contained and transported in a manner that prevents release of waste material and in a manner such that nuisance conditions shall not occur.

- 13.8.3 Infectious waste that has been treated so that it is noninfectious may be disposed of with other noninfectious wastes or non-hazardous solid wastes. The treatment facility shall be able to provide documentation that the infectious waste has been treated according to these regulations and is no longer infectious. Documentation may be by written notice, heat sensitive tape or other equivalent means. A transporter or disposal facility may require this and additional information in order to comply with 13.4. Such documentation shall constitute a presumption of non-infectiousness per 25-15-407 and of appropriate treatment and disposal per 25-15-405.
- 13.8.4 Contaminated sharps shall be placed in puncture resistant containers and these shall be made noninfectious by an acceptable treatment method as defined herein. Untreated containers of sharps shall not be compacted.
- 13.8.5 Spills of infectious waste which occur during transportation shall be cleaned up immediately by the transporter according to standard procedures. Spills to the environment or those exposing workers or the general public to potential infection, shall be reported to the Department and the local governing body having jurisdiction within 24 hours. A written summary report shall be sent to the Department within 7 days of the incident.

SECTION 14 COMPOSTING [Eff. 12/30/2008]

14.1 GENERAL PROVISIONS

14.1.1 Scope and Applicability

- (A) This Section 14 applies to all owners or operators that compost solid waste. Composting operations exempt from these Section 14 requirements are specified in Section 14.1.2.
- (B) Compliance with this Section 14 shall not relieve any facility owner or operator from his/her obligation to comply with any other applicable federal, state or local statutes, regulations, requirements or ordinances.

14.1.2 Exemptions

This Section 14 does not apply to the following composting operations, unless the Department determines that the composting operation described below and otherwise exempt may adversely affect human health and the environment:

- (A) Backyard composting: Type 1 feedstocks and foodwaste only, operations up to 100 cubic yards qualify as Backyard composting;
- (B) A business that processes yard or landscaping waste, generated through routine operations, into mulch for product distribution (the owner or operator must register as a recycler under Section 8 of these Solid Waste Regulations);
- (C) A business that accepts finished compost for bagging or handling;
- (D) Agricultural composting operations where either:
- (1) Compost materials include only agricultural waste generated on-site, subject to the following conditions:
- (a) The compost is produced at a manufacturing facility registered by the Colorado Department of Agriculture (CDA), pursuant to § 35-12-101 et seq., C.R.S.; and

- (b) Finished compost distributed off-site shall meet the specifications for compost established by the CDA; or
- (2) Compost materials include only agricultural waste generated on-site, and imported wood chips and tree branches, subject to the following conditions:
 - (a) Importation of wood chips and tree branches only in quantities necessary for effective composting of the agricultural waste generated on-site;
 - (b) Storage of imported wood chips and tree branches is limited to nine (9) months;
 - (c) The facility keeps records to support adherence to this time limit;
 - (d) The compost is produced at a manufacturing facility registered by the CDA, pursuant to § 35-12-101et seq., C.R.S.;
 - (e) Finished compost is subject to the specifications for compost established by the CDA; and
 - (f) The finished compost is only used on agricultural zoned property, as defined by the local requirements.
- (E) The composting of biosolids at a wastewater treatment plant provided that the facility has received a permit in accordance with the Department's Biosolids Regulations No. 64, 5 CCR 1002-64, promulgated pursuant to Section 25-8-205(1)(e), C.R.S.

14.1.3 Compliance Schedules

- (A) An application to amend a facility's certificate of designation to incorporate the requirements of this Section 14 must be filed by the owner or operator of existing composting facilities with the local governing authority within six (6) months of the effective date of this Section 14.
- (B) If an existing facility does not have a certificate of designation, and one is required under § 30-20-102, C.R.S. then the owner or operator of facility must submit an application for certificate of designation to the local governing authority within six (6) months of the effective date of this Section 14.
- (C) For existing Class III and Class IV facilities not requiring a certificate of designation, the owner or operator must submit to the Department and the local governing authority within six (6) months of the effective date of this Section 14 either a revised engineering design and operations plan (in the case of facilities that already have an approved plan) or a new engineering design and operation plan incorporating the requirements of this Section 14.
- (D) Within six (6) months of the effective date of this Section 14, facilities that cannot meet the compliance schedule specified in 14.1.3(A), 14.1.3(B) or 14.1.3(C) must make a demonstration to the Department showing why this compliance schedule cannot be met, and must request an alternate schedule for coming into compliance with this Section 14. Such extension shall be subject to Department approval, but the deadline for coming into compliance may be extended no longer than eighteen (18) months after the effective date of this Section 14.
- (E) Within twelve (12) months of the effective date of this Section 14, an existing Class V composting facility must have onsite a completed Composting Plan that complies with

Section 14.11.

14.1.4 Compost Feedstock Types

The categories described below are not intended to be all-inclusive, but rather are set forth as guidance to assist owners and operators in determining the appropriate classification of a proposed or existing composting facility. The Department recognizes that case-by-case determinations may be necessary concerning selection of an appropriate category for a particular feedstock. Accordingly, the Department may require that analytical and/or process information be supplied by the owner or operator to assist in making such determinations.

Type 1: Agricultural crop residues, manure, untreated wood wastes, yard, paper and green wastes.

Type 2: Animal material, animal mortalities and source separated food wastes.

Type 3: Biosolids, solid waste, processed solid waste and sludges.

14.2 COMPOSTING FACILITY CLASSIFICATIONS

Classification of composting facilities is based upon the types of feedstocks received by the facility and the nature of the operation.

14.2.1 Class I Composting Facility

A Class I composting facility is one that:

- (A) Is permitted to receive Types 1, 2 or 3 feedstocks;
- (B) Is not restricted as to the volume of feedstocks, bulking agent or in-process material that may be present on the site at any given time; and
- (C) May accept feedstocks from multiple generators at one location for processing.

14.2.2 Class II Composting Facility

A Class II composting facility is one that:

- (A) Is permitted to receive only Type 1 and Type 2 feedstocks;
- (B) Is not restricted as to the volume of feedstocks, bulking agent or in-process material that may be present on the site at any given time; and
- (C) May accept feedstocks from multiple generators at one location for processing.

14.2.3 Class III Composting Facility

A Class III composting facility is one that:

- (A) Receives only Type 1 feedstocks;
- (B) Is limited to a total volume of 50,000 cubic yards of feedstock, in-process and bulking material on-site at any one time (finished compost does not count toward this total); and
- (C) May accept feedstocks from multiple generators at one location for processing.

14.2.4 Class IV Composting Facility

A Class IV composting facility is one that:

- (A) Receives only Type 1 feedstocks and/or foodwaste;
- (B) Is limited to a total volume of 5,000 cubic yards of feedstock, in-process and bulking material on-site at any one time (finished qualified product does not count toward this total);
- (C) Limits composting activities to waste generated on-site and to an area two (2) acres in size or less; and
- (D) Fits into one of the following facility categories:
 - (1) A vermicomposting operation that uses Type 1 feedstocks and/or food waste as growth media; or
 - (2) A horticultural or landscaping operation that accumulates and composts only tree and yard waste from their business operations and only imports other compatible material types and only in quantities necessary for effective composting. Composting occurs at the location where tree and yard waste is processed; or
 - (3) Institutions that compost waste at the site where they are generated and only imports other compatible material types and only in quantities necessary for effective composting. Institutions may include, but are not limited to, correctional facilities, schools, parks, community centers and golf courses.

14.2.5 Class V Composting Facility

The Class V composting facility classification is for agricultural composters that do not meet the requirements in Section 14.1.2(D). A Class V composting facility is one that:

- (A) Conducts composting operations at the site of waste generation or on agriculturally zoned property owned by the generator; and
- (B) Uses only agricultural waste generated on site and other compatible material types and only in quantities necessary for effective composting.

14.3 GENERAL REQUIREMENTS FOR CLASS I, II and III COMPOSTING FACILITIES

This Section applies to Class I, II, and III composting facilities.

14.3.1 Facility Design Requirements

- (A) **Review by Professional Engineer:** All engineered features of the facility design shall be reviewed and sealed by a Colorado registered professional engineer.
- (B) **Surface Water Control:** Surface water control features at compost facilities shall be designed, constructed and maintained:
 - (1) To prevent flow onto the facility during peak discharge from a 25-year, 24-hour storm event;
 - (2) To control and collect the on-site run-off water volume resulting from a 25-year, 24-hour storm event;

- (3) To contain and manage leachate;
 - (4) Such that all storm water/leachate containment structures shall be constructed of a minimum of eighteen (18) inches of compacted soil or in-situ earthen material or other low permeability materials to achieve a hydraulic conductivity of less than or equal to 1×10^{-6} cm/sec;
 - (5) Alternative liner designs that perform in an equivalent manner to the Section 14.3.1(B)(4) liner design may be approved by the Department and the local governing authority based on a demonstration of alternate liner design's equivalent performance, the waste type and site specific technical information;
 - (6) All stormwater/leachate containment structures shall be dewatered within thirty (30) calendar days of a storm event so that full runoff storage capacity is maintained; and
 - (7) Such that storm water/leachate containment structures shall be designed and maintained with a minimum 2 feet of freeboard measured from lowest elevation at any given time.
- (C) **Leachate Control:** A low permeability workpad area may be necessary to manage leachate generated from composting operations. Site-specific conditions, operational practices, feedstock, bulking material and liquid wastes will be evaluated to determine the necessity for a workpad. The workpad shall be an engineered feature that is designed and constructed to:
- (1) Ensure ground water protection;
 - (2) Be of sufficient slope to direct storm water/leachate to the appropriate collection and storage system; and
 - (3) Withstand various temperatures and allow for heavy equipment operation, without damage or failure.

14.3.2 Facility Construction Requirements

- (A) Composting facilities shall implement their approved quality assurance and quality control plan in constructing all engineered structures at the facility.
- (B) A construction certification report shall be submitted to the Department for review and approval, at a minimum, sixty (60) calendar days prior to acceptance of feedstock, liquid waste or bulking material.
- (C) The owner or operator of a composting facility shall provide copies of the construction record drawings for engineered features at the site and a report documenting facility construction, including the results of observations and testing carried out as part of the construction quality assurance plan, to the Department and local governing authority.
- (D) Facilities shall not commence operation until the Department has determined that the construction was completed in accordance with the approved engineering report/plans and specifications and has approved the construction documentation in writing.

14.3.3 Facility Operation Requirements

- (A) **Prohibited Materials:** No composting facility may accept asbestos or asbestos containing

materials, infectious waste, hazardous waste, PCB waste or lead-acid batteries.

- (B) **Financial Assurance:** The owner or operator of a composting facility shall establish financial assurance in accordance with Section 1.8 of these Solid Waste Regulations.
- (C) **Surface Water Control:** A composting facility shall control surface water flowing onto the site and prevent surface water from leaving the site. All stormwater/leachate containment structures shall be dewatered within thirty (30) calendar days of a storm event so that full runoff storage capacity is maintained. Freeboard shall be maintained at a minimum of two (2) feet at all times.
- (D) **Nuisance Conditions:** A composting facility shall control on-site and prevent off-site nuisance conditions such as noise, dust, mud, odors, vectors and windblown debris.
- (E) **Access Control:** A composting facility shall control access to prevent illegal dumping, prevent unauthorized access and provide for site security both during and after business hours. Effective artificial barriers or natural barriers may be used in lieu of fencing.
- (F) **Signage:** A composting facility shall erect and maintain signage that identifies the facility name, emergency contact information, and the materials that will and will not be accepted, and that ensures adequate traffic control.
- (G) **Contingency Plan:** A composting facility shall develop, maintain for current site conditions, and keep available at all times, a contingency plan which outlines the corrective or remedial procedures to be taken in the event of:
 - (1) The delivery of unapproved feedstock, bulking material, liquid waste or other waste materials;
 - (2) Contamination of surface water or ground water; and
 - (3) The occurrence of nuisance conditions either on-site or off-site.
- (H) **Fire Protection:** A composting facility shall properly implement its approved fire protection plan as required by local fire codes, and such plan shall be kept current with site conditions and compliant with local fire codes.
- (I) **Odor Control:** A composting facility shall implement its Department-approved odor management plan as necessary to control on-site and prevent off-site nuisance conditions, including the following:
 - (1) Develop operational procedures to minimize on-site odors and prevent off-site odors (e.g., incorporating feedstocks with bulking material as soon as practical).
 - (2) Develop operational procedures to mitigate odors when they occur either on-site or off-site (e.g., use of biofilters).
 - (3) Develop strategies for mitigating off-site odors (e.g., communication with neighbors, responding to complaints within 24 hours).
- (J) **Personnel Training:** A composting facility shall operate under the control of properly trained individuals. Personnel shall be trained to recognize prohibited materials, take action when nuisance conditions occur, and implement emergency procedures when necessary.
- (K) **Pathogen Reduction:** The owner or operator of a composting facility shall ensure that the

composting process reduces pathogens. The pathogen reduction methodology shall be described in the facility's Design and Operations Plan per Section 14.4. Processes to reduce pathogens include, but are not limited to:

- (1) **Windrow composting:** the compost material must be maintained at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for fifteen (15) days or longer. The fifteen days do not need to be consecutive. During the period when the compost is maintained at 55 degrees Celsius or higher, there shall be a minimum of five (5) turnings of the windrow.
 - (2) **Within-vessel composting:** the compost material must be maintained at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for three (3) days.
 - (3) **Aerated static pile composting process:** all in-process compost shall be covered with sufficient insulating material, and the pile shall be maintained at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for a pathogen reduction period of three (3) days.
 - (4) **Alternative methods of compliance** to meet requirements of Section 14.5.4 may be approved by the Department based on a demonstration that these methods achieve an equivalent pathogen reduction.
- (L) **Groundwater Monitoring:** A composting facility which has not received a specific waiver from ground water monitoring from the Department and the local governing authority, shall submit a Ground Water Monitoring Plan to the Department for review and approval in accordance with Section 2.2 of these Solid Waste Regulations. Monitoring parameters will be established based on the hydrogeologic data related to the site, the type of waste stream(s) accepted at the facility and waste characterization analyses performed on incoming wastes.

14.4 ENGINEERING DESIGN AND OPERATION PLAN

The owner or operator of a Class I, II or III composting facility shall submit an engineering Design and Operations (D&O) Plan to the Department and the local governing authority for review and approval, prior to commencing facility construction, composting or feedstock storage operations. The plan shall describe how the facility will comply with all applicable requirements in these Solid Waste Regulations.

14.4.1 All portions of the facility design and site investigation shall be reviewed and sealed by a Colorado registered professional engineer or reviewed and signed by a professional geologist, as appropriate.

14.4.2 Each Design and Operations Plan shall include, at a minimum:

- (A) Names, addresses, and telephone numbers of the owner and/or operator, and one or more persons having the authority to take action in the event of an emergency;
- (B) Name of the composting facility, the physical address and legal description, location with respect to the nearest town, and mailing address, if different from physical address;
- (C) Site maps and plans drawn to a common recognized engineering scale illustrating the facility's surveyed property boundaries, location of processing and storage areas, adjoining properties, roads, fencing, existing and proposed structures, surface water containment and control structures and all proposed monitoring points for surface water and groundwater quality;

- (D) Maximum facility capacity and a description of the types of materials to be composted, including:
 - (1) Estimated quantities of feedstocks;
 - (2) Estimated quantities of liquid wastes;
 - (3) Estimated quantities of bulking materials;
 - (4) Estimated quantities of in-process material; and
 - (5) Estimated finished product on-site.
- (E) Mass balance evaluation for feedstocks, and bulking materials to determine an acceptable mixture for efficient composting;
- (F) A detailed description of the composting operation specifically defining all procedures, activities, waste acceptance practice, pathogen reduction methodology and periods of non-activity;
- (G) Description of an adequate system of barriers, fencing, or other site controls to prevent unauthorized site access;
- (H) Description of site signage;
- (I) Description of site security measures taken to ensure the site is secured during business hours to control public access, and prevent unauthorized vehicles and illegal dumping of wastes;
- (J) Description of employee training, including recognition of prohibited material, actions taken to mitigate nuisance conditions and implementation of contingency plan;
- (K) Design of surface water control system;
- (L) An evaluation of potential impacts to existing surface water and ground water quality, including but not limited to:
 - (1) A description of site geological and hydrogeological conditions;
 - (2) Floodplain information including evidence that the proposed site is not located within a 100-year floodplain;
 - (3) Public water supply information including the location of all water supply wells, springs, and surface water intakes within one mile of the proposed facility boundary;
 - (4) Identification of all lakes, rivers, streams, springs, or bogs, on-site or within one-half mile of the proposed facility boundary;
 - (5) Depth to, and thickness of, the uppermost aquifer;
 - (6) Hydrologic properties of the uppermost aquifer;
 - (7) Information regarding the existing quality of ground water beneath the proposed facility;

- (8) The types and regional thickness of unconsolidated soils materials;
 - (9) The types and regional thickness of consolidated bedrock materials; and
 - (10) Geologic hazards such as slope stability, faulting, folding, rockfall, landslides, subsidence or erosion potential.
- (M) Plans for closure and post closure care of the composting facility as defined further in Sections 14.8 and 14.9;
- (N) Contingency plans, describing actions to be taken in the following situations:
- (1) The delivery of unapproved feedstock, bulking material, wetting agent or other waste materials;
 - (2) Contamination of surface water or ground water; and
 - (3) The occurrence of nuisance conditions either on-site or off-site.
- (O) Fire protection plan;
- (P) Odor management plan;
- (Q) Provision that all engineered features in the facility design be reviewed and sealed by a Colorado professional engineer;
- (R) A quality assurance and quality control plan to be reviewed and approved by the Department and the local governing authority for all engineered structures at the facility; and
- (S) A detailed description of sampling procedures for testing of finished compost.

14.5 SAMPLING OF FINISHED COMPOST

14.5.1 Compost Standards

- (A) The owner or operator of a compost facility (unless exempt under Section 14.1.2) shall ensure that compost to be sold or distributed for off-site use meets the standards set forth in Table 1 of this Section 14, and with Section 14.5.5 below. Compliance with these standards shall not relieve any owner or operator from their obligation to comply with any other applicable agency standards, such as those of the Colorado Department of Agriculture.

TABLE 1

Maximum Constituent Concentration For Compost

Sold Or Distributed For Off-site Use

(mg/kg dry weight basis)

CONSTITUENTS	MAXIMUM LEVEL
INORGANICS 1	.
(mg/kg)	
Arsenic	41
Cadmium	39

Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800
BIOLOGICAL	.
Fecal coliform	see 14.5.1 (B)
Salmonella	see 14.5.1 (B)

¹ **Inorganic Methodology:** Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846) Third Edition, December 1996: As, Cd, Cu, Pb, Ni, Se and Zn by Method 6010 or 7000. Hg by 7471. These documents are available for review at the Colorado Department of Public Health and Environment (See § 1.1.2 of these Regulations) and the State Publications Depository Libraries.

