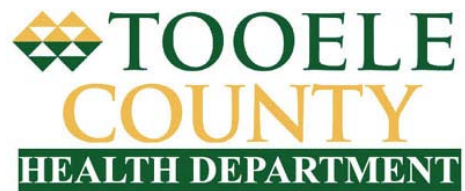


HEALTH REGULATION # 8
SOLID WASTE MANAGEMENT AND PERMITTING



Adopted by the Tooele County Board of Health May 9, 1997

Revisions made and adopted May 6, 2004

Under Authority of Section 26A-1-121
Utah Code Annotated, 1953, as amended

Certified Official Copy
Tooele County Health Department

By: _____
Director

HEALTH REGULATION #8

SOLID WASTE MANAGEMENT AND PERMITTING

<u>Section</u>	<u>Page</u>
1.0 Definitions	1
2.0 General Provisions	14
2.1 Purpose and Applicability	14
2.2 Jurisdiction	14
2.3 Powers and Duties	14
2.4 Scope	15
2.5 General design, construction, operation and maintenance	15
2.6 Prohibited acts	15
2.7 Notice	16
2.8 Inspections	17
2.9 Condemning or closing a solid waste management facility or other property and recording noncompliance	18
2.10 Emergency orders and actions	18
2.11 Department Procedures for collection of costs incurred	19
2.12 Right to appeal	19
2.13 Penalty	20
2.14 Severability	20
2.15 Effective date	20
3.0 Permits, Bonds and Financial Responsibility	20
3.1 Department approval and permits required	20
3.2 Application requirements for approval and permit	21
3.3 Permit fees	22
3.4 Exemptions or adjustment to the permit and permit fees and bonds	24
3.5 Suspension or revocation of approval or permit	26
3.6 Bond and financial responsibility requirements	27
3.7 Joint permitting and bonding	28
4.0 Waste Contractor Requirements	29
4.1 Container construction, maintenance, and placement requirements	29
4.2 Collection and transportation of solid waste	30
4.3 Unloading of solid waste	30
4.4 Record keeping and reporting requirements	31
4.5 Safety plan and training requirements	31
5.0 Solid Waste Collection and Transportation Vehicles	32
5.1 Vehicle inspection and permit requirements	32
5.2 Vehicle construction requirements	33
5.3 Vehicle maintenance requirements	33
5.4 Vehicles to be used for permitted use only	33
5.5 Liquid scavenger operations	33
6.0 Solid Waste Landfills	33

6.1	Restricted siting locations	33
6.2	Department approval and bond requirements	35
6.3	Report and approval requirements for permit	35
6.4	Conditions for plan approval	38
6.5	Minimum design and operating requirements	38
6.6	Groundwater and surface water monitoring requirements	38
6.7	Property deed recording requirements	39
6.8	Closure and post-closure requirements	39
6.9	Asbestos waste disposal facilities	39
7.0	Closing of Existing or Abandoned Open Dumps	39
7.1	Closure requirements	39
8.0	Solid Waste Processing Requirements	40
8.1	Restricting siting locations	40
8.2	Approval and permit requirements	40
8.3	Plan and plan approval requirements	40
8.4	Pre-open and construction inspection	44
8.5	Minimum design and operating requirements	44
8.6	Processing facility closure requirements	49
8.7	Surface impoundments	50
8.8	Land spreading facilities	51
9.0	Waste Tires	51
9.1	Waste tire generator and transporter requirements	51
9.2	Land filling of waste tires and tire shreddings	52
9.3	Waste tire storage facility requirements	52
10.0	Infectious Waste	53
10.1	Storage and disposal requirements applicable to all generators of infectious waste	54
10.2	Requirements applicable to health care facilities, infectious waste contractors and processing facilities	54
10.3	Approval and permit requirements	54
10.4	Storage and containment requirements	54
10.5	Decontamination of reusable containers	55
10.6	Transportation requirements	56
10.7	Treatment and disposal requirements	57
11.0	Asbestos	58