(B) The owner or operator of a composting facility shall ensure that:

- (1) The density of the fecal coliform present in the compost is less than 1000 Most Probable Number per gram of total solids (dry weight basis); or
- (2) The density of Salmonella sp. bacteria in the compost is less than three (3) Most Probable Number per four (4) grams of total solids (dry weight basis) at the time the compost is to be sold or otherwise distributed for use.

14.5.2 Sampling Frequency: Finished compost shall be sampled and tested once every 10,000 cubic yards of compost produced, or annually, whichever is more frequent. The Department, in consultation with the local governing authority, may require additional sampling and testing when a change in feedstocks, bulking material, liquid waste or operational practices warrant greater frequency.

14.5.3 Reintroduction of Finished Product into Compost Process: Finished compost which has been sampled and tested, but to which raw or partially composted feedstock, bulking material, or liquid waste is added prior to, or during distribution, shall be reintroduced into the composting process, re-sampled and re-tested prior to commencing or continuing distribution.

14.5.4 Sampling Methodology: Sample collection, preservation, and analysis shall assure valid and representative analytical results. Sampling procedures shall be described in the facility's design and operation plan.

14.5.5 Additional Testing: The Department may require additional testing of finished compost for constituents not found in Table 1 and at a frequency greater than specified in Section 14.5.2 of this Section 14.

14.5.6 Exceedances: Compost that exceeds the levels specified in Table 1 or as specified in the approved design and operations plan must be:

- (A) Reintroduced into the composting process; or
- (B) Disposed of at a permitted solid waste disposal facility; or
- (C) Otherwise used in a manner approved by the Department and local governing authority.

14.5.7 Unrestricted Use: Compost that satisfies the levels specified in Table 1 and all other parameters

identified by the Department per Section 14.5.5 is determined by these criteria to be finished compost and acceptable for unrestricted use. The finished compost is considered to be a product not a waste, and is no longer subject to these Solid Waste Regulations. For those additional constituents identified by the Department under Section 14.5.5 and not found on Table 1, the Department will approve protective unrestricted use constituent concentrations.

14.6 CLASS-SPECIFIC REQUIREMENTS FOR COMPOSTING FACILITIES

14.6.1 Class I Composting Facility Requirements: Class I composting facilities have no limitation as to feedstock type or material volume except as may be specified in the certificate of designation or approved design and operations plan.

- (A) No person shall operate a Class I composting facility without having obtained a certificate of designation from the local governing authority, in accordance with Section 1.6 of these Solid Waste Regulations.
- (B) The owner or operator of a Class I composting facility shall develop and implement the facility's approved waste characterization plan in accordance with Section 1.2 of these Solid Waste Regulations.
- (C) The owner or operator of a Class I composting facility shall only receive those feedstocks, bulking materials and liquid wastes specified in the approved design and operation plans for the facility. Acceptance of composting materials, different from those originally approved, shall be in accordance with the facility's waste characterization plan.

14.6.2 Class II Composting Facility Requirements: Class II composting facilities have no limitation as to material volume, except as may be specified in the certificate of designation or the approved design and operation plan.

- (A) No person shall operate a Class II composting facility without having obtained a certificate of designation from the local governing authority, in accordance with Section 1.6 of these Solid Waste Regulations.
- (B) The owner or operator of a Class II composting facility shall only receive Type I or Type II feedstock and only receive those liquid wastes specified in the approved design and operation plan.

14.6.3 Class III Composting Facility Requirements: Class III composting facilities satisfying the following provisions do not require a certificate of designation:

- (A) The owner or operator of a Class III composting facility shall only receive Type I feedstock and shall only receive those liquid wastes specified in the approved design and operation plan.
- (B) The owner or operator of the Class III composting facility shall limit the total volume of feedstock, bulking agent and in-process material on-site at any given time to 50,000 cubic yards or less. Finished qualified product does not count toward this total.

14.6.4 Class IV Composting Facility Requirements: Class IV composting facilities satisfying the following provisions do not require a certificate of designation:

- (A) The owner or operator of the Class IV composting facility shall only compost Type I feedstocks and/or food waste generated on the site.
- (B) The owner or operator of the Class IV composting facility shall only import other compatible

materials of a type and quantity necessary for effective composting.

- (C) The owner or operator of a Class IV composting facility shall limit the composting activities to a two-acre area.
- (D) The owner or operator of the Class IV composting facility shall limit the total volume of feedstock, in-process and bulking material present on the site at any given time to 5,000 cubic yards. Finished compost does not count toward this total.
- (E) Class IV composting facilities are not required to submit a design and operations plan. Instead, the facility shall operate in accordance with the requirements defined in Section 14.11 of these Regulations.

14.6.5 Class V Composting Facility Requirements: Class V composting facilities satisfying the following provisions do not require a certificate of designation:

- (A) The owner or operator of the Class V composting facility shall conduct composting operations only at the site of waste generation or on contiguous property owned by the generator.
- (B) The owner or operator of the Class V composting facility shall compost only agricultural wastes generated on-site and other compatible materials necessary for effective composting in quantities and types as approved by the Department and local governing authority.
- (C) Engineered features or operational plans already approved by the Department would not need to be re-submitted if equivalence is demonstrated (e.g., storm water control features that meet the requirements in the Confined Animal Feeding Operations Control Regulation, 5 CCR 1002-81).
- (D) Class V composting facilities are not required to submit a design and operations plan. Instead the facility shall operate in accordance with the requirements defined in Section 14.11 of these Regulations.

14.7 RECORDKEEPING AND REPORTING

14.7.1 Each composting facility shall maintain, at a minimum, the following applicable records:

- (A) Type and amount of feedstock(s), liquid waste(s), and bulking material(s) received, processed and remaining on-site;
- (B) Amount of finished compost sold, used on-site or distributed off-site;
- (C) Water quality monitoring data;
- (D) Liquid waste analytical data;
- (E) Feedstock analytical data;
- (F) Compost analytical data;
- (G) Operational monitoring data including time and temperature readings;
- (H) Windrow/pile aeration data;
- (I) Financial assurance documentation;

- (J) Design and operations plan;
- (K) Certificate of designation;
- (L) Waiver demonstration documentation; and
- (M) Facility personnel training records.

14.7.2 These records shall be maintained at the facility, unless otherwise approved by the Department and local governing authority, and shall be made available to the local governing authority, and the Department, upon request during business hours.

14.7.3 Each composting facility shall submit an annual report by May 1st of each year to the Department and local governing authority. The annual report shall provide the total volume of materials received at the facility during the previous calendar year, including by type:

- (A) The quantity of finished product used on-site, sold, or distributed off-site; and
- (B) The quantity and type of feedstock, liquid waste, and bulking material received, processed, and remaining on-site.

14.8 CLOSURE PLAN

14.8.1 Each Design and Operations Plan shall include a provision for closure of a composting facility.

14.8.2 Closure Plan

If at any time a composting facility ceases operation, including the discontinued receipt, processing and sale of materials for more than one hundred eighty (180) days, the owner or operator shall notify the Department and local governing authority and unless otherwise approved by the Department and the local governing authority, the owner or operator must begin implementation of its Closure Plan. Closure activities shall not exceed ninety (90) days in length. Extension of the closure period may be granted by the Department and the local governing authority if the owner or operator demonstrates that closure will, of necessity, take longer than ninety (90) days and all measures necessary to prevent threats to human health and the environment will be taken.

14.8.3 The Closure Plan shall contain, at a minimum:

- (A) A complete and accurate description and schedule of all steps necessary to achieve closure of the composting facility. Such steps shall include the following criteria:
 - (1) The removal of all stored raw feedstock, bulking material, and liquid waste to a permitted solid waste facility or a facility where the wastes may be beneficially reused with approval from the Department and local governing authority;
 - (2) The removal of all other wastes on-site, including those wastes generated by closure activities, to a permitted solid waste facility;
 - (3) The removal of all workpad areas;
 - (4) The removal of all storm water control and collection structures, unless specifically approved by the Department and local governing authority to remain on-site;
 - (5) The removal of all tanks, structures and equipment;

(6) Site restoration including regrading and revegetation; and

(7) The removal of partially composted feedstocks and bulking material to a permitted solid waste facility or another compost facility with approval from the Department and local governing authority.

14.8.4 Within fourteen (14) calendar days of commencing implementation of the Closure Plan, the facility shall provide written notification to the Department and the local governing authority.

14.8.5 Within thirty (30) calendar days of completing closure activities the owner/operator of the facility shall provide written notification to the Department and local governing authority to document that all the requirements and conditions of the closure plan have been achieved.

14.8.6 Following closure of the facility, a notation must be placed on the deed notifying any potential purchaser that the property has been used as a composting facility.

14.9 POST-CLOSURE CARE AND MAINTENANCE

14.9.1 Following closure of the composting facility the owner or operator must conduct post-closure care, which shall consist of at least the following:

(A) Continued monitoring, sampling and testing of soil, groundwater or surface water as defined in the post-closure plan;

(B) Inspection and maintenance of any cover material or vegetation; and

(C) An annual report submitted to the Department and local governing authority detailing post-closure care activities during the prior year.

14.9.2 The post-closure care and maintenance period shall be for a minimum of five (5) years. The length of the post-closure care period may be:

(A) Decreased by the Department after consultation with the local governing authority if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment; or

(B) Increased by the Department after consultation with the local governing authority if it is determined that the lengthened period is necessary to protect human health and the environment.

14.9.3 Following completion of the post-closure care period the owner or operator must submit a certification signed by an independent Colorado registered professional engineer for approval by the Department and the local governing authority, verifying that post-closure care has been completed in accordance with the post-closure plan and has been placed in the operating record.

14.10 REQUIREMENTS FOR PILOT PROJECTS

14.10.1 A written request shall be submitted to the Department, and local governing authority describing the objectives of a proposed pilot project, how the pilot will integrate with the existing or proposed facility, methodology and protocol to be used, data to be gathered, analysis to be performed and detailed information on the operational activities for the pilot and its projected timeframe. Written approval must be given by the Department, and local governing authority before proceeding. A pilot project shall not exceed one (1) year in length.

14.10.2 Request for Pilot Project. A pilot request shall include the following minimum criteria:

A. General Data:

- (1) Names, addresses and telephone numbers of the owner and/or operator;
- (2) Legal description, physical address, and mailing address of the proposed site;
- (3) Signage to ensure adequate traffic control and a telephone number to contact in case of an emergency;
- (4) A provision that the site must be attended or secured during businesses hours, to control public access, prevent unauthorized vehicles and illegal dumping of wastes; and
- (5) A site map drawn to a common recognized engineering scale illustrating all proposed roads, fencing, existing and proposed structures, adjacent properties, storm water control and containment features, and processing and storage areas.

B. Operations Data:

- (1) A description of feedstock type(s);
- (2) A description of bulking material(s);
- (3) A description of liquid waste(s);
- (4) A description of proposed use for finished and unfinished compost;
- (5) Anticipated volume of liquid waste, bulking and feedstock materials to be received, and finished compost produced during the duration of the pilot project;
- (6) A detailed description of the composting operations;
- (7) Access control;
- (8) Odor management plan;
- (9) Fire protection plan that is in accordance with the local fire codes and requirements;
- (10) Storm water run-on, runoff, and containment features supported by calculations demonstrating that these features meet, at a minimum, the design requirements described in Section 14.3.1(B);
- (11) Recordkeeping for all operational activities;
- (12) A description of the work pad; and
- (13) A contingency plan addressing actions required in the event unacceptable materials are discovered, contamination or discharge of waters from the site occurs, or nuisance conditions occur either on-site or off-site.

C. Environmental Issues:

Evaluation of the potential for impacts to ground water and surface water.

D. Compost Standards and Quality:

- (1) Sampling procedures;
- (2) Pathogen reduction methodology; and
- (3) Testing procedures.

E. Closure Plan:

A closure plan shall be provided describing the actions necessary to adequately close the facility. The closure plan shall follow the requirements described in 14.8.3. Closure activities must be completed within thirty (30) days after pilot project completion or termination.

F. Financial Assurance:

Financial assurance shall be established pursuant to Section 1.8 of these Regulations.

G. Project Closeout Report:

A project closeout report shall be submitted to the Department and local governing authority within ninety (90) calendar days after pilot project completion or termination. The closeout report should include, at a minimum, the following information:

- (1) A summary of each objective and whether the objective was achieved;
- (2) Identification of anticipated and unanticipated results;
- (3) Environmental impacts resulting from the pilot;
- (4) Successes and failures; and
- (5) Data from test results of compost material.

14.10.3 Conversion to Permanent Facility:

To continue operation of a pilot project as a permanent approved composting facility, the owner or operator shall apply for a certificate of designation or submit a design and operations plan, whichever is appropriate for the composting classification, within ninety (90) calendar days of pilot project completion.

14.11 COMPOSTING PLAN REQUIREMENTS FOR CLASS IV AND CLASS V COMPOSTING FACILITIES

14.11.1 Composting Plan: The owner or operator shall develop a written composting plan for the facility prior to commencing facility construction, composting or feedstock storage operations. The plan shall be maintained at the facility, and available for review upon request by the Department or local governing authority during business hours.

14.11.2 Notification: The owner or operator of a Class IV or Class V composting facility shall notify the Department in writing of their facility's composting activities. The written notification shall include, at a minimum, the following information:

- (A) Names, addresses, and telephone numbers of the owner and/or operator, and one or more persons having the authority to take action in the event of an emergency; and

- (B) Name of the composting facility, the physical address and legal description, location with respect to the nearest town, and mailing address, if different from physical address.

14.11.3 General Requirements:

- (A) Site maps and plans drawn to a common recognized engineering scale illustrating the facility's surveyed property boundaries, location of processing and storage areas, adjoining properties, roads, fencing, existing and proposed structures, surface water containment and control structures and all proposed monitoring points for surface water and groundwater quality;
- (B) Maximum facility capacity and a description and volume estimate of the types of materials to be composted, including: feedstocks; liquid waste, bulking material, additives and amendments.
- (C) Evaluation to determine appropriate mix of feedstocks, bulking material and amendments for efficient composting;
- (D) A detailed description of the composting operation specifically defining all procedures, activities, waste acceptance practice, pathogen reduction methodology and periods of non-activity;
- (E) Plans for closure and post closure care of the composting facility as defined in Sections 14.8 and 14.9, respectively;
- (F) Odor Management Plan.
 - (1) Develop operational procedures to minimize on-site odors and prevent off-site odors. (e.g., incorporating feedstocks with bulking material as soon as practical);
 - (2) Develop operational procedures to mitigate odors when they occur either on-site or off-site (e.g., use of biofilters); and
 - (3) Develop strategies for mitigating off-site odors (e.g., communication with neighbors, responding to complaints within 24 hours).
- (G) A sampling plan describing procedures for sampling and testing finished compost. Testing requirements shall achieve at a minimum those standards defined in Section 14.5.
- (H) All engineered features of the facility design shall be reviewed and sealed by a Colorado registered professional engineer or evaluation of potential impacts to groundwater reviewed and signed by a professional geologist, as appropriate.

14.11.4 Specific Requirements

- (A) **Surface Water Control:** Surface water control features at compost facilities shall be designed, constructed and maintained:
 - (1) To prevent flow onto the facility during peak discharge from a 25-year, 24-hour storm event;
 - (2) To control and collect the on-site run-off water volume resulting from a 25-year, 24-hour storm event;
 - (3) To contain and manage leachate in a storage system;

- (4) Such that all storm water/leachate containment structures shall be constructed of a minimum of eighteen (18) inches of compacted soil or in-situ earthen material or other low permeability materials (e.g., geomembrane) to achieve a hydraulic conductivity of less than or equal to 1×10^{-6} cm/sec;
 - (5) Such that storm water/leachate containment structures shall be designed and maintained with a minimum 2 feet of freeboard measured from lowest elevation at any given time; and
 - (6) Whenever the design capacity of impoundment is less than the volume required to store runoff from the designed storm event, the structures must be dewatered to a level that restores the required capacity once soils on a land application or the in process composting material site has the water holding capacity to receive the wastewater.
- (B) **Leachate Control:** A low permeability workpad area may be necessary to manage leachate generated from composting operations. Site-specific conditions, operational practices, feedstock, bulking material and liquid waste types will be evaluated to determine the necessity for a workpad. The workpad shall be an engineered structure that is designed and constructed to:
- (1) Ensure ground water protection;
 - (2) Be of sufficient slope to direct storm water/leachate to the appropriate collection and storage system; and
 - (3) Withstand various temperatures and allow for heavy equipment operation, without damage or failure.

14.11.5 Facility Operation Requirements

- (A) **Prohibited Materials:** No composting facility may accept asbestos or asbestos-containing materials, infectious waste, hazardous waste, PCB waste or lead-acid batteries.
- (B) **Financial Assurance:** The owner or operator of a composting facility shall establish financial assurance in accordance with Section 1.8 of these Solid Waste Regulations.
- (C) **Nuisance Conditions:** A composting facility shall control on-site and prevent off-site nuisance conditions such as noise, dust, mud, odors, vectors and windblown debris.
- (D) **Access Control:** A composting facility shall control access to prevent illegal dumping.
- (E) **Signage:** A composting facility shall erect and maintain signage that identifies the facility name, emergency contact information, and the materials that will and will not be accepted, and that ensures adequate traffic control.
- (F) **Contingency Plan:** A composting facility shall develop, maintain for current site conditions, and keep available at all times, a contingency plan which outlines the corrective or remedial procedures to be taken in the event of:
 - (1) The delivery of unapproved feedstock, bulking material, wetting agent or other waste materials;
 - (2) Contamination of surface water or ground water; and

(3) The occurrence of nuisance conditions either on-site or off-site.

(G) **Personnel Training Plan:** A composting facility shall operate under the control of properly trained individuals. Personnel shall be trained to recognize prohibited materials, take action when nuisance conditions occur, and implement emergency procedures when necessary.

(H) **Pathogen Reduction:** The owner or operator of a composting facility shall ensure that the composting process reduces pathogens. The pathogen reduction methodology shall be described in the facility's Composting Plan.

(I) **Recordkeeping:**

Recordkeeping and reporting shall follow the requirements defined in Section 14.7.

SECTION 15 WASTE MOTOR VEHICLE TIRE HAULERS [Eff. 01/30/2007]

15.1 PURPOSE

The purpose of this Section 15 is to provide a regulatory structure for the commercial transportation of waste motor vehicle tires for storage and/or disposal in this state in accordance with Colorado Revised Statute 25-17-204 ("the Act").

15.2 SCOPE AND APPLICABILITY

15.2.1 The Regulations of this section apply to commercial waste motor vehicle tire haulers and address registration, recordkeeping, enforcement, and surety requirements.

15.2.2 Nothing in this section shall preclude or preempt a local governing authority from enforcement of local ordinances related to waste motor vehicle tires that are at least as restrictive as the regulations of this section.

15.2.3 EXEMPTIONS – The requirements of this section do not apply to:

(A) Waste haulers who operate a vehicle that is primarily engaged in the process of collection and transportation of solid wastes other than waste motor vehicle tires, which includes, but is not limited to, municipal solid waste and construction and demolition debris;

(B) Waste haulers that only travel through the state with waste motor vehicle tires as part of interstate commerce and do not deposit, transfer, store or dispose of any waste motor vehicle tires within this state;

(C) Persons who transport products made from recycled waste motor vehicle tires for sale or other distribution; or

(D) Commercial freight carriers that haul waste motor vehicle tires under contract with a waste motor vehicle tire hauler.

15.3 REGISTRATION REQUIREMENTS FOR COMMERCIAL WASTE MOTOR VEHICLE TIRE HAULERS

15.3.1 Waste motor vehicle tires may only be transported to the following types of facilities, sites and users in this state for storage and/or disposal:

(A) A waste motor vehicle tire storage site;

- (B) A waste motor vehicle tire monofill site;
- (C) A municipal or privately owned solid waste landfill site that is operating in compliance with the requirements of applicable law;
- (D) A beneficial user of waste motor vehicle tires;
- (E) A waste motor vehicle tire recycling facility; or
- (F) A facility that possesses a valid air quality permit if the permit allows for an approved beneficial use of the waste motor vehicle tires and the facility is not used to store waste motor vehicle tires for more than a ninety (90) calendar day period prior to any beneficial use.

15.3.2 No person shall transport waste motor vehicle tires in this state unless the person has registered with the Department by submitting an application for Certificate of Registration as a Colorado waste motor vehicle tire hauler (Form TH-1) to the Solid Waste Unit within the Hazardous Materials and Waste Management Division of the Department. The application may be obtained by contacting the Department.

15.3.3 Once a completed application is submitted to the Department, it will serve as the Certificate of Registration, provided that an accompanying surety bond has been posted in accordance with subsection 15.3.7, pending designation of a registration number onto the application form and issuance of a legible copy of such to the applicant by the Department.

15.3.4 An application for a Certificate of Registration (Form TH-1) must be submitted to the Department via certified mail, regular mail or hand delivery, and must include the following:

- (A) The business name of the waste motor vehicle tire hauler and any other names under which the waste motor vehicle tire hauler may do business;
- (B) The principal business address of the waste motor vehicle tire hauler and any other address where the waste motor vehicle tire hauler shall conduct commercial transportation of waste motor vehicle tires for storage or disposal activities in this state ;
- (C) A business telephone number(s);
- (D) The name and address of the principal officer of a corporate waste motor vehicle tire hauler or the owner(s) of a waste motor vehicle tire hauler operating a proprietorship or partnership;
- (E) The original signature and date of signature of the waste motor vehicle tire hauler applicant; and
- (F) Evidence that a surety bond has been posted in accordance with subsection 15.3.7.

15.3.5 Failure to submit a complete and proper application for Certificate of Registration (Form TH-1) will result in Certification of Registration denial.

15.3.6 The waste motor vehicle tire hauler must retain, and make available upon request of a department representative, a legible copy of its Certificate of Registration, which shall be maintained:

- (A) At the waste motor vehicle tire hauler's principal business address and any other address at which the waste motor vehicle tire hauler does business in Colorado; and

- (B) In each vehicle owned or rented by the waste motor vehicle tire hauler that is used for hauling waste motor vehicle tires.

15.3.7 A waste motor vehicle tire hauler must acquire and maintain a surety bond in the amount of \$10,000 that shall be submitted on Form TH-2, which may be obtained by contacting the Department. Waste motor vehicle tire haulers must acquire, maintain, and submit such surety bond to the department with the application for a Certificate of Registration, where a waste motor vehicle tire hauler has not previously submitted the application for a Certificate of Registration or within ninety (90) calendar days of the effective date of this Section 15, where the waste motor vehicle tire hauler has previously submitted the application for a Certificate of Registration. The surety bond shall provide limited financial assurance for the cleanup and proper disposal of waste motor vehicle tires delivered by a waste motor vehicle tire hauler to any facility, site, or user other than those set forth in subsection 15.3.1.

- (A) The surety bond provided to the Department must be issued subject to the laws and jurisdiction of the State of Colorado and must be issued by a surety company authorized by the Commissioner of Insurance to do business in Colorado. The surety bond provided to the Department must have original signatures. The wording of the surety bond must be identical to the wording on Form TH-2.
- (B) The surety bond must name the Director, Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division as the obligee for the surety bond.
- (C) The surety bond must be continuous in nature, unless canceled by the surety company. The Department must be notified sixty (60) calendar days prior to cancellation of the surety bond. Notice must be provided in writing via certified mail to the Division Director.
- (D) In the event of cancellation of a surety bond, the waste motor vehicle tire hauler must provide a replacement surety bond, executed by an authorized surety company, within thirty (30) calendar days of the Department's receipt of the notice of cancellation of the existing surety bond. Should the waste motor vehicle tire hauler fail to submit alternate bond coverage by the thirty-first (31) calendar day following receipt by the Department of the notice of cancellation, the waste motor vehicle tire hauler's Certificate of Registration shall be immediately suspended.
- (E) The surety's liability is limited to the amount of the surety bond. The waste motor vehicle tire hauler's liability is not, however, limited to the amount of the bond. In the event the cost to clean up and dispose of improperly disposed waste motor vehicle tires exceeds the \$10,000 obtained by the department as a result of the surety bond, the waste motor vehicle tire hauler remains liable for all costs exceeding \$10,000 related to the clean up and disposal of the improperly disposed waste motor vehicle tires.
- (F) The owner or operator may cancel the surety if the Department has given prior written consent. The Department will provide such written consent when:
 - (1) An owner or operator submits alternate financial assurance as specified in this section; or
 - (2) When the waste motor vehicle tire hauler has completed all activities required by the Department under this Section 15 including written notification that the waste motor vehicle tire hauler is no longer in business and/or the date that the waste motor vehicle tire hauling activities ceased.

15.4 RECORD KEEPING AND ANNUAL REPORTING REQUIREMENTS FOR COMMERCIAL WASTE

MOTOR VEHICLE TIRE HAULERS

15.4.1 A waste motor vehicle tire hauler must create a manifest for each load of waste motor vehicle tires. Receipts, invoices, bills of lading, or other record-keeping forms may be used in lieu of a manifest but the following information must be documented in a legible manner for each load of waste motor vehicle tires hauled and disposed of by the waste motor vehicle tire hauler. All generators and haulers of commercial waste motor vehicle tires in Colorado must use this manifest.

(A) The manifest or other record keeping form must include the:

- (1) Name of the generator of the waste motor vehicle tires;
- (2) Quantity of waste motor vehicle tires in the load either measured by:
 - (a) Actual number of waste motor vehicle tires by category (e.g., passenger car/light-duty truck tires, semi-truck tires, etc.);
 - (b) Volume of waste motor vehicle tires measured in cubic feet; or
 - (c) Weight of waste motor vehicle tires measured in tons;
- (3) Name and Certificate of Registration number of the waste motor vehicle tire hauler;
- (4) Date of transport;
- (5) Destination of waste motor vehicle tires;
- (6) Signature and date of signature of the generator, the waste motor vehicle tire hauler, and the destination facility.

15.4.2 A waste motor vehicle tire hauler must do the following:

- (A) Carry, but not display, a manifest (or other record-keeping form) of each load in the vehicle while hauling the waste motor vehicle tires described on the record.
- (B) Retain a completed copy of the manifest (or other record-keeping form) of each load for a minimum of three (3) years.
- (C) Provide a completed copy of the manifest (or other record-keeping form) of each load to the applicable waste motor vehicle tire generator and destination facility within thirty (30) calendar days after the hauler takes possession of the waste motor vehicle tires.
- (D) Make a copy of any manifest (or any other record-keeping form) available to the Department upon request.

15.4.3 Upon issuance of a Certificate of Registration, a waste motor vehicle tire hauler must submit an annual report to the Department on the Commercial Waste Motor Vehicle Tire Hauler Annual Report Form (Form TH-3). This form may be obtained by contacting the department.

- (A) The report shall account for the number of waste motor vehicle tires transported by the waste motor vehicle tire hauler during the previous calendar year beginning January 1 and ending December 31. Waste motor vehicle tire quantities are to be reported exclusively by actual count of motor vehicle tires by category (e.g., passenger car/light-duty truck tires, semi-truck tires, etc.), or exclusively by weight in tons. Passenger tire equivalents

may be used to convert from one category to the other. If both weight and volume of the waste motor vehicle tires are known, then the weight of the waste motor vehicle tires must be used to determine the number of passenger tire equivalents.

(B) The annual report must be received by the Department, via certified mail, regular mail, facsimile or hand delivery, by March 1 of each year and must include the following:

- (1) Quantity of waste motor vehicle tires collected by the waste motor vehicle tire hauler from within Colorado for the applicable reporting period;
- (2) Quantity of waste motor vehicle tires that are brought to Colorado locations by the waste motor vehicle tire hauler from out-of-state sources during the applicable reporting period ;
- (3) Final disposition of all the waste motor vehicle tires collected during the applicable reporting period by listing each waste motor vehicle tire storage site, waste motor vehicle tire monofill site, or municipal or privately owned solid waste landfill site, recycling site, or other beneficial site of end use, and the total quantities of waste motor vehicle tires that the waste tire hauler has delivered to each.
- (4) Documentation that the surety bond is paid and current.

15.4.4 A waste motor vehicle tire hauler must notify the Department in writing of any change in the information contained in the Certificate of Registration application form. This notification must be received by the Department as part of the first annual report (Form TH-3) submitted by the waste motor vehicle tire hauler immediately following the change(s) in information. A failure to properly inform the Department of changes to a certificate of registration in accordance with this section shall result in immediate suspension of the certificate of registration and may result in revocation of the certificate of registration.

15.5 COMMERCIAL WASTE MOTOR VEHICLE TIRE HAULERS: INSPECTIONS AND ENFORCEMENT

15.5.1 **Inspections.** Inspections of a waste motor vehicle tire hauler's business location(s), vehicle(s), and equipment owned or operated by a waste motor vehicle tire hauler may be conducted by authorized representatives of the Department to evaluate compliance with the Act and the Regulations of this Section 15.

(A) Authorized representatives of the Department will have access to all such business locations and vehicles and equipment owned or operated by a waste motor vehicle tire hauler during normal working hours.

(B) Inspections will be made upon consent or pursuant to a search warrant issued by the Colorado District Court in the judicial district where the business or vehicle and/or equipment owned or operated by a waste motor vehicle tire hauler is located, when it is demonstrated to the court that entry to such business location or vehicle and/or equipment owned or operated by a waste motor vehicle tire hauler is required to verify compliance with the Act.

(C) No prior notification is required for such inspections.

15.5.2 **Enforcement.** Whenever the Department determines that any person is or has been in violation of any standard, regulation, rule, or order established, issued, or adopted under the provisions of the Act, the Department may take appropriate steps to address the violations.

(A) **Suspending/Revoking a Waste Motor Vehicle Tire Hauler Certificate of Registration.**

The Department may suspend or revoke the waste motor vehicle tire hauler's Certificate of Registration when the Department determines that any person is or has been in violation of any standard, regulation, rule, or order established, issued, or adopted under the provision of the Act.

(B) **Initiating and Resolving Compliance Advisories.** A Compliance Advisory may be issued when the Department deems it appropriate to notify the respondent that a violation has occurred or is occurring. It shall include the factual basis for the violations. It does not constitute an agency action subject to appeal, but does constitute notice to the respondent of the violation(s).

(1) Compliance Advisories may be resolved by:

(a) An Informal Conference that shall be available to the respondent. The Informal Conference may be either by telephone, in person, or by mail. The respondent shall be given the opportunity to submit additional materials addressing the basis for the Department's belief that a violation has occurred or is occurring.

(b) A No Violations Letter that shall be issued by the Department, if, after receipt of the facility's response, the Department determines that some or all of the violations did not occur. It shall inform the respondent in writing and attach a copy of the correspondence to the Compliance Advisory in the respondent's file.

(c) A No Further Action Letter that shall be issued by the Department to the respondent, if, after the Informal Conference or submittal of additional information, the Department finds, based upon the available information, that compliance with some or all of the violations in the Compliance Advisory has been achieved. A copy of the No Further Action Letter shall be attached to the Compliance Advisory in the respondent's file.

(i) A No Further Action letter shall serve to document which violations have been remedied as of the date of issuance of such letter and shall inform the respondent that no further action regarding those violations is necessary by the respondent to come into compliance with the specified requirements.

(ii) The issuance of such No Further Action letter shall not preclude the Department from issuing an Administrative Enforcement Action in accordance with subsection C below or from initiating a criminal action pursuant to Section 25-17-204(4), C.R.S. for the violation(s) cited in the Compliance Advisory.

(d) If, in the case of a Compliance Advisory, no Informal Conference is held or if after the Informal Conference the Department determines that some or all the violations cited in the Compliance Advisory are correct, the Department may issue a Compliance Order.

(C) **Initiating Administrative Enforcement Actions** . A Compliance Order may be issued whenever the Department finds, based upon information provided to the Department, discovered by the Department during an inspection or otherwise in the possession of the Department, that the respondent is or has been in violation of the Act, any subsequent rule or regulation or any certificate of registration, or previously issued Compliance Order.

- (1) All Compliance Orders shall be served upon the respondent by registered mail, return receipt requested, or via personal service.
 - (2) A Compliance Order shall identify the factual and legal elements of each violation. A Compliance Order may be prohibitory or mandatory in effect and may state what steps the respondent must take to prevent or remediate any violations.
- (D) **Resolving Compliance Orders.** An Informal Conference shall be available to the respondent to whom a Compliance Order has been issued.
- (1) The Informal Conference may be either by telephone, in person or by mail.
 - (a) The respondent may offer any evidence or argument concerning the existence or gravity of the violations alleged in the Compliance Order at an Informal Conference.
 - (b) The respondent may also discuss the terms of the order and may request further explanation of the violations.
 - (c) The respondent need not be represented by legal counsel at the Informal Conference, although the respondent may choose to do so.
 - (d) A respondent's acceptance of an offer for an Informal Conference does not stay the effectiveness of any provision of a Compliance Order pursuant to Section 24-4-105, C.R.S. that is specified to be effective immediately unless otherwise agreed to in writing by the Department. Failure to accept an offer to attend an Informal Conference shall not preclude a respondent from filing an appeal of the Compliance Order.
 - (2) Following the Informal Conference, the Department may reissue the Compliance Order as originally issued, modify the order, or withdraw the order.
 - (a) A modified or reissued Compliance Order shall become effective upon receipt by the respondent unless provided otherwise in such Compliance Order and is subject to appeal in accordance with subsection E below.
 - (b) If after consideration of any information provided by the respondent, the Department determines that all of the violations did not occur, the Department shall withdraw the Compliance Order. A copy of the letter withdrawing the Compliance Order shall be included in the administrative record for the Compliance Order in the respondent's file.
 - (3) Unless otherwise provided for in a Compliance Order, if no Informal Conference is held or if a Compliance Order is originally issued as fully effective, the Compliance Order shall be subject to appeal in accordance with subsection E below.
 - (4) If after consideration of any information provided by the respondent the Department determines that some of the violations did not occur, the Department shall issue a No Violation Letter identifying such violations. A copy of the No Violation Letter shall be included in the administrative record for the Compliance Order in the respondent's file.
 - (5) If after consideration of information provided by the respondent the Department determines that the respondent has come into compliance with some or all of the

violations, the Department shall issue a No Further Action Letter to the respondent and include said letter in the administrative record for the Compliance Order in the respondent's file.

(a) A No Further Action Letter shall serve to document which violations have been remedied as of the date of the letter.

(b) The issuance of such No Further Action letter shall not preclude the Department from issuing a Compliance Order in accordance with this section or from initiating a criminal action pursuant to Section 25-17-204(4), C.R.S. for the violations cited in the Compliance Order.

(E) **Appeals of Compliance Orders.** After the Compliance Order is effective, but within thirty (30) calendar days of the effective date, the respondent may file a notice of appeal requesting an adjudicatory hearing pursuant to provisions of Section 24-4-105, C.R.S., with the Division of Administrative Hearings and the Department.

(1) Failure to file such notice of appeal within thirty (30) calendar days shall terminate the respondent's right to challenge the Compliance Order.

(2) The filing of a notice of appeal shall not stay the respondent's obligation to comply with an effective Compliance Order.

(3) All Compliance Orders are effective upon receipt unless provided otherwise in the Compliance Order.

(4) Within thirty (30) calendar days of the date that the administrative law judge issues his/her decision, the Executive Director of the Department shall review the decision and make a determination regarding the final agency action. The respondent's obligations under the Compliance Order shall not be stayed pending determination of the final agency action by the Executive Director.

(5) All appeals of determinations of final agency action by the Executive Director shall be filed with the Denver District Court no later than thirty (30) calendar days after the respondent's receipt of the determination.

SECTION 16 DISPOSAL OF MOTORIZED EQUIPMENT WASTES [Eff. 07/01/2007]

16.1 Scope and Applicability

These regulations apply to the management and disposal of used lead-acid batteries, used oil and waste tires that are residentially generated, under authority of CRS Title 30, Article 20, Part 1 and Part 10.

16.2 General Provisions

(A) Land disposal of residentially generated used lead-acid batteries, used oil and waste tires is prohibited. Land disposal includes, but is not limited to, placing, discarding, or otherwise disposing of these wastes:

(1) At a solid waste disposal site and facility;

(2) At a transfer station;

(3) At a hazardous waste treatment, storage or disposal facility;

- (4) In sewers;
 - (5) In septic tanks;
 - (6) In drainage systems;
 - (7) In surface or groundwaters;
 - (8) In watercourses;
 - (9) In any body of water; or
 - (10) On the ground.
- (B) Placement of these wastes in a receptacle or collection device destined for land disposal, such as a dumpster, is prohibited.
- (C) Acceptance of these wastes at a solid waste disposal site or facility or transfer station is prohibited, except for the purpose of recycling or collection facility operations.
- (D) Each entity affected by this Section must comply with all other applicable Colorado statutes and Regulations of the Department, and with all applicable local zoning laws and ordinances.

16.3 Due Diligence Exemption

16.3.1 Individuals

Individuals residing in areas without recycling facilities or collection facilities are given the opportunity to demonstrate a lack of reasonable recycling options. In order to exercise this option, the individual must conduct due diligence to establish that reasonable options are not available. A finding of due diligence shall be based, at a minimum, on an individual's inquiry into local recycling options accomplished by querying the local telephone directory and contacting the county or municipality of residence regarding the availability of local recycling facilities, collection centers, or collection events. In the event that due diligence is exercised and no reasonable recycling option is identified, an individual may dispose of used lead-acid batteries, used oil and/or waste tires in a solid waste disposal site and facility or transfer station. The individual must contact the intended recipient solid waste disposal site and facility or transfer station to make sure that the facility will accept the used lead-acid batteries, used oil, and/or waste tires. Nothing in this Section precludes any solid waste disposal site and facility or transfer station from refusing to accept these items on a site-specific basis.

16.3.2 Solid Waste Disposal Sites and Facilities

Each solid waste disposal site and facility must evaluate any due diligence determinations made by individuals, consistent with waste screening criteria already implemented for other waste streams in accordance with Section 2.1.2 of these Regulations. The individual may be required by the solid waste disposal site and facility to document the due diligence that was performed if such a requirement is identified in the facility's waste characterization plan required in Section 16.10 of these Regulations.