APPENDIX A
Water Quality Analysis Table

1.0 DEFINITIONS

For the purpose of this regulation, the following phrases, terms, and words shall have the meanings given in this section:

- 1.1 Active Life: The period of time that solid waste is or will be routinely and regularly received at or by a solid waste management facility;
- 1.2 Agricultural Waste: Manure or crop residues from various agricultural pursuits, including, but not limited to dairies and the raising of livestock and poultry;
- 1.3 Airport: A public use airport open to the public without prior permission and without restrictions within the physical capabilities of available facilities and any active military portion;
- 1.4 Applicant: The person or persons applying for a permit or approval for a solid waste management facility;
- 1.5 Aquifer: A geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs;
- 1.6 Asbestos: The asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, and actinolite-tremolite;
- 1.7 Asbestos-containing material: Any material containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR Part 763 Section 1, Polarized Light Microscopy, that when dry, is friable, meaning it can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable asbestos-containing material which is mechanically or in any other way handled causing it to crumble, pulverize or reduce to powder form shall be deemed friable, and subject to regulation. If the asbestos content is less than 10% but detectable, the Director may require the verification of the asbestos content by point counting using polarized light microscopy (PLM);
- 1.8 Ash residue: The solid residue and any entrained liquids resulting from the combustion of solid waste, including bottom ash, boiler ash, fly ash, and the solid residue of any air pollution control device;
- 1.9 Automobile dismantling yard: A lot or portion thereof, tract or parcel of land, structure or business, which is lawfully licensed to be used, maintained or operated for storing, collecting, keeping, buying, dismantling, or selling of vehicle parts;
- 1.10 Baseline water quality: The chemical composition of groundwater or surface water before deposition of solid waste;
- 1.11 Board of Health: The Tooele County Board of Health, created pursuant to Title 26A, Chapter 1, Utah Code Ann., 1953 as amended;
- 1.12 Bulky waste: Large items of solid waste including, but not limited to, appliances, furniture, construction and demolition waste, motor vehicles, tires, trees, branches, and stumps;
- 1.13 Cell: A discrete engineered area that is designed for the disposal of solid waste and that is a subpart of a landfill;
- 1.14 Clay: As a soil separate, means the mineral soil particles less than 0.002 millimeters diameter. As a soil texture class, "Clay" means soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt;
- 1.15 Clean Fill: Uncontaminated rock, soil, gravel, and inert solid waste approved by the Director that is suitable and utilized for engineering or grading purposes if handled and placed in compliance with all local, state, and federal regulations;
- 1.16 Closed portion: The closure of a discrete portion of a solid waste management facility in accordance with the closure requirements of this regulation;
- 1.17 Collector: Any person who collects or transports solid waste;
- 1.18 Combustion: The thermal treatment of solid waste in a device that uses elevated

- temperatures as the primary method to change the chemical, physical, or biological character or composition of the waste;
- 1.19 Commercial waste: Solid waste generated by stores, offices, restaurants, warehouses, and other non-manufacturing activities other than household or industrial;
 - 1.20 Compaction: The volume reduction of material under load;
 - 1.21 Compost: Organic waste material that has biologically decomposed or is in the process of biologically decomposing under controlled conditions;
 - 1.22 Composting: A method of solid waste management whereby the organic component of the waste stream is biologically decomposed under controlled conditions to a state in which the end product or compost can be safely handled, stored, or applied to the land without adversely affecting human health or the environment;
 - 1.23 Confined aquifer: An aquifer containing groundwater that is everywhere at a pressure greater than atmospheric pressure and from which water in a well usually rises to a level above the top of the aquifer;
 - 1.24 Construction and demolition landfill: A solid waste management facility which is a landfill that is permitted by the Department to accept construction and/or demolition waste;
 - 1.25 Construction and demolition waste: Solid waste resulting from the construction