16.3.3 Collection Facilities

Due diligence is only available to individuals; collection facilities are prohibited from the provisions of due diligence under this exemption.

16.4 Management of Residentially Generated Used Lead-acid Batteries

16.4.1 Used Lead-acid Battery Disposal

- (A) Land disposal of residentially generated used lead-acid batteries is prohibited.
- (B) A person shall manage residentially generated used lead-acid batteries by delivery to one of the following entities:
 - (1) A retailer or wholesaler engaged in used lead-acid battery collection or recycling;
 - (2) A secondary lead smelter;
 - (3) A collection facility engaged in used lead-acid battery collection; or
 - (4) A recycling facility engaged in used lead-acid battery recycling.

16.4.2 Used Lead-acid Battery Management Standards

- (A) A retailer, wholesaler, or collection facility that accepts and stores residentially generated used lead-acid batteries shall manage the batteries in a manner that prevents the release of waste or waste constituents to the environment, as follows:
 - (1) Any used lead-acid battery that shows evidence of leakage, spillage, or damage that could cause leakage, shall be placed in a container. The container must be closed, labeled as to its contents, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage;
 - (2) Batteries that are not leaking and are in good condition must be stored on pallets or in a comparable manner that keeps all batteries off the ground;
 - (3) Batteries stored outside shall be protected from the weather;
 - (4) Used lead-acid batteries must be stored in a designated accumulation area indicated by signs, markings, or other identifiers; and
 - (5) Any release associated with the storage or recycling of lead-acid batteries must be immediately contained and remediated.
- (B) A retailer, wholesaler, or collection facility that accepts and stores residentially generated used lead-acid batteries in accordance with this Section and also accepts and stores used lead-acid batteries regulated under the Colorado Hazardous Waste Regulations 6 CCR 1007-3, may manage residentially generated used lead-acid batteries in accordance with:
 - (1) Section 16.4.2(A) above;
 - (2) Hazardous waste requirements for Universal Wastes at 6 CCR 1007-3, Part 273; or
 - (3) Hazardous waste requirements for lead-acid batteries being reclaimed in accordance with 6 CCR 1007-3, Part 267, Subpart G.

16.4.3 Retailer Deposit System

Any retailer selling replacement lead-acid batteries may accept from customers used lead-acid batteries of the same general type and in a quantity at least equal to the number of new batteries purchased, if

offered by customers. A lead-acid battery retailer that chooses to set up a deposit system may collect a deposit of at least ten dollars on the sale of an automotive-type replacement lead-acid battery not accompanied by the return of a used lead-acid battery. The retailer shall return the deposit if the person who paid the deposit returns a used lead-acid battery to the retailer within thirty (30) calendar days of the date of sale.

16.4.4 Retailer Disposal Options

A retailer accepting used lead-acid batteries from customers in the State shall dispose of said batteries by delivery to one of the following:

- (A) The agent of a lead-acid battery wholesaler or a secondary lead smelter;
- (B) A battery manufacturer for delivery to a secondary lead smelter;
- (C) A collection facility engaged in used lead-acid battery collection; or
- (D) A recycling facility engaged in used lead-acid battery recycling.

16.4.5 Lead-acid battery wholesalers

Any wholesaler selling replacement lead-acid batteries may accept from customers, at the point of transfer, used lead-acid batteries of the same general type and in a quantity at least equal to the number of new batteries purchased, if offered by customers.

16.4.6 Household Hazardous Waste Collection Event Exemption

Residentially generated used lead-acid batteries that are collected during any periodic household hazardous waste collection event (where such wastes are not accepted on a continuous basis) shall be exempt from the standards in 16.4.2, provided that the residentially generated used lead-acid batteries are managed to prevent release to the environment and are transferred from the site within thirty (30) calendar days following each collection event.

16.5 Management of Residentially Generated Used Oil

16.5.1 Used Oil Disposal

- (A) Land disposal of residentially generated used oil is prohibited.
- (B) Notwithstanding Subsection (A) of this Section, a person may dispose of an item or substance that contains de minimis quantities of used oil in a solid waste disposal site and facility under Subsection (A) of this Section if:
 - (1) All oil has been removed from the item or substance to the extent reasonably possible; and
 - (2) No free-flowing oil remains in the item or substance.
- (C) A person shall dispose of used oil by delivery to one of the following entities:
 - (1) A retailer engaged in used oil collection or recycling;
 - (2) A wholesaler engaged in used oil collection or recycling;
 - (3) A collection facility engaged in used oil collection; or

- (4) A recycling facility engaged in used oil recycling.
- (D) A retailer shall dispose of used oil by delivery to one of the following entities:
 - (1) The agent of a wholesaler engaged in used oil recycling;
 - (2) A collection facility engaged in used oil collection for recycling; or
 - (3) A recycling facility engaged in used oil recycling.

16.5.2 Used Oil Management Standards

A collection facility that accepts and stores residentially generated used oil must manage the oil as follows:

- (A) For transport to an appropriate recycling facility, the collection facility must comply with requirements set forth in the Colorado Hazardous Waste Regulations, 6 CCR 1007-3, Part 279.30 for do-it-yourselfer (DIY) used oil collection centers. Owners or operators of all DIY used oil collection centers must comply with the generator standards in 6 CCR 1007-3, Part 279, Subpart C.
- (B) For the co-mingling of used oil residentially generated by DIY with commercially generated used oil, the collection facility must comply with requirements set forth in the Colorado Hazardous Waste Regulations, 6 CCR 1007-3, Part 279.31 for used oil collection centers.

16.6 Management and Disposal of Residentially Generated Waste Tires

For purposes of this Section, waste tire shall refer to a whole tire, as defined in Section 1.2 of these Regulations and in CRS Title 30, Article 20, Part 10.

16.6.1 Waste Tire Disposal

- (A) Land disposal of residentially generated waste tires is prohibited.
- (B) A person or commercial tire hauler shall dispose of residentially generated waste tires by delivery to one of the following entities:
 - (1) A retailer engaged in waste tire collection or recycling;
 - (2) A wholesaler engaged in waste tire collection or recycling;
 - (3) A waste tire monofill that has a certificate of designation;
 - (4) A collection facility engaged in waste tire collection; or
 - (5) A recycling facility engaged in waste tire recycling.

16.6.2 Retail Disposal System

A retailer selling replacement tires in the State may accept from customers, at the point of transfer, waste tires of the same general type and in a quantity at least equal to the number of new tires purchased, if offered by customers. A retailer shall dispose of waste tires by delivery to one of the following:

- (A) The agent of a tire wholesaler;

- (B) A collection facility engaged in waste tire collection;
- (C) A recycling facility engaged in waste tire recycling; or
- (D) A waste tire monofill that has a certificate of designation.

16.6.3 Wholesale Disposal System

A wholesaler selling tires in the State may accept from customers, at the point of transfer, waste tires of the same general type and in a quantity at least equal to the number of new tires purchased, if offered by customers. A wholesaler shall dispose of waste tires by delivery of waste tires to:

- (A) A waste tire monofill that has a certificate of designation;
- (B) A collection facility engaged in waste tire collection; or
- (C) A recycling facility engaged in waste tire recycling.

16.6.4 Collection Facility Disposal System

A collection facility shall dispose of waste tires by delivery to a waste tire monofill having a certificate of designation or to a recycling facility engaged in waste tire recycling.

16.6.5 Waste Tire Management Standards *[Eff. 03/30/2008]*

Collection facilities shall store waste tires in accordance with tire pile storage criteria found in Section 10.2.9(B) of these Regulations and in accordance with all local ordinances and fire protection codes. Collection facilities shall not store tires in a manner that creates nuisance conditions. Collection facilities that store tires for more than two years will be required to provide financial assurance for closure and post-closure care in accordance with Section 1.8 of these Regulations.

16.6.6 Household Hazardous Waste Collection Event Exemption

Tires that are collected during any periodic household hazardous waste collection event (where such wastes are not accepted on a continuous basis) shall be exempt from the standards in 16.6.5 provided that the waste tires are transferred from the site within thirty (30) calendar days following each collection event.

16.7 Waste Hauler Requirements

Waste haulers must provide notice to their existing customers on or before July 1, 2007, as well as new customers thereafter, that the land disposal of residentially generated used lead-acid batteries, used oil and waste tires is prohibited beginning on July 1, 2007. The notice shall explain the disposal options available under Sections 16.4, 16.5 and 16.6 of these Regulations for these three waste types.

16.8 Recordkeeping

Retailers, wholesalers and collection facilities must keep records to demonstrate compliance with this Section. At a minimum, such records shall include documentation of waste types and volumes, annual reports if applicable, and shipping manifests or records of shipment. Records shall be maintained onsite for a minimum of 3 years, or as long as the material remains onsite, whichever is greater.

16.9 Inspections

The Department may inspect, in accordance with the provisions of § 30-20-113, C.R.S., retailers,

wholesalers, collection facilities and recycling facilities to verify compliance with this Section of the Regulations. As an alternative to physically inspecting the above facilities, the Department may require the above facilities to complete and return a self-certification checklist.

16.10 Waste Characterization Plans

Each solid waste site and disposal facility shall amend its waste characterization plan to include waste acceptance procedures designed to minimize the disposal of residentially generated used lead-acid batteries, used oil and waste tires. Such procedures shall be implemented no later than July 1, 2007. Solid waste sites and disposal facilities shall include these waste screening procedures in the waste characterization and disposal plan required by Section 2.1.2(C). The prohibition on disposal of these waste types shall be incorporated into employee training required by Section 2.1.2(B)(3). Any solid waste disposal site and facility in substantial compliance with its waste characterization plan developed pursuant to section 30-20-110 (1) (g), and Section 2.1.2 of the Regulations, shall be deemed to be in compliance with this Section, so long as such waste characterization plan contains waste acceptance procedures to minimize the disposal of lead-acid batteries, used oil, and waste tires consistent with the requirements of this Section.

SECTION 17 COMMERCIAL EXPLORATION & PRODUCTION WASTE IMPOUNDMENTS [Eff. 12/30/2008]

17.1 GENERAL PROVISIONS

17.1.1 Scope and Applicability: This Section 17 applies to all commercial solid waste disposal sites and facilities with waste impoundments that accept exploration & production (EP) wastes for treatment, storage or disposal. Included in the scope of this Section 17 are discrete impoundment units, containment systems, ancillary equipment and other associated operations at the facility. In addition, Sections 1 and 2 of these Solid Waste Regulations are directly applicable to all such facilities unless specifically otherwise noted herein. This Section 17 does not apply to exploration and production waste impoundments regulated by the Colorado Oil and Gas Conservation Commission. Compliance with this Section 17 shall not relieve the facility owner or operator from his/her obligation to comply with the facility's certificate of designation and any other applicable federal, state or local statute, regulation, requirement or ordinance.

17.1.2 Effective Date: This Section 17 was adopted by the Solid and Hazardous Waste Commission on November 18, 2008 and became effective on December 30, 2008.

17.1.3 Compliance Schedules

17.1.3(A) An application to amend a facility's certificate of designation to incorporate the requirements of these Solid Waste Regulations must be filed by the owner or operator of existing commercial EP waste impoundment facilities with the local governing authority within three (3) months of the effective date of this Section 17. If an existing facility does not have a certificate of designation, and one is required under 30-20-102 C.R.S., then the owner or operator of the facility must submit an application for certificate of designation to the local governing authority within three (3) months of the effective date of this Section 17.

17.1.3(B) Within twenty-four (24) months of the effective date of this Section 17, all facilities must comply with these Solid Waste Regulations.

17.1.3(C) Within eighteen (18) months of the effective date of this Section 17, facilities that cannot meet the compliance schedule specified in 17.1.3 (B) must make a demonstration to the Department showing why this compliance schedule cannot be met, and must request an alternate schedule for coming into compliance with this Section 17. Such

extension shall be subject to Department approval, but the deadline for coming into compliance may be extended no later than thirty-six (36) months after the effective date of this Section 17 per the requirements of HB 08-1414.

17.2 ENGINEERING DESIGN AND OPERATION PLAN

The owner or operator of each commercial EP waste impoundment shall submit an engineering design and operation plan to the Department and the Local Governing Authority for review and approval, prior to commencing impoundment construction, storage, treatment or disposal operations. The plan shall describe how the facility will comply with all applicable requirements in these Solid Waste Regulations.

17.2.1 All portions of the facility design and site investigation shall be reviewed and sealed by a Colorado registered professional engineer or reviewed and signed by a professional geologist, as appropriate.

17.2.2 The engineering design and operation plan shall include the following subject areas, at a minimum:

17.2.2(A) General Information

- (1) Owner and Operator mailing address, county and legal description of the solid waste disposal facility;
- (2) Site area, in acres;
- (3) Type of treatment, disposal, storage and containment features, monitoring and operational practices to be used at the facility; and
- (4) Discussion of facility's service area, including transportation corridors and surrounding access.

17.2.2(B) Site Investigation

17.2.2(B)(1) **Geologic Data:** The engineering design and operations plan shall include, at a minimum, the following geologic data:

- (a) Types and regional thickness of unconsolidated soils and materials;
- (b) Types and regional thickness of consolidated bedrock materials; and
- (c) Regional and local geologic information, including but not limited to bedrock strike and dip, fracture patterns, slope stability, fracturing, faulting, folding, rockfall, landslides, subsidence or erosion potential, that may affect the design and operation of the facility for solid wastes disposal.

17.2.2(B)(2) **Hydrologic data.** The engineering design and operations plan shall include, at a minimum, the following hydrological data:

- (a) Lakes, rivers, streams, springs, or bogs, on-site or within two (2) miles of the site boundary;
- (b) Depth to and thickness of perched zones and uppermost aquifers;
- (c) Groundwater wells within one (1) mile of the site boundary, including well depth, depth to water, screened intervals, yields and the aquifers tapped;

- (d) Hydrologic properties of the perched zones and uppermost aquifer, including flow directions, flow rates, porosity, coefficient of storage, permeability, limits of saturation and potentiometric surface;
- (e) Site location in relation to the base floodplain of nearby drainages;
- (f) The separation between the wastes to be impounded and the uppermost water-bearing zone, perched or otherwise;
- (g) An evaluation of the potential for impacts to existing surface water and ground water quality from each of the proposed impoundment units and ancillary equipment, if more than one, or the facility if only one unit exists;
- (h) The existing quality of ground water beneath the proposed facility;
- (i) Any other associated factors related to the time of travel from the midpoint of each cell to the point of compliance;
- (j) Climatic factors;
- (k) The estimated volume, physical and chemical characteristics of the waste;
- (l) The distance ground water beneath the site would flow during the facility's operating life and post-closure care period; and
- (m) The distance to existing domestic wells or springs and proposed future development shown to use the uppermost aquifer or monitored unit down gradient of the site.

17.2.2(C) **Facility Design:** The engineering design and operations plan shall include specific design details for each solid waste impoundment and all associated structures and ancillary equipment used to store, treat or dispose of solid waste.

17.2.2(C)(1) **Engineering Data.** The engineering design and operations plan shall contain, at a minimum, the following engineering data:

- (a) The types and quantity of material(s) that will be required for use as liner material in the upper and lower components of the liner system;
- (b) Maps and plans, drawn to a common recognized engineering scale, that show the following;
 - (i) The location and depth of cut or fill for liners;
 - (ii) The location, dimensions and grades of all surface water control structures;
 - (iii) The location and dimensions of all surface water containment structures, including those designed to impound contaminated runoff, sludge, or liquids for treatment;
 - (iv) The spatial distribution of engineering, geologic and hydrologic data, and relationship to the proposed facility and each individual impoundment unit;

- (v) The location of all proposed facility structures and access roads;
- (vi) The location of all proposed monitoring points for surface water and ground water quality;
- (vii) The final contours and grades of the reclaimed site after closure;
- (viii) The location of fencing or other access control features to be placed on-site;
- (ix) The location of each proposed phase of development; and
- (x) The design details of the impoundment liner including size and total volume at capacity.

17.2.2(C)(2) **Liner System Design Specifications:** The engineering design and operation plan shall provide the following specifications relative to each liner system component:

(a) **Compacted Clay Liner:**

- i) Compaction;
- ii) Density;
- iii) Moisture content; and
- iv) The design hydraulic conductivity.

(b) **Flexible Membrane Liner:**

- i) The selected flexible membrane liner product;
- ii) Thickness;
- iii) Manufacturer Specifications; and
- iv) Evidence demonstrating compatibility with all waste streams proposed to be managed in the waste impoundment.

17.2.2(C)(3) **Demonstration of Groundwater Protection:** Impoundment facilities shall demonstrate that the design proposed for the facility complies with all applicable sections of this Section 17, and complies with Sections 2.1.15 and 2.2 of these Solid Waste Regulations and Regulation 41 (5 CCR 1002-41). Such demonstration shall include the following information:

- (a) Liner hydraulic conductivity;
- (b) Thickness of each liner type;
- (c) Slope of the liner layer;
- (d) Hydraulic head on the liner;
- (e) The waste or waste streams to be impounded, including their constituent

toxicity, mobility and persistence in the environment;

- (f) Distance from the midpoint of each cell to relevant point of compliance at the downgradient edge of each impoundment;
- (g) Distance to, and characteristics of, the uppermost aquifer or monitored unit;
- (h) Climatic factors;
- (i) The estimated volume and physical and chemical characteristics of the wastes to be impounded;
- (j) The chemical compatibility of the wastes to be impounded with the liner; and
- (k) The development and installation of a groundwater monitoring system.

17.2.2(C)(4) **Monitoring System and/or Leak Detection System:** Construction details shall be provided for all proposed monitoring points for surface water and groundwater quality and the monitoring system used to make volume and freeboard determinations.

17.2.2(C)(5) **Ancillary Storage:** Facilities which include tanks or tank systems, or other ancillary storage and treatment equipment, must include plans, design criteria and specifications for each waste storage and waste treatment device in the facility's engineering design and operations plan.

17.2.2(D) **Construction:** The design and operation plan must include a quality assurance and quality control plan (QA/QC) for all engineered structures and appurtenances. The QA/QC Plan must be reviewed and approved by the Department and governing authority prior to commencing construction of any waste management features at the facility.

17.2.2 (E) **Facility Operations:** The engineering design and operations plan shall include specific operational details for each solid waste impoundment and all associated structures or ancillary equipment used to store, treat or dispose of solid waste. The plan shall also include the following operational data, at a minimum:

- (1) The names, qualifications and addresses of the persons operating the facility and having the authority to take corrective action in the event of noncompliance;
- (2) The business hours for the facility;
- (3) Access control measures, including the types and height of fencing to be placed onsite;
- (4) A listing of the waste stream types to be approved for routine receipt and anticipated volumes in barrels or gallons/per day of wastes to be received;
- (5) The expected life of the site or unit;
- (6) The number and job descriptions of personnel projected to be employed at the impoundment facility when operating;
- (7) Type of equipment projected to be used at the facility;
- (8) The size (surface area and volume) and types of impoundments or processing areas

to be constructed;

- (9) Provisions to minimize nuisance conditions on-site and prevent nuisance conditions from occurring off-site;
- (10) Provisions for fire protection, including the amounts and sources of onsite water available to be used for fire protection; and
- (11) Facility inspections, both the frequency of inspections by the operator and associated written documentation of the condition of impoundment embankments and related piping or structures.

17.2.2(F) **Contingency Plan:** The Engineering Design and Operation Plan shall include a contingency plan. The plan shall describe what actions will be taken should one of the situations below occur. The plan must be implemented as described in Section 17.3.3(L), to address the following situations:

- (1) Plans to be implemented in the event of a release from the impoundment resulting in potential contamination of surface waters or groundwater;
- (2) Plans to be implemented if liquids are discovered in the leak detection system; and
- (3) Conditions of non-compliance with these Solid Waste Regulations or the facility's approved plans necessitating corrective action.

17.2.2(G) **Waste Characterization Plan:** The plan shall contain the following sections at a minimum:

- (1) A description of how the facility will comply with 2.1.2 of these Solid Waste Regulations;
- (2) Provision for annual profiling and analysis of waste streams and of impoundment contents consistent with Sections 17.3.3(C)(2) and 17.3.3(C)(3); and
- (3) Provision for random sampling of incoming wastes by the facility consistent with Section 17.3.3(C)(4).

17.2.2(H) **Personnel Training Plan:** The facility shall develop a personnel training plan based on job responsibilities and duties that includes the following provisions:

- (1) Job-specific annual training in the facility's design and operation plan, including all attachments to the plan and all documents referenced in the plan that are relevant to operational compliance, and
- (2) Job-specific annual training in the recognition of hazardous and prohibited wastes.

17.2.2(I) **Sitewide Monitoring Plan:** The facility shall develop a sitewide monitoring plan, inclusive of groundwater monitoring, stormwater monitoring, ancillary equipment (if present), leak detection monitoring and monitoring of liquid wastes.

17.3 DESIGN, CONSTRUCTION AND OPERATION REQUIREMENTS

A liner system is required by statute for all commercial solid waste disposal sites and facilities managing EP waste.

17.3.1 Design Requirements

17.3.1(A) Liner System

- 17.3.1(A)(1) **Liner Requirements:** The statutory performance requirement for EP waste disposal facilities is to prevent migration of EP waste to groundwater. Therefore, each waste impoundment covered by this section shall be lined with a composite liner as described in Section 17.3.1(A)(2) or a double liner system as described in Section 17.3.1(A) (3), and the facility design must include leak detection monitoring in accordance with Section 17.3.1(C) to prevent the migration of EP waste or EP waste constituents to groundwater. The owner or operator of the facility shall demonstrate, to the Department and the local governing authority, that the design developed for the facility will comply with this Section 17 and Sections 2.1.15 and 2.2 of these Solid Waste Regulations, and with Regulation 41 (5 CCR 1002-41). Such demonstration shall be subject to Department approval.
- 17.3.1(A)(2) **Composite Liner System:** A composite liner shall consist of an upper and lower component.
- (a) The upper component shall consist of a minimum 60-mil high-density polyethylene (HDPE). The upper component shall be installed in direct and uniform contact with the compacted soil component; and
 - (b) The lower component shall consist of at least a two-foot layer of compacted soil with a hydraulic conductivity less than or equal to 1×10^{-7} cm/sec.
- 17.3.1(A)(3) **Double liner system:** A double liner consists of two liner systems separated by a drainage or leak detection layer. Each of the liner systems may be comprised of a single or composite liner configuration. At a minimum, a) one of the liner systems must incorporate a 60-mil HDPE or equivalent liner material as one of its liner components, and b) the other liner system must be equivalent to a two-foot layer of compacted soil with a hydraulic conductivity less than or equal to 1×10^{-7} cm/sec. The drainage layer between the liner systems contains transmissive material such as sand, gravel or a synthetic drainage blanket, and conveys liquid to a sump from which it can be extracted. This type of liner incorporates leak detection capability directly into the design, and may warrant the Department's consideration of a modified Appendix B groundwater monitoring program.
- 17.3.1(A)(4) **Separation from Groundwater:** At a minimum, the facility shall ensure a separation of twenty (20) feet between the bottom of the liner system and the uppermost occurrence of groundwater.
- 17.3.1(A)(5) **Alternative liner designs:** Alternative liner designs that perform in an equivalent manner to the Section 17.3.1 (A) (2) or (A)(3) liner systems may be approved by the Department and the local governing authority based on a demonstration of alternate liner design's equivalent performance, the waste type and site specific technical information. At a minimum, the upper liner component shall be a 60-mil HDPE or equivalent synthetic liner. Proposals for alternative designs shall also demonstrate that the facility can comply with Sections 2.1.15 and 2.2 of these Solid Waste Regulations, and with Regulation 41 (5 CCR 1002-41).

17.3.1(B) **Mandatory Set-Backs:** For EP waste disposal facilities whose application for

certificate of designation is submitted to the local governing authority after the effective date of this Section 17, the facility must have a mandatory set-back of one-half mile from all residences, educational facilities, day-care centers, hospitals, nursing homes, jails, hotels, motels, other occupied structures, or outside activity areas such as parks and playing fields.

17.3.1(C) **Leak Detection Monitoring System:** All EP waste impoundments must include leak detection monitoring consistent with the liner design specific to that impoundment.

17.3.1(C)(1) Composite single liner systems must incorporate one of the following:

- (i) Vadose Zone Monitoring (wet/dry wells);
- (ii) Resistivity net;
- (iii) Downgradient impoundment edge groundwater monitoring; or
- (iv) Other equivalently protective system as approved by the Department.

17.3.1(C)(2) **Double liner system:** The leak detection is incorporated into the interstitial drainage layer. Sampling of leak detection liquids must be performed immediately upon discovery. Downgradient point-of-compliance groundwater monitoring shall be conducted, as necessary, based upon history of impoundment liquids detected in the leak detection system.

17.3.1(D) **Continuous Freeboard Monitoring:** All waste impoundment facilities or units shall be equipped with a means to, at all times, quickly and accurately determine the total volume of waste and amount of freeboard in each impoundment.

17.3.1(E) **Access Control:** Each waste impoundment covered by this section shall be equipped with fencing and netting to prevent the public and wildlife from accessing the waste disposal facility. Facilities shall control public access, prevent unauthorized access and provide for site security both during and after business hours, and prevent illegal dumping of wastes. Effective artificial barriers or natural barriers as approved by the Department may be used in lieu of fencing.

17.3.1(F) **Stormwater Control:** Each waste impoundment shall be designed, constructed and maintained to provide: (1) a run-on control and diversion structures to prevent flow into the unit from a 25-year, 24-hour storm, (2) a run-off control system to collect runoff from a 25-year, 24-hour storm and control run-off from a 100-year, 24-hour storm. Precipitation that cannot be diverted from the impoundment, and therefore comes in contact with impounded waste, shall be managed as solid waste. Each impoundment shall be designed, constructed and maintained to prevent damage to the containment structure from erosion.

17.3.1(G) **Embankment Durability:** Embankments shall be designed to eliminate erosion and to withstand deterioration caused by the impounded waste.

17.3.2 Construction Requirements

17.3.2(A) Waste impoundments shall be constructed according to Department-approved detailed design plans, specifications and criteria. The owner or operator of each facility shall develop and implement a Quality Assurance/Quality Control (QA/QC) program to demonstrate that each engineered containment structure at the facility has been constructed in accordance with the facility's approved Engineering Design and Operation

Plan and the facility's approved QA/QC Plan.

17.3.2(B) Synthetic liners shall be installed according to the manufacturer's instructions, which shall be submitted as part of the facility's engineering design and operations plan.

17.3.2(C) The construction will be tested and evaluated using quality control and quality assurance measures and methods specified in the facility's approved Engineering Design and Operation Plan and QA/QC Plan. The resulting QA/QC information, including daily visual observations, moisture, density and hydraulic permeability test results, shall be submitted as part of a construction certification report to the Department and local governing authority for review and approval.

17.3.2(D) During construction and prior to the addition of liquid wastes, liner systems shall be protected from erosion, desiccation, drying, UV degradation or other damage.

17.3.2(E) At least ninety (90) calendar days prior to the commencement of waste acceptance into the impoundment facility, the owner or operator of the facility shall submit the construction certification report to the Department and the local governing authority. This report shall certify that the construction has been completed in accordance with the facility's approved engineering design and operation plan and approved QA/QC Plan. The construction certification report shall be signed and sealed by a Colorado registered professional engineer and shall be subject to Department approval prior to the acceptance of waste. Nothing in these Solid Waste Regulations precludes separate review and approval by the local governing authority as well. Construction certification reports shall be developed, approved and implemented for all engineered structures and ancillary equipment used to manage solid waste at the facility.

17.3.3 Operating Requirements

17.3.3(A) **Compliance with Approved Plans:** Operation of waste impoundments shall be in accordance with all approved plans, and with the minimum standards found in Sections 1, 2 and 17 of these Solid Waste Regulations.

17.3.3(B) **Commingling of Wastes:** Incompatible wastes shall not be commingled.

17.3.3(C) **Waste Characterization:**

17.3.3(C)(1) The owner or operator of commercial EP waste disposal facilities shall develop and implement waste analysis procedures to ensure that only EP waste is disposed of at the facility. The disposal of waste streams different from those originally approved shall constitute a significant change in operation and require an approval by the Department and the local governing authority prior to acceptance at the facility. An amendment to the facility's certificate of designation may be required.

17.3.3(C)(2) The owner or operator of each commercial EP waste impoundment facility shall initially profile and then conduct annual testing on each waste stream entering the facility, including, at a minimum, waste from each well and/or each tank battery and each drilling location, to demonstrate conformance with the original analyses. Each facility must also ensure that EP waste generators using the facility notify the facility when there has been a change in their processes or waste composition.

17.3.3(C)(3) The owner or operator of each EP waste disposal facility shall analyze at least one sample of the contents of each impoundment annually for the suite of

analytes included in Appendix II of the Solid Waste Regulations. Such analysis shall be performed using appropriate methods as specified in the site-wide monitoring plan to provide an accurate representation of constituents and concentration levels found in the waste. If the impounded wastes are subject to stratification, a separate sample shall be taken from each representative level, including settled sludge and oil or other surface accumulation.

17.3.3(C)(4) Annual testing of unannounced grab samples shall be taken from random vehicles entering the facility and analyses conducted for the original or approved amended list of parameters. If any waste is found to differ from the original analysis, the Department and local governing body having jurisdiction shall be notified in writing within seven (7) calendar days, and a request to modify the design and operation plan submitted to the Department and local governing authority for review and approval prior to continuing acceptance the identified waste stream.

17.3.3(C)(5) EP waste disposal facilities shall not receive hazardous waste and will conduct waste profiling in accordance with Section 2 and their approved waste characterization plan (as amended to conform to this Section 17).

17.3.3(D) **Liner Protection:** The owner or operator of EP waste disposal facilities shall maintain the integrity of liners by prevention of damage through uncontrolled or improper discharge of wastes into the impoundment, vehicle traffic, dredging of settled sludge, skimming and maintenance of spray systems erosion, desiccation, drying, UV degradation or other damage or other actions.

17.3.3(E) **Removal of Surface Accumulation:** All evaporative impoundments shall be safeguarded and maintained free of oil or other surface accumulations. Any accumulation of oil or surface accumulations shall be removed within twenty-four (24) hours of discovery. Discovery and removal dates and times shall be documented.

17.3.3(F) **Leak Detection Monitoring:** Per statutory requirement, EP waste disposal facilities shall conduct monitoring not only to detect, but also to prevent, releases that impact groundwater. If the liner design incorporates a double liner system, this can be readily accomplished through monitoring of the drainage layer. However, if the liner design consists of a single composite liner, monitoring to provide leak detection capability must be implemented in accordance with Section 17.3.1(C) beneath or adjacent to the impoundment.

17.3.3(G) **Groundwater Monitoring:** The owner or operator of a commercial EP waste impoundment facility shall conduct groundwater monitoring in accordance with a Department-approved groundwater monitoring plan. Monitoring parameters shall be established based on the hydrogeologic data related to the site, the type of waste stream(s) accepted at the facility and waste characterization results.

17.3.3(H) **Surface Water Monitoring:** Surface water monitoring, including monitoring of seeps, is required where seepage has been detected or other releases have been identified.

17.3.3(I) **Continuous Fluid Level Monitoring:** Continuous fluid level and freeboard level monitoring is required for each impoundment. Maximum liquid level shall be measured continuously so that each impoundment has a minimum of two (2) feet of freeboard, measured from the lowest elevation berm of a specific impoundment to the upper surface of the impounded waste. Fluid level measurement points for each impoundment shall be established, and continuously maintained.

17.3.3(J) **Mass Balance:** To ensure the accuracy of the method used for monitoring fluid level and to check for potential liner leaks, monthly monitoring of total volume for each impoundment shall occur.

17.3.3(K) **Attendant:** Commercial EP waste impoundment facilities shall maintain at least one trained attendant on site during scheduled business hours and when accepting waste.

17.3.3(L) **Contingencies:**

The owner or operator shall develop, implement and maintain an approved contingency plan (See Section 17.2.2(F), engineering design and operation plan) to be implemented in the following situations: 1) an unplanned release from the containment system, 2) leachate observed in the leak detection system and 3) conditions of noncompliance with approved plans or certificate of designation or the Solid Waste Regulations necessitating corrective action. The contingency plan must contain provisions for assessing the full nature and extent of release to delineate the impact to soil, groundwater or surface water, for remedying such impact, and for returning the facility to compliance. If a facility has an approved Spill Prevention Control and Countermeasures (SPCC) Plan, then the Department will accept a modified approved SPCC Plan that also incorporates the additional requirements as specified in these Solid Waste Regulations. If the facility does not have an approved SPCC Plan, then the Contingency Plan must include all of the provisions identified in this Section 17 of the Solid Waste Regulations.

17.3.3(L)(1) As part of the facility's implementation of the contingency plan, the owner or operator shall take the following actions, at a minimum:

- (a) Cease adding waste into the impoundment;
- (b) Close and empty the impoundment to repair leaks; and/or
- (c) Remove any liquid from the leak detection system on a daily basis, or more frequently as necessary; and
- (d) Measure and record the volume of waste removed.

17.3.3(L)(2) The owner or operator shall notify the Department and the local governing authority within twenty-four (24) hours of any identified release from a waste impoundment or ancillary equipment or any incident requiring implementation of the Contingency Plan. Within seven (7) calendar days of the incident, the owner or operator shall provide written notification outlining immediate actions taken.

17.3.3(L)(3) A detailed written assessment of the impact of leakage, repair completion and verification, and the need for additional monitoring and proposed corrective action shall be submitted by the owner/operator within forty five (45) calendar days to the Department and local governing authority. Repairs affecting an engineered feature at the facility must be certified by a Colorado registered P.E., in accordance with 17.3.2(E)

17.3.3(M) **Facility Inspections:** The owner or operator of the facility shall implement a weekly facility inspection program. The inspection provisions shall cover all waste treatment, disposal, containment and storage features at the facility, including tanks and ancillary equipment. At a minimum, these inspections shall examine ground movement, cracks, erosion, leaks, equipment connections, influent and effluent locations, rodent burrows, vegetation growing on a liner system, damage to ancillary equipment, spills, detection of liquids in sumps, fires or explosions, or other events or problems which could affect the

operation of the facility or jeopardize the integrity of an impoundment. Leak detection and collection systems shall also be inspected weekly for the presence of any liquids. If liquids are detected, samples shall be taken and analyzed immediately, and a determination made, as to the source of the liquid in the leak collection system. Other aspects of the waste containment system, including tanks and ancillary equipment, shall be inspected on a weekly basis as well.

17.3.3(N) **Financial Assurance:** Financial assurance of an adequate amount to cover closure and post-closure care costs shall be established in accordance with Section 1.8 of these Solid Waste Regulations.

17.4 RECORDKEEPING AND REPORTING REQUIREMENTS

17.4.1 **Availability of Records:** Monthly summary records of waste receipts shall be maintained for a minimum of three (3) years during the operating life of the facility documenting the origin, volume in storage, shipment to other facilities, and rate of disposal of all wastes. All records, including but not limited to facility inspection logs, daily depth/volume readings, precipitation, waste and monitoring analyses, freeboard and load receipts shall be maintained on-site unless otherwise approved by the Department. Those records shall be available for inspection by representatives of the Department and the local governing authority during regular business hours.

17.4.2 **Evaporative Treatment:** The owner or operator of a facility employing forced evaporative treatment shall calculate and record on a quarterly basis the total volume of all wastes treated and evaporated in each impoundment.

17.4.3 **Incoming Waste Shipments:** Each shipment of solid waste being disposed of at a waste impoundment facility which is subject to the Solid Waste Regulations and the Act shall be registered, with the following information entered on a single receipt or manifest:

- (A) Date and time;
- (B) Receiving impoundment identification;
- (C) Quantity;
- (D) Type of waste;
- (E) Location produced;
- (F) Waste generator;
- (G) Hauler and truck number; and
- (H) Driver's name and signature.

17.4.4 **Record Retention:** Each waste impoundment facility shall maintain the following records:

- (A) Individual load receipts for at least three (3) years.
- (B) Monthly summaries shall be maintained for a minimum of three (3) years during the operating life and post closure care period of the facility. Monthly summaries for each impoundment shall contain the following: (1) total volume of each waste stream disposed, and (2) waste stream identification(s).

17.4.5 **Annual Report:** Each commercial EP waste impoundment facility shall submit an annual report

by March 1st of each year to the Department and local governing authority. The annual report shall include:

- (A) The total volume received for each waste type during the previous calendar year;
- (B) Waste removed from the facility during the previous calendar year;
- (C) Any planned or unplanned releases from an impoundment unit at the facility during the previous calendar year; and
- (D) Documentation regarding all hazardous waste screening of the impoundments and random load screening documentation.

17.4.6 **Routine Monitoring:** All monitoring data shall be documented in the facility's operating record.

17.4.7 **Measurement Points:** Each measurement point for each impoundment shall be established, recorded in the operating record and continuously maintained in accordance with Section 17.2.2(C)(4).

17.4.8 **Fluid level measurement points** for each impoundment shall be maintained in the facility operating record.

17.4.9 **Mass Balance:** Documentation of monthly total volume monitoring conducted to check for leakage shall become part of the facility's operating record.

17.4.10 **Waste Characterization:** Waste characterization results indicating excursions from the facility's approved plans, such as inadvertent receipt of unapproved wastes, shall trigger notification in writing to the Department and the local governing authority within seven (7) calendar days after receipt of such results by the owner or operator.

17.4.11 **Contingency:** Contingency notification and reporting shall be conducted as required in Section 17.3.3(L). Notification within twenty-four (24) hours to the Department and local governing authority and written notification within seven (7) calendar days of the incident outlining immediate (within 24 hours of any identified release) actions taken. The facility shall submit to the Department and the local governing authority a detailed written assessment of any situation requiring implementation of the facility's contingency plan within forty-five (45) calendar days of the occurrence.

17.4.12 **Inspections**

Records shall be maintained that fully document all inspections, damage, repairs and repair verifications to impoundments, the liners systems or ancillary equipment. Such documentation shall be inclusive of all requirements of Section 17.3.3(M). Written notification shall be provided to the Department and local governing authority within seven (7) calendar days after discovery of such liner damage or other event which affects the operation and environmental protectiveness of the facility.

17.5 **CLOSURE**

17.5.1 The owner or operator of an impoundment facility shall develop a closure plan, which meets the following minimum criteria:

17.5.1(A) The closure plan shall be prepared as part of the Engineering Design and Operations plan and shall describe the steps necessary to close the impoundment facility at any point during its active life. If at any time a facility ceases operation, including the

discontinued receipt, treatment or processing of waste for more than thirty (30) calendar days, the owner or operator shall notify the Department and local governing authority and unless otherwise approved by the Department and the governing body, the owner or operator must begin implementation of its Closure Plan in accordance with the approved schedule required in 17.5.1(B)(1).

17.5.1(B) The closure plan, at a minimum, shall include the following information:

- (1) A schedule for implementing all activities associated with the closure process, with any change to this schedule requiring Department approval;
- (2) Provisions for removal of all equipment at the site;
- (3) Provisions for removing all liquid wastes from the impoundments;
- (4) Proposed plans and procedures for sampling and testing soil and groundwater at the site;
- (5) **Background Study:** Provisions for conducting a background constituent concentrations study prior to receipt of waste at the Facility or on a schedule approved by the Department. The Background Study must include, at a minimum, the following:
 - a. Sampling Plan;
 - b. Analysis Plan;
 - c. Data Evaluation Plan;
 - d. Recommendations;
 - e. A description of anticipated post disposal land use; and
 - f. A schedule for completing all activities necessary to satisfy implementation of the Background Study.
- (6) **Closure Verification Study:** Provisions for sampling and analyses of residual materials following removal of all liquid wastes from the impoundments, such as sludge and soil, for potential hazardous characteristics. The soils and residual materials sampling and analyses results will be compared against appropriate protective remediation goals or levels established in the Background Study on a case-by-case basis for establishing acceptable residual levels as approved by the Department. The Closure Verification must include, at a minimum, the following:
 - a. Sampling Plan;
 - b. Analysis Plan;
 - c. Data Evaluation Plan;
 - d. Recommendations;
 - e. A description of anticipated post disposal land use; and

f. A schedule for completing all activities necessary to satisfy implementation of the Closure Verification Study.

(7) Provisions for final disposal of all soils, sludges, or other wastes that exceed the acceptable residual levels approved by the Department.

17.5.2 Owners or operators of all impoundment facilities shall submit a report to the Department within sixty (60) calendar days of completing final closure activities. The report shall summarize the volume of each waste stream disposed in each impoundment, and list the name, address and phone number of person(s) responsible for post closure control of the facility.

17.5.3 Discrete units of the impoundment facility may be closed independently of closure of the entire facility.

17.5.4 At least sixty (60) calendar days in advance of the proposed closure date, the owner or operator must notify the Department and the local governing authority and place signs of suitable size at the entrance to the site and facility.

17.5.5 The owner or operator of the facility must complete closure activities of the facility in accordance with the closure plan and within one hundred eighty (180) calendar days following the final receipt of waste. Extensions of the closure period may be granted by the Department if the owner or operator demonstrates that closure will take longer than one hundred eighty (180) calendar days and the owner/operator has taken and will continue to take all steps to prevent threats to human health and the environment.

17.5.6 Following closure of an impoundment facility, the owner or operator shall:

17.5.6(A) Record a notation on the deed to the facility property, or some other instrument that is normally examined during title search; and

17.5.6(B) Notify the Department and the local governing authority that a notation has been recorded on the deed and a copy has been placed in the operating record. The notation on the deed must in perpetuity notify any potential purchaser of the property that:

(1) The land has been used as an impoundment facility; and

(2) Its use may be restricted. The Department after consultation with the local governing authority may grant permission to remove the notation from the deed if all wastes and residual contamination are removed from the facility.

17.5.7 A closure certification report is required to be submitted within sixty (60) calendar days of completion of closure activities which documents all the requirements and conditions of the closure plan have been achieved. The Report must be signed and sealed by a Colorado registered professional engineer and is subject to review and approval by the Department.

17.6 POST-CLOSURE CARE AND MAINTENANCE

17.6.1 Following closure of the impoundment facility the owner or operator must conduct post-closure care, which shall consist of at least the following:

(A) Provisions to prevent nuisance conditions;

(B) Maintaining the integrity and effectiveness of the final cover, should waste be closed in place, including making repairs to the cover and replanting vegetation as necessary;

- (C) Monitoring ground water in accordance with the requirements of Section 2.2 and maintaining the groundwater monitoring system, if applicable;
 - (D) Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and
 - (E) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the function of the monitoring systems unless reviewed and approved by the Department.
- 17.6.2 Following completion of the post-closure care period the owner or operator must submit a certification signed by an independent Colorado registered professional engineer for approval by the Department and the local governing body having jurisdiction, verifying that post-closure care has been completed in accordance with the post-closure plan and has been placed in the operating record.
- 17.6.3 Post-closure care must be conducted for a minimum of thirty (30) years. The length of the post-closure care period may be:
- (A) Decreased by the Department after consultation with the local governing authority if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment; or
 - (B) Increased by the Department after consultation with the local governing authority if it is determined that the lengthened period is necessary to protect human health and the environment.

APPENDIX A FINANCIAL ASSURANCE INSTRUMENT LANGUAGE

WORDING OF THE INSTRUMENTS

I.(A) Trust Agreement

A trust agreement for a trust fund, in this section, must be worded as follows, except that instruction in brackets are to be replaced with the relevant information and the brackets deleted:

Trust Agreement

Trust Agreement, the "Agreement" , entered into as of [date] by and between [name of the owner or operator], a [name of state][insert "corporation" , "partnership" , "association" , or "proprietorship"], the "Grantor" , and [name of corporate trustee], [insert "incorporated in the State of Colorado" or "a national bank"], the "Trustee."

Whereas, the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, a regulatory agency of the State of Colorado, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a solid waste facility shall provide assurance that funds will be available when needed for closure and/or post-closure care of the facility,

Whereas, the Grantor has elected to establish a trust to provide all or a part of such financial assurance for the facilities identified herein,

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions as used in this Agreement:

- (A) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.
- (B) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities and Cost Estimates This Agreement pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A, for each facility list the EPA identification number, name, address, and the current closure and/or post-closure cost estimates, and/or corrective action, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund The grantor and the trustee hereby establish a trust fund, the "Fund", for the benefit of the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division. The grantor and the trustee intend that no third party have access to the fund except as herein provided. The fund is established initially as consisting of the property which is acceptable to the trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the trustee is referred to as the fund, together with all earnings and profits thereon, less any payments or distributions made by the trustee pursuant to this Agreement.

The fund shall be held by the trustee, IN TRUST, as hereinafter provided. The trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the grantor, any payments necessary to discharge any liabilities of the grantor established by the Department.

Section 4. Payment for Closure and Post-Closure Care The trustee shall make payments from the fund as the Department shall direct, in writing, to provide for the payment of the costs of closure, and/or corrective action, and/or post-closure care of the facilities covered by this Agreement. The trustee shall reimburse the grantor or other persons as specified by the Department from the fund for closure and post-closure expenditures in such amount as the Department shall direct in writing. In addition, the trustee shall refund to the grantor such amounts as the Department specifies in writing. Upon refund, such funds shall no longer constitute part of the fund as defined herein.

Section 5. Payment Comprising the Fund Payments made to the trustee for the fund shall consist of cash or securities acceptable to the trustee.

Section 6. Trustee Management The trustee shall invest and reinvest the principal and income of the fund and keep the fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the grantor may communicate in writing to the trustee from time to time, subject, however, to the provisions of this Section. In investing reinvesting, exchanging, selling, and managing the fund, the trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (A) Securities or other obligations of the grantor, or any other owner or operator of the

facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80A-2.(A), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

- (B) The trustee is authorized to invest the fund in time or demand deposits of the trustee, to the extent insured by an agency of the Federal or State government; and
- (C) The trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment The trustee is expressly authorized in its discretion:

- (A) To transfer from time to time any or all of the assets of the fund to any common, commingled, or collective trust fund created by the trustee in which the fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (B) To purchase shares in any investment company registered under the investment company act of 1940, 15 U.S.C. 80A-1 et seq ., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the trustee. The trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee Without in any way limiting the powers and discretions conferred upon the trustee by the other provision of this Agreement or by law, the trustee is expressly authorized and empowered:

- (A) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (B) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (C) To register any securities held in the fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the trustee shall at all times show that all such securities are part of the fund;
- (D) To deposit any cash in the fund in interest-bearing accounts maintained or savings certificates issued by the trustee, in its separate corporate capacity, or in any other banking institution affiliated with the trustee, to the extent insured by an agency of the Federal or State government; and
- (E) To compromise or otherwise adjust all claims in favor of or against the fund.

Section 9. Taxes and Expenses All taxes of any kind that may be assessed or levied against or in respect of the fund and all brokerage commissions incurred by the fund shall be paid from the fund. All other expenses incurred by the trustee in connection with the administration of this trust, including fees for legal services rendered to the trustee, the compensation of the trustee to the extent not paid directly by the grantor, and all other proper charges and disbursements of the trustee shall be paid from the fund.

Section 10. Annual Valuation The trustee shall annually, at least 30 days prior to the anniversary date of establishment of the fund, furnish to the grantor and to the Colorado Department of Public Health and Environment a statement confirming the value of the trust. Any securities in the fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the fund. The failure of the grantor to object in writing to the trustee within 90 days after the statement has been furnished to the grantor and the Department shall constitute a conclusively binding assent by the grantor, barring the grantor from asserting any claim or liability against the trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel The trustee may from time to time consult with counsel, who may be counsel to the grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation The trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the grantor.

Section 13. Successor Trustee The trustee may resign or the grantor may replace the trustee, but such resignation or replacement shall not be effective until the grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the trustee hereunder. Upon the successor trustee's acceptance of the appointment, the trustee shall assign, transfer and pay over to the successor trustee the funds and properties then constituting the fund. If for any reason the grantor cannot or does not act in the event of the resignation of the trustee, the trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes the administration of the trust in a writing sent to the grantor, the Department, and the present trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee All orders, requests, and instructions by the grantor to the trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the grantor may designate by amendment to Exhibit A. The trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Department to the trustee shall be in writing, signed by the director or his designees, and the trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the grantor or Department hereunder has occurred. The trustee shall have no duty to act in the absence of such orders, requests, and instructions from the grantor and/or the Department, except as provided for herein.

Section 15. Notice of Nonpayment The trustee shall notify the grantor and the Department, by certified mail within 10 days following the expiration of the 30-days period after the anniversary of the establishment of the trust, if no payment is received from the grantor during that period. After the pay-in period is completed, the trustee shall not be required

to send a notice of nonpayment.

Section 16. Amendment of Agreement This Agreement may be amended by an instrument in writing executed by the grantor, the trustee, and the Department, or by the trustee and the Department if the grantor ceases to exist.

Section 17. Irrevocability and Termination Subject to the right of the parties to amend this Agreement as provided in Section 16, this trust shall be irrevocable and shall continue until terminated at the written agreement of the grantor, the trustee and the Department, or by the trustee and the Department, if the grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the grantor.

Section 18. Immunity and Indemnification The trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the grantor or the Department issued in accordance with this Agreement. The trustee shall be indemnified and saved harmless by the grantor or from the trust fund, or both, from and against any personal liability to which the trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the grantor fails to provide such defense.

Section 19. Choice of Law This Agreement shall be administered, construed, and enforced according to the laws of the State of Colorado.

Section 20. Interpretation As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in these regulations were constituted on the date first above written.

[Signature of grantor]

[Title]

[Seal]

Attest: [Signature of attestor] [Title]

[Signature of trustee]

[Name of trustee]

[Title]

[Seal]

Attest: [Signature of attestor] [Title]

- (B) The following is an example of the certification of acknowledgment which must accompany the trust agreement for a trust fund as specified in of these regulations.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

II. Standby Trust Agreement

- (A) A trust agreement for a standby trust fund, in this section, must be worded as follows, except that instruction in brackets are to be replaced with the relevant information and the brackets deleted:

Standby Trust Agreement

Standby Trust Agreement, the "Agreement", entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert "corporation", "partnership", "association", or "proprietorship"], the "Grantor", and [name of corporate Trustee], [insert "incorporated in the State of Colorado" or "a national bank"], the "Trustee."

Whereas, the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, a regulatory agency of the State of Colorado, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a solid waste facility shall provide assurance that funds will be available when needed for closure and/or post-closure care of the facility,

Whereas, the Grantor has elected to establish a standby trust to provide all or a part of such financial assurance for the facilities identified herein,

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions as used in this Agreement:

- (A) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.
- (B) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities and Cost Estimates This Agreement pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A, for each facility list the EPA identification number, name, address, and the current closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund The grantor and the trustee hereby establish a trust fund, the "Fund", for the benefit of the Colorado Department of Public Health and Environment,

Hazardous Materials and Waste Management Division. The grantor and the trustee intend that no third party have access to the fund except as herein provided. The fund is established initially as consisting of the property which is acceptable to the trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the trustee is referred to as the fund, together with all earnings and profits thereon, less any payments or distributions made by the trustee pursuant to this Agreement.

The fund shall be held by the trustee, IN TRUST, as hereinafter provided. The trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the grantor, any payments necessary to discharge any liabilities of the grantor established by the Department.

Section 4. Payment for Closure and Post-Closure Care The trustee shall make payments from the fund as the Department shall direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The trustee shall reimburse the grantor or other persons as specified by the Department from the fund for closure and post-closure expenditures in such amount as the Department shall direct in writing. In addition, the trustee shall refund to the grantor such amounts as the Department specifies in writing. Upon refund, such funds shall no longer constitute part of the fund as defined herein.

Section 5. Payment Comprising the Fund payments made to the trustee for the fund shall consist of cash or securities acceptable to the trustee.

Section 6. Trustee Management The trustee shall invest and reinvest the principal and income of the fund and keep the fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the grantor may communicate in writing to the trustee from time to time, subject, however, to the provisions of this Section. In investing reinvesting, exchanging, selling, and managing the fund, the trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (A) Securities or other obligations of the grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80A-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (B) The trustee is authorized to invest the fund in time or demand deposits of the trustee, to the extent insured by an agency of the Federal or State government; and
- (C) The trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment The trustee is expressly authorized in its discretion:

- (A) To transfer from time to time any or all of the assets of the fund to any common, commingled, or collective trust fund created by the trustee in which the fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (B) To purchase shares in any investment company registered under the Investment

Company Act of 1940, 15 U.S.C. 80A-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the trustee. The trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee Without in any way limiting the powers and discretions conferred upon the trustee by the other provision of this Agreement or by law, the trustee is expressly authorized and empowered:

- (A) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (B) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (C) To register any securities held in the fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the trustee shall at all times show that all such securities are part of the fund;
- (D) To deposit any cash in the fund in interest-bearing accounts maintained or savings certificates issued by the trustee, in its separate corporate capacity, or in any other banking institution affiliated with the trustee, to the extent insured by an agency of the Federal or State government; and
- (E) To compromise or otherwise adjust all claims in favor of or against the fund.

Section 9. Taxes and Expenses All taxes of any kind that may be assessed or levied against or in respect of the fund and all brokerage commissions incurred by the fund shall be paid from the fund. All other expenses incurred by the trustee in connection with the administration of this trust, including fees for legal services rendered to the trustee, the compensation of the trustee to the extent not paid directly by the grantor, and all other proper charges and disbursements of the trustee shall be paid from the fund.

Section 10. Advice of Counsel The trustee may from time to time consult with counsel, who may be counsel to the grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation The trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the grantor.

Section 12. Successor Trustee The trustee may resign or the grantor may replace the trustee, but such resignation or replacement shall not be effective until the grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee

shall have the same powers and duties as those conferred upon the trustee hereunder. Upon the successor trustee's acceptance of the appointment, the trustee shall assign, transfer and pay over to the successor trustee the funds and properties then constituting the fund. If for any reason the grantor cannot or does not act in the event of the resignation of the trustee, the trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes the administration of the trust in a writing sent to the grantor, the Department, and the present trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee All orders, requests, and instructions by the grantor to the trustee shall be in writing, signed by such persons as are designated in the attached exhibit A or such other designees as the grantor may designate by amendment to Exhibit A. The trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Department to the trustee shall be in writing, signed by the director or his designees, and the trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the grantor or department hereunder has occurred. The trustee shall have no duty to act in the absence of such orders, requests, and instructions from the grantor and/or the Department, except as provided for herein.

Section 14. Amendment of Agreement This Agreement may be amended by an instrument in writing executed by the grantor, the trustee, and the Department, or by the trustee and the Department if the grantor ceases to exist.

Section 15. Irrevocability and Termination Subject to the right of the parties to amend this Agreement as provided in Section 14, this trust shall be irrevocable and shall continue until terminated at the written agreement of the grantor, the trustee and the Department, or by the trustee and the Department, if the grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the grantor.

Section 16. Immunity and Indemnification The trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the grantor or the Department issued in accordance with this Agreement. The trustee shall be indemnified and saved harmless by the grantor or from the trust fund, or both, from and against any personal liability to which the trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the grantor fails to provide such defense.

Section 17. Choice of Law This Agreement shall be administered, construed, and enforced according to the laws of the State of Colorado.

Section 18. Interpretation As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in these regulations were constituted on the date first above written.

[Signature of grantor]

[Title]

[Seal]

Attest: [Signature of attestor] [Title]

[Signature of trustee]

[Name of trustee]

[Title]

[Seal]

Attest: [Signature of attestor] [Title]

- (B) The following is an example of the certification of acknowledgment which must accompany the trust agreement for a trust fund as specified in of these regulations.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

III. Irrevocable Standby Letter of Credit.

A letter of credit, specified in these regulations, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

Director Colorado Department of Public Health and Environment Hazardous Materials and Waste Management Division 4300 Cherry Creek Drive South Denver, Colorado 80246-1530

Dear Sir or Madam:

We hereby establish our irrevocable standby letter of credit no. _____ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. Dollars \$_____, available upon presentation of:

(1) Your sight draft bearing reference to this letter of credit no. _____, and

(2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Colorado Solid Wastes Disposal Sites and Facilities Act as amended."

This letter of credit is effective as of [date] and shall expire on [date at least 1 year later], but such expiration date shall be automatically extended for a period of [at least 1 year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft, for 120 days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the specified amount of the draft directly into the standby trust fund of [owner's or operator's name], in accordance with your instructions, unless an alternate mechanism has been established by the State of Colorado to directly receive monies.

We certify that the wording of this letter of credit is identical to the wording specified as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code"].

IV. Surety Bond

A surety bond guaranteeing payment into a trust fund, as specified in these regulations, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Financial Guarantee Bond

Date bond executed: _____

Effective date: _____

Principal: [legal name and business address of owner or operator] _____

Type of organization: [insert "individual" , "joint venture" , "partnership" , or "corporation"]

State of incorporation: _____

Surety(ies): [name(s) and business address(es)] _____

EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond: [Indicate closure and/or post-closure and/or corrective action amount separately] _____

Total penal sum of bond: \$_____

Surety's bond number: _____

Know all persons by these presents, that we, the principal and surety(ies) hereto are firmly bound to the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the surety(ies) are corporations acting as co-sureties, we, the sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or action against any or all of us, and for all other purposes each surety binds itself, jointly and severally with the principal, for the payment of such sum only as is set forth opposite the name of such surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said principal is required, under the Colorado regulations pertaining to Solid Waste Disposal Sites and Facilities, to have a permit or interim status in order to own or operate each solid waste management facility identified above, and

Whereas said principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit or interim status, and

Whereas said principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance, unless an alternate mechanism has been established by the State of Colorado to directly receive monies.

Now, therefore, the conditions of the obligation are such that if the principal shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

Or, if the principal shall fund the standby trust fund in such amount(s) within 15 days after an order to begin closure is issued by the Department or a U.S. District court or other court of competent jurisdiction,

Or, if the principal shall provide alternate financial assurance, as specified in these regulations and obtain the Department's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the principal and the Department from the surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The surety(ies) shall become liable on this bond obligation only when the principal has failed to fulfill the conditions described above. Upon notification by the Department that the principal has failed to perform as guaranteed by this bond, the surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Department.

The liability of the surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the surety(ies) hereunder exceed the amount of said penal sum.

The surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the principal and to the Department, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the principal and

the Department, as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the surety(ies), provided, however, that no such notice shall become effective until the surety(ies) receive(s) written authorization for termination of the bond by the Department.

[The following paragraph is an optional rider that may be included but is not required:]

The principal and surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Department.

In witness whereof, the principal and surety(ies) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the principal and surety(ies) and that the wording of this surety bond is identical to the wording specified in the applicable regulations were constituted on the date this bond was executed.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

Corporate seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: _____

Liability limit: \$_____

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), Corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$_____

V. Performance Bond

A surety bond guaranteeing performance of closure and/or post-closure care, or corrective action as specified, must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

Performance Bond

Date bond executed: _____

Effective date: _____

Principal: [legal name and business address of owner or operator] _____

Type of organization: [insert "individual" , "joint venture" , "Partnership" , or "corporation"]

State of incorporation: _____

Surety(ies): [Name(s) and business address(es)] _____

EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond (indicate closure and post-closure amounts separately):

Total penal sum of bond: \$ _____

Surety's bond number: _____

Know all persons by these presents, that we, the principal and surety(ies) hereto are firmly bound to the Colorado Department of Public Health and Environment (hereinafter referred to as the Department), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators successors, and assigns jointly and severally; provide that, where the surety(ies) are corporations acting as co-sureties, we, the sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each surety binds itself, jointly and severally with the principal, for the payment of such sum only as is set forth opposite the name of such surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said principal is required, under the Colorado Solid Wastes Disposal Sites and Facilities Act as amended, to have a permit in order to own or operate each solid waste management facility identified above, and

Whereas said principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit, and Whereas said principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance, unless an alternate mechanism has been established by the State of Colorado to directly receive monies;

Now, therefore, the conditions of this obligation are such that if the principal shall faithfully perform closure, whenever required to do so, of each facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

And, if the principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the post-closure plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

Or, if the principal shall provide alternate financial assurance as specified in these regulations, and obtain the Department's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the principal and the Department from the surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The surety(ies) shall be come liable on this bond obligation only when the principal has failed to fulfill the conditions described above.

Upon notification by the Department that the principal has been found in violation of the closure requirements of these regulations, for a facility for which this bond guarantees performances of closure, the surety(ies) shall either perform closure in accordance with the closure plan and other permit requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by the Department.

Upon notification by the Department that the principal has failed to provide alternate financial assurance as specified in these regulations, and obtain written approval of such assurance from the Department during the 90 days following receipt by both the principal and the Department of a notice of cancellation of the bond, the surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Department.

The surety(ies) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the surety(ies) hereunder exceed the amount of said penal sum. The surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Department provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the principal and the Department, as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the surety(ies), provided, however, that no such notice shall become effective until the surety(ies) receive(s) written authorization for termination of the bond by the Department.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Department.

In witness whereof, the principal and surety(ies) have executed this performance bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the principal and surety(ies) and that the wording of this surety bond is identical to the wording specified in the applicable regulations.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: _____

Liability limit: \$ _____

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$ _____

VI. Insurance

- (1) The standard insurance industry certificate of insurance form (ACORD form), as prescribed by the Colorado Insurance Commission, shall be used to evidence closure and/or post-closure care and/or corrective action coverage. The following information is to be included in the certificate of insurance:

(A) Name, address, and telephone number of agency; and the underwriter

(B) Name and EPA I.D. Number if applicable of facility being covered (if list is too long additional pages may be attached).

(C) Indication of type of coverage (closure, post-closure and/or corrective action).

(D) Amount of coverage (closure, post-closure and/or corrective action).

(E) A statement of certification, in the comment section, worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

"This certificate certifies that the policy to which this certificate applies, provides [insert and/or closure and/or post-closure care or corrective action coverage] in connection with the insured's obligation to demonstrate financial responsibility under Section 1.8.9 of the regulations pertaining to Solid Waste Disposal Sites and Facilities 6 CCR 1007-2, as amended.

(F) Authorized company representatives' signature

- (2) Cancellation of this policy, whether by the insurer or the insured, will be effective only upon written notice and only after the expiration of sixty (60) days after a written notice of cancellation is received by the Department.

VII. Certificate of Deposit

- (1) The following information is to be included on the Certificate of Deposit:

- (A) Name, address, and telephone number of issuing bank.
 - (B) Name and EPA I.D. Number if applicable of facility being covered (if list is too long additional pages may be attached).
 - (C) Payable To: Director, Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division.
 - (D) Indication of type of coverage (closure, post-closure and/or corrective action).
 - (E) Amount of coverage (closure, post-closure and/or corrective action).
 - (F) Authorized Bank's signature
 - (G) Automatic renewal of the Certificate of Deposit with interest added to the principal unless otherwise instructed in writing by the Department.
- (2) (A) Cancellation of this Certificate of Deposit, whether by the insurer or the insured, will be effective only upon written notice and only after expiration of sixty (60) days after a written notice of cancellation is received by the Department.
 - (B) A thirty (30) day written notice of maturity of the Certificate of Deposit will be sent to the Department and facility.

APPENDIX B GROUND WATER MONITORING

Appendix B uses 40 CFR Part 258 (Solid Waste Disposal Facility Criteria, October 9, 1991) as a reference document. Part 258 reference numbers, contained herein, are intentionally used for cross reference to the federal document.

B1 Applicability [40 CFR 258.50]

Ground water monitoring requirements in the Appendix B may be waived by the Department after consultation with the local governing body having jurisdiction if the owner or operator demonstrates that there is no migration potential for hazardous substances, pollutants and contaminants from that solid waste disposal site and facility to ground water during the life of the facility and the post-closure care period. If ground water monitoring requirements are waived, the operator must continue to demonstrate that no potential exists for migration of hazardous substances, pollutants and contaminants from the facility. Such demonstration shall be evaluated by the operator and submitted to the Department and the local governing body having jurisdiction every five years. This demonstration must be certified by a qualified ground water scientist and approved by the Department, and be based upon:

- (1) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and
- (2) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment, and

(3) Distance to drinking water intakes.

B2 Ground water monitoring systems [40 CFR 258.51]

(A) A ground water monitoring system must consist of a sufficient number of monitoring wells installed at appropriate locations and depths which will yield ground water samples that:

(1) Represent the quality of background ground water that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management unit where:

(a) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or

(b) Sampling at other wells will provide an indication of background ground water quality that is as representative or more representative than that provided by the hydraulically upgradient wells; and

(2) Represent the quality of ground-water at the relevant point of compliance specified in Section 2.1.15. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Department under 40 CFR 258.40(D) that is capable of detecting ground water contamination. When physical obstacles preclude installation of ground water monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Department under 40 CFR 258.40(D) that is capable of detecting ground water contamination.

(B) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground water samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the ground water. Ground water monitoring wells and points are designed and installed in accordance with applicable rules and regulations pursuant to the "Water Well and Pump Installation Contractor's Act", Title 37, Article 91, Part 1, CRS, as amended

(1) The owner or operator must document the design, installation, development, and decommission of any monitoring wells, piezometers and other measurements, sampling, and analytical devices. Documentation shall be placed in the operating record and shall be submitted to the Department and the local governing body having jurisdiction.

(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

(C) The number, spacing, and depths of monitoring systems shall be:

(1) Determined based upon site-specific technical information that must include thorough characterization of the:

(a) Saturated thickness, ground water flow rate, ground water flow direction including seasonal and temporal fluctuations in ground-water flow; and

(b) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising

the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

- (2) Certified by a qualified ground water scientist and approved by the Department and the local governing body having jurisdiction. Within 14 days, the owner or operator must place documentation in the operating record and be submitted to the Department and the local governing body having jurisdiction.

(D) Alternative monitoring systems

Alternative monitoring systems may be approved by the Department based on site specific technical information. Alternative monitoring includes the following: vadose zone monitoring, wet/dry monitoring or other alternative monitoring systems that are sufficient to detect changes in the subsurface condition and/or contaminants from the facility at the relevant point of compliance.

B3 Ground water sampling and analysis requirements [40 CFR 258.53]

- (A) The ground water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of ground water quality at the background and downgradient wells installed in compliance with 40 CFR 258.51(A). The owner or operator must notify the Department and the local governing body having jurisdiction that the sampling and analysis program documentation has been placed in the operating record and the program must include procedures and techniques for:

- (1) Sample collection;
- (2) Sample preservation and shipment;
- (3) Analytical procedures;
- (4) Chain of custody control; and
- (5) Quality assurance and quality control.

- (B) The ground water monitoring program must include sampling and analytical methods that are appropriate for ground water sampling and that accurately measure hazardous constituents and other monitoring parameters in ground water samples. Analytical methods shall be according to Colorado Department of Health guidelines, or an EPA approved method, for constituents listed in Appendix I and Appendix II.

- (C) The sampling procedures and frequency must be protective of human health and the environment.

- (D) Ground water elevations must be measured in each well immediately prior to purging, each time ground water is sampled. Changes in the rate and directions of ground water flow should be evaluated at a frequency appropriate to site-specific hydrogeologic conditions. Ground water elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in ground water flow which could preclude accurate determination of ground water flow rate and direction.

- (E) The owner or operator must establish background ground water quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular ground water monitoring program that applies to the solid waste disposal site and facility, as determined under 40 CFR 258.54(A) or 40 CFR 258.55(A). Background ground water quality may be established at wells that are not located hydraulically upgradient from the solid

waste disposal site and facility if it meets the requirements of 40 CFR 258.51(A)(1).

- (F) The number of samples collected to establish ground water quality data must be consistent with the appropriate statistical procedures determined pursuant to paragraph (G) of this section. The sampling procedures shall be those specified under 40 CFR 258.54(B) for detection monitoring, 40 CFR 258.55 (B) and (D) for assessment monitoring, and 40 CFR 258.56(B) for corrective action.
- (G) Following collection of background constituent concentration data, the owner or operator must specify in the operating record one or more of the following statistical methods to be used in evaluating ground water monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well. Any changes in statistical methodology from the specified method(s) shall be reviewed and approved by the Department within two weeks of the request and entered into the operating record. After background data has been collected, a statistical analysis will be specified.
 - (1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.
 - (2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.
 - (3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.
 - (4) A control chart approach that gives control limits for each constituent.
 - (5) A trend analysis approach to evaluate the significance of an apparent change in water quality over time at a given well.
 - (6) Another statistical test method that meets the performance standards of 40 CFR 258.53(H). The owner or operator must place a justification for this alternative in the operating record and notify the Department of the use of this alternative test. The justification must demonstrate that the alternative method meets the performance standards of 40 CFR 258.53(H).
- (H) Any statistical method chosen under 40 CFR 258.53(G) shall comply with the following performance standards, as appropriate:
 - (1) The statistical method used to evaluate ground water monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed, or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.
 - (2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type I error level no less than 0.01 For each testing period. If a multiple comparisons procedure is used, the type I experiment

wise error rate for each testing period shall be no less than 0.05; However, the type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

- (3) If a control chart approach is used to evaluate ground water monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.
 - (4) If a tolerance interval or a prediction interval is used to evaluate ground water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.
 - (5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (PQL) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.
 - (6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.
- (I) The owner or operator must determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular ground water monitoring program that applies to the solid waste disposal site and facility, as determined under 40 CFR 258.54(A) or 40 CFR 258.55(A).
- (1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the ground-water quality of each parameter or constituent at each monitoring well designated pursuant to 40 CFR 258.51(A)(2) to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (G) and (H) of this section.
 - (2) Within 30 days after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well and notify the Department.

B4 Detection monitoring program [40 CFR 258.54]

- (A) Detection monitoring is required at solid waste disposal sites and facilities at all ground water monitoring wells defined under 40 CFR 258.51(A)(1) and (A)(2) of this part. At a minimum, a detection monitoring program must include the monitoring for the constituents listed in Appendix IA of this part. A detection monitoring program for solid waste disposal site and facility must also include the monitoring for constituents listed in Appendix IB.
- (1) The Department after consultation with the local governing body having jurisdiction may delete any of the Appendix I monitoring parameters for a solid waste disposal site and facility on a site specific basis, if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the facility.

- (2) The Department after consultation with the local governing body having jurisdiction may add to the Appendix IA or IB monitoring parameters for a solid waste disposal site and facility on a site specific basis. The additional analytes will be selected using the following minimum criteria:
 - (a) An “acceptable” analytical method exists. An acceptable method should be validated to demonstrate it is capable of generating reliable data on a routine basis. Additionally, it should be standardized and thus readily available from commercial laboratories.
 - (b) A calibration standard is commercially available and readily obtainable.
 - (c) The analyte is chemically stable in the sample matrix with appropriate but not unreasonable collection and preservation techniques.
 - (d) If there exists a reasonable expectation that the additional analyte will be present due to site specific conditions, or the additional analyte will be a reliable indicator of ground water chemistry and possible precursor to other more hazardous constituents that may be released later from the solid waste disposal site and facility.
- (3) In determining the addition or deletion of Appendix IA or IB constituents, the Department shall consider the following factors:
 - (a) The types, quantities, And concentrations of constituents in wastes managed at the solid waste disposal sites and facilities, and
 - (b) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the mswlf unit.
- (B) To establish background concentrations, a minimum of eight quarterly samples from each well must be collected and analyzed for the Appendix IA & IB constituents, or the list approved in accordance with paragraph (A) of this section. The Department may specify an appropriate monitoring frequency for repeated sampling and analysis for Appendix IA & IB constituents, or the list approved in accordance with paragraph (a) of this section, during the active life and the post-closure care period. The monitoring frequency during the active life (including closure) shall be no less than semi-annual, unless approved by the Department. The alternative frequency shall be based on consideration of the following factors:
 - (1) Lithology of the saturated and unsaturated zone;
 - (2) Hydraulic conductivity of the ground water and unsaturated zone;
 - (3) Ground water flow rates;
 - (4) Minimum distance between upgradient edge of the solid waste disposal site and facility unit and downgradient monitoring well screen (minimum distance of travel); and
 - (5) Resource value of the ground water.
 - (6) For landfills this schedule shall be no less stringent than 40 CFR 258.54(B).
- (C) If the owner or operator determines, pursuant to 40 CFR 258.53(G) of this part, that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I a or IB or the list approved in accordance with paragraph (A) of this section, at any

monitoring well at the boundary specified under 40 CFR 258.51(A)(2), the owner or operator:

- (1) Must place documentation in the facility operating record indicating which constituents have shown statistically significant changes from background levels and forward the documentation to the Department and the local governing body having jurisdiction within 14 days; and
- (2) Must establish an assessment monitoring program meeting the requirements of 40 CFR 258.55 of this part within 90 days except as provided for in paragraph (3) below.
- (3) May demonstrate that a source other than a SWDSF caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground water quality. A report documenting this demonstration must be certified by a qualified ground water scientist and approved by the Department and the local governing body having jurisdiction and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this section. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in 40 CFR 258.55.

B5 Assessment monitoring program [40 CFR 258.55]

- (A) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in the Appendix IA or IB or in the list approved in accordance with 40 CFR 258.54(A)(1) & (a)(2).
- (B) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator of a sanitary landfill must sample and analyze the ground water for all constituents identified in Appendix II of this part. A minimum of one sample from each potentially affected well must be collected and analyzed during each sampling event. For any constituent detected in the these wells as a result of the complete Appendix II analysis, a minimum of four independent samples, or an alternate sampling schedule approved by the Department, from each well (background and downgradient) must be collected and analyzed to establish background for the constituents. The Department may specify an appropriate subset of wells to be sampled and analyzed for Appendix II constituents during assessment monitoring. The Department may delete any of the Appendix II monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.
- (C) Solid waste disposal sites and facilities, other than sanitary landfill, must also conduct an assessment monitoring program. The parameters of the assessment monitoring program shall be determined by the owner or operator and the Department based on consideration of:
 - (1) The types, quantities and concentrations of constituents in wastes managed at the solid waste disposal site and facility, and
 - (2) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the solid waste disposal site and facility.
- (D) The Department may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of Appendix II constituents or the list approved in accordance with 40 CFR 258.55(C), during the active life (including closure) and post-closure care of the unit considering the following factors:
 - (1) Lithology of the aquifer, monitored and unsaturated zone;

- (2) Hydraulic conductivity of the aquifer, monitored and unsaturated zone;
 - (3) Ground water flow rates;
 - (4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);
 - (5) Resource value of the aquifer and monitored unit; and
 - (6) Nature (fate and transport) of any constituents detected in response to this section.
- (E) After obtaining the results from the initial or subsequent sampling events required in 40 CFR 258.55(B), (C) and (D), the owner or operator must:
- (1) Within 14 days, place documentation in the operating record identifying the detected Appendix II constituents or the list approved in accordance with 40 CFR 258.55(C), and submit the documentation to the Department and the local governing body having jurisdiction;
 - (2) Within 90 days, and on a semiannual basis thereafter:
 - (a) Resample all wells specified by 40 CFR 258.51(A);
 - (b) Conduct analyses for all constituents in Appendix IA & IB or in the alternative list approved in accordance with 40 CFR 258.54(A)(2), and for those constituents in Appendix II or the list approved in accordance with 40 CFR 258.55(C) that are detected in response to 40 CFR 258.55(B), (c) and (d); and
 - (c) Record their concentrations in the facility operating record and submit them to the Department and the local governing body having jurisdiction.
 - (3) At least one sample from each well must be collected and analyzed during these sampling events. The Department may specify an alternative monitoring frequency during the active life (including closure) and the post-closure period for the constituents referred above to in this paragraph. The alternative frequency for Appendix IA & IB constituents, or the list approved in accordance with 40 CFR 258.54(A)(2), during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in 40 CFR 258.55(D);
- (F) If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in 40 CFR 258.53(G), for two consecutive sampling events, the owner or operator must document and submit this finding to the Department and the local governing body having jurisdiction, and may, upon approval from the Department and the local governing body having jurisdiction discontinue assessment monitoring.
- (G) If one or more Appendix II constituents or the list approved in accordance with 40 CFR 258.55(C) are detected at statistically significant levels above the background concentrations, the owner or operator shall, within 14 days of this finding, place a document in the operating record identifying the Appendix II constituents or the list approved in accordance with 40 CFR 258.55(C) that have exceeded the background concentrations and submit the documentation to the Department and all appropriate local government officials. The owner or operator shall also:
- (1) (a) Characterize the nature and extent of the release by installing additional monitoring wells as necessary;

- (b) Install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with 40 CFR 258.55(D)(2);
 - (c) Notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with 40 CFR 258.55(G)(1); and
 - (d) Initiate an assessment of corrective measures as required by 40 CFR 255.56 Of this part within 90 days; or
- (2) Demonstrate that a source other than a mswlf unit caused the contamination, or that the statically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground water quality. A report documenting this demonstration must be certified by a qualified ground water scientist or approved by the Department and placed in the operating record. If a successful demonstration is made the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to 40 CFR 258.55, and may return to detection monitoring if the Appendix II constituents or the list approved in accordance with 40 CFR 258.55(C) are at or below background as specified in 40 CFR 258.55(E). Until a successful demonstration is made, the owner or operator must comply with 40 CFR 258.55(G) including initiating an assessment of corrective measures in accordance with 40 CFR 258.56.

B6 Assessment of corrective measures [40 CFR 258.56]

- (A) Within 90 days of finding that any of the constituents referenced in 40 CFR 258.55 have been detected at a statistically significant level exceeding the background concentrations, the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time as determined by the Department and governing body having jurisdiction.
- (B) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in 40 CFR 258.55.
- (C) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under 40 CFR 258.57, addressing at least the following:
 - (1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;
 - (2) The time required to begin and complete the remedy;
 - (3) The costs of remedy implementation; and
 - (4) The institutional requirements such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).
- (D) The owner or operator shall provide to the Department the results of the corrective measures assessment, prior to the remedy selection. The Department and the local governing body having jurisdiction shall provide a 30 day public notification and public comment period to interested and affected parties prior to the remedy selection.

- (E) In the interest of minimizing environmental contamination and promoting effective remediation, owners or operators shall evaluate pursuant to Appendix B, Section B6, Subsection (F) the need for undertaking interim measures prior to the selection of the final remedy.
- (1) The owner or operator shall evaluate the need for interim measures within 30 days of the date of determining that there has been a statistically significant increase over background and shall submit the evaluation to the department and the local governing body having jurisdiction.
 - (2) Within 30 days after the determination is made that interim measures are needed, the owner or operator shall submit documentation to the department and the local governing body having jurisdiction of their intention to implement the interim measure and an implementation schedule.
 - (3) Within 14 days of receipt of documentation, the department shall notify the owner or operator of any conditions to be imposed and any recommended modifications to be employed during the implementation of the interim measure.
 - (5) The interim measures, as approved by the department, shall be initiated as soon as possible but no later than 30 days after the receipt of the department's approval.
 - (6) The owner or operator shall provide periodic progress reports on the implementation of interim measures to the department and the local governing body having jurisdiction and incorporate the interim measures in the results of the corrective measures assessment as required in 40 CFR 258.56(d).
- (F) Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to 40 CFR 258.57. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:
- (1) Time required to develop and implement a final remedy;
 - (2) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;
 - (3) Actual or potential contamination of drinking water supplies or sensitive ecosystems;
 - (4) Further degradation of the ground water that may occur if remedial action is not initiated expeditiously;
 - (5) Weather conditions that may cause hazardous constituents to migrate or be released;
 - (6) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and
 - (7) Other situations that may pose threats to human health and the environment.

B7 Selection of remedy [40 cfr 258.57]

- (A) Based on the results of the corrective measures assessment conducted under 40 CFR 258.56, remedies must:
- (1) Be protective of human health and the environment;

- (2) Attain the ground water protection standard as specified pursuant to 40 CFR 258.55 (G) and (H);
 - (3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of constituents referenced in 40 CFR 258.55 into the environment that may pose a threat to human health or the environment; and
 - (4) Comply with standards for management of wastes as specified in 40 CFR 258.58(D).
- (B) In selecting a remedy that meets the requirements of 40 CFR 258.57(A), the owner or operator shall consider the following evaluation factors:
- (1) Extent and nature of contamination;
 - (2) Resource value of the ground water including:
 - (a) Current and potential uses;
 - (b) Proximity and withdrawal rate of users;
 - (c) Ground water quantity and quality;
 - (d) The hydrogeologic characteristic(s) of the saturated zones beneath the facility and surrounding land; and
 - (e) The cost and availability of alternative water supplies.
 - (3) The long-term and short-term effectiveness and protectiveness of the potential remedy(s) based on consideration of the following:
 - (a) The type and degree of long-term management required, including monitoring, operation, and maintenance;
 - (b) Short-term risks that might be posed to the human health and the environment during implementation of such a remedy, including potential threats associated with excavation, transportation, and redisposal or containment;
 - (c) Time until the remedy becomes effective;
 - (d) Potential for exposure of humans and environmental receptors to remaining wastes;
 - (e) Long-term reliability of the engineering and institutional controls; and
 - (f) Potential need for refinement of the remedy.
 - (4) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:
 - (I) The extent to which containment practices will reduce further releases;
 - (II) The extent to which treatment technologies may be used; and
 - (III) The practical capabilities of remedial technologies in achieving compliance with ground water protection standards established under 40 CFR 258.57(G) and (H), and other objectives of the remedy.

- (5) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:
 - (I) Degree of difficulty associated with constructing the technology;
 - (II) Expected operational reliability of the technologies;
 - (III) Need to coordinate with and obtain necessary approvals and permits from other agencies;
 - (IV) Availability of necessary equipment and specialists;
 - (V) Available capacity and location of needed treatment, storage, and disposal services;
 - (VI) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives; and
 - (VII) Ground water removal and treatment costs.
 - (6) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.
 - (7) The degree to which community concerns are addressed by a potential remedy(s).
 - (8) Other relevant factors.
- (C) If the owner or operator is unable to meet the requirements of 40 CFR 258.57(A) the Department after consultation with the local governing body having jurisdiction may determine that remediation of a release of constituents referenced in 40 CFR 258.55 is not necessary if the owner or operator demonstrates to the satisfaction of the Department that:
- (1) The ground water is additionally contaminated by substances that have originated from a source other than the solid waste disposal site and facility and those substances are present in concentrations such that cleanup of the release from the SWDSF would provide no significant reduction in risk to the human health and the environment; or
 - (2) The constituent(s) is present in ground water that is not hydraulically connected to the uppermost aquifer or surface water.
 - (3) Remediation results in unacceptable cross-media impacts.
 - (4) Obtain certification of a qualified ground water scientist or approval by the Department that compliance with requirements under 40 CFR 258.57(A) cannot be practically achieved with any currently available methods.
 - (5) A cost-benefit analysis indicates that remediation of the release is unacceptable.
- (D) A determination by the Department pursuant to 40 CFR 258.57(C) shall not affect the authority of the Department to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the ground water; to prevent exposure to the ground water; or control exposure of human health and environment to residual contamination.
- (E) The owner or operator shall specify as part of the selected remedy, a schedule(s) for initiating and

completing remedial activities or source control. Such a schedule must require the initiation of remedial activities or source control within a reasonable period of time taking into consideration the factors set forth in paragraphs 40 CFR 258.57(B) or 40 CFR 258.57(D).

- (F) The owner or operator must submit a report to the Department and the local governing body having jurisdiction and place it in the operating record, within 14 days of selecting a remedy(s) or source control measure(s). The report shall describe the selected remedy(s) or source control measure(s) and how it meets the requirements of section 40 CFR 258.57. Within 60 days of the reports receipt, the Department after consultation with the local governing body having jurisdiction shall provide a determination, in conformance with Section 40 CFR 258.57 of the adequacy of the remedy(s) or source control measure(s).
- (G) The owner or operator shall develop ground water protection standards which are required to implement a corrective measure pursuant to 40 CFR 258.57. The ground water protection standards shall not be implemented without approval by the Department. The ground water protection standard for each constituent, referenced in 40 CFR 258.55, that has been detected at a statistically significant level exceeding background shall be based on the following:
 - (1) Background concentration for the constituent in wells established in accordance with 40 CFR 258.51(A);
 - (2) Maximum contaminant level (MCL) promulgated under Section 1412 of the safe drinking water act (codified) under 40 CFR Part 141;
 - (3) Health based levels that satisfy the following criteria:
 - (a) The level is derived in a manner consistent with guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028);
 - (b) The level is based on scientifically valid studies conducted in accordance with the toxic substances control act good laboratory practice standards (40 CFR Part 792) or equivalent;
 - (c) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1×10^{-4} To 1×10^{-6} range; and
 - (d) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.
- (H) The owner or operator, and the Department in consultation with the local governing body having jurisdiction may consider establishing alternate ground water protection standards to 40 CFR 258.57(G), based on consideration of the following:
 - (1) Multiple contaminants in the ground water;
 - (2) Exposure threats to sensitive environmental receptors;
 - (3) Other site-specific exposure or potential exposure to ground water; and
 - (4) Best demonstrated available technology.

B8 Implementation of corrective measures [40 CFR 258.58]

- (A) Based on the schedule established under 40 CFR 258.57(D) for initiation and completion of remedial activities the owner or operator must:
 - (1) Establish and implement a corrective action ground water monitoring program that, at a minimum:
 - (a) Meets the requirements of an assessment monitoring program under 258.55;
 - (b) Indicates the effectiveness of the corrective action remedy; and
 - (c) Demonstrates compliance with ground water protection standard pursuant to 40 CFR 258.58(E).
 - (2) Implement the corrective action remedy selected under 40 CFR 258.57;
- (B) An owner or operator or the Department in consultation with the local governing body having jurisdiction may determine, based on information developed after implementation of the remedy, source control or other information, that compliance with requirements of 40 CFR 258.57 are not being achieved. In such cases, the owner or operator must implement other methods or techniques in compliance with the requirements of section 40 CFR 258.58(C).
- (C) All wastes that are generated during the implementation of the remedy(s) or source control measure(s) required under 40 CFR 258.57, or an interim measure required under 40 CFR 258.58(A)(3), shall be managed in a manner:
 - (1) That is protective of human health and the environment; and
 - (2) That complies with applicable Resource Conservation and Recovery Act requirements.
- (D) Remedies selected pursuant to 40 CFR 258.57 shall be considered complete when:
 - (1) The owner or operator complies with the ground water protection standards established under 40 CFR 258.55 (G) and (H) at all points within the plume of contamination that lie beyond the ground water monitoring well system established under 40 CFR 258.51(A).
 - (2) Compliance with the ground water protection standards established under 40 CFR 258.55 (G) and (H) has been achieved by demonstrating that concentrations of constituents referenced in 40 CFR 258.55 have not exceeded the ground water protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in 40 CFR 258.53(G) and (H). The Department may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of constituents referenced in 40 CFR 258.55 have not exceeded the ground water protection standard(s) based on the following factors:
 - (a) Extent and concentration of the constituent(s) released;
 - (b) Chemical and physical characteristics of the hazardous constituents in the ground water and geologic media;
 - (c) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

(d) Chemical and physical characteristics of the ground water and geologic media.

(3) All actions required to complete the remedy have been satisfied.

(E) Upon completion of the remedy, the owner or operator and qualified ground water scientist must certify that completion of the remedy is in compliance with 40 CFR 258.58(D). A report shall be submitted to the Department and the local governing body having jurisdiction and placed in the operating record, within 14 days of certification. Within 60 days receipt of the report, the Department after consultation with the local governing body having jurisdiction shall provide a determination that the corrective action has met the requirements of 40 CFR 258.58(D). (F) Upon completion of the certification process pursuant to 40 CFR 258.58(E), the owner or operator shall be released from the financial assurance requirement for corrective action under Section 1.6.

APPENDIX I FOR DETECTION MONITORING

APPENDIX IA GENERAL GROUND WATER QUALITY INDICATOR PARAMETERS

CATIONS

MAGNESIUM

SODIUM

POTASSIUM

CALCIUM

ANIONS

CARBONATE

BICARBONATE

CHLORIDE

SULFATE

NITRITE

NITRATE

FIELD PARAMETERS

PH

SPECIFIC CONDUCTIVITY

TEMPERATURE

TOTAL ORGANIC CARBON

APPENDIX IB

COMMON NAME
INORGANIC

CAS NUMBER

.

CONSTITUENTS

(1) ANTIMONY	.
(TOTAL)	
(2) ARSENIC(TOTAL)	.
(3) BARIUM(TOTAL)	.
(4)	.
BERYLLIUM(TOTAL)	
(5) CADMIUM(TOTAL)	.
(6) CHROMIUM	(TOTAL)
(7) COBALT	(TOTAL)
(8) COPPER	(TOTAL)
(9) LEAD	(TOTAL)
(10) NICKEL	(TOTAL)
(11) SELENIUM	(TOTAL)
(12) SILVER	(TOTAL)
(13) THALLIUM	(TOTAL)
(14) VANADIUM	(TOTAL)
(15) ZINC	(TOTAL)

ORGANIC

CONSTITUENTS:

(16) ACETONE	67-64-1
(17) ACRYLONITRILE	107-13-1
(18) BENZENE	71-43-2
(19)	74-97-5
BROMOCHLOROMET	
HANE	
(20)	75-27-4
BROMODICHLOROME	
THANE	
(21) BROMOFORM;	75-25-2
TRIBROMOMETHANE	
(22) CARBON	75-15-0
DISULFIDE	
(23) CARBON	56-23-5
TETRACHLORIDE	
(24)	108-90-7
CHLOROBENZENE	
(25) CHLOROETHANE;	75-00-3
ETHYL CHLORIDE	
(26) CHLOROFORM;	67-66-3
TRICHLOROMETHAN	
E	
(27)	124-48-1
DIBROMOCHLOROME	
THANE;	
CHLORODIBROMOME	

THANE	
(28) 1,2-DIBROMO-3-CHLOROPROPANE; DBCP	96-12-8
(29) 1,2-DIBROMOETHANE; ETHYLENE DIBROMIDE; EDB	106-93-4
(30) O-DICHLOROBENZENE; 1,2-DICHLOROBENZENE	95-50-1
(31) P-DICHLOROBENZENE; 1,4-DICHLOROBENZENE	106-46-7
(32) TRANS-1,4-DICHLORO-2-BUTENE	110-57-6
(33) 1,1-DICHLOROETHANE; ETHYLIDENE CHLORIDE	75-34-3
(34) 1,2-DICHLOROETHANE; ETHYLENE DICHLORIDE	107-06-2
(35) 1,1-DICHLOROETHYLENE ; 1,1-DICHLOROETHENE; VINYLIDEN CHLORIDE	75-35-4
(36) CIS-1,2-DICHLOROETHYLENE ; CIS-1,2-DICHLOROETHENE	156-59-2
(37) TRANS-1,2-DICHLOROETHYLENE ; TRANS-1,2-DICHLOROETHENE	156-60-5
(38) 1,2-DICHLOROPROPANE; PROPYLENE DICHLORIDE	78-87-5
(39) CIS-1,3-DICHLOROPROPENE	10061-01-5

(40) TRANS-1,3-DICHLOROPROPENE	10061-02-6
(41) ETHYLBENZENE	100-41-4
(42) 2-HEXANONE; METHYL BUTYL KETONE	591-78-6
(43) METHYL BROMIDE; BROMOMETHANE	74-83-9
(44) METHYL CHLORIDE; CHLOROMETHANE	74-87-3
(45) METHYLENE BROMIDE; DIBROMOMETHANE	74-95-3
(46) METHYLENE CHLORIDE; DICHLOROMETHANE	75-09-2
(47) METHYL ETHYL KETONE; MEK; 2-BUTANONE	78-93-3
(48) METHYL IODIDE; IODOMETHANE	74-88-4
(49) 4-METHYL-2-PENTANONE; METHYL ISOBUTYL KETONE	108-10-1
(50) STYRENE	100-42-5
(51) 1,1,1,2-TETRACHLOROETHANE	630-20-6
(52) 1,1,2,2-TETRACHLOROETHANE	79-34-5
(53) TETRACHLOROETHYLENE; TETRACHLOROETHENE	127-18-4
PERCHLOROETHYLENE	
(54) TOLUENE	108-88-3
(55) 1,1,1-TRICHLOROETHANE; METHYLCHLOROFORM	71-55-6

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2855	100
2860	100
2865	100
2870	100
2875	100
2880	100
2885	100
2890	100
2895	100
2900	100
2905	100
2910	100
2915	100
2920	100
2925	100
2930	100
2935	100
2940	100
2945	100
2950	100
2955	100
2960	100
2965	100
2970	100
2975	100
2980	100
2985	100
2990	100
2995	100
3000	100
3005	100
3010	100
3015	100
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3035	100
3040	100
3045	100
3050	100
3055	100
3060	100
3065	100
3070	100
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3080	100
3085	100
3090	100
3095	100
3100	100
3105	100
3110	100
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3125	100
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3135	100
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3180	100
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3190	100
3195	100
3200	100
3205	100
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3270	100
3275	100
3280	100
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3295	100
3300	100
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3370	100
3375	100
3380	100
3385	100
3390	100
3395	100
3400	100
3405	100
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3445	100
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3470	100
3475	100
3480	100
3485	100
3490	100
3495	100
3500	100
3505	100
3510	100
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3525	100
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3535	100
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3545	100
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3555	100
3560	100
3565	100
3570	100
3575	100
3580	100
3585	100
3590	100
3595	100
3600	100

0.0,0.0-TRIS(ETHYL PHOSPHOROTHIOATE) ...	326-00-0	PHOSPHOROTHIOIC ACID, O,S-DI- TRIS(ETHYL-)	8270	15
SYNTHETICALLY DERIVED ...	99-73-3	PERMETHYL 1,3,5-TRISULFONYL- BENZENE	8610	10
...	...	...	8610	90
VINYL ACETATE ...	108-05-4	ACETIC ACID, ETHYL ESTER	7510	2000
VINYL MONOMER, CHLORIDE ...	73-33-4	ETHYLENE, CHLORIDE	7510	10
...	...	...	7510	10
ATYLENE (TOTAL) ...	SEE NOTE 13	ISOPRENE, DIMETHYL-	7510	10
...	...	...	7510	10
ZINC ...	(TOTAL)	ZINC	7510	10
...	...	...	7510	10

[illegible][illegible]

History

[For history of this section, see Editor's Notes in the first section, 6 CCR 1007-2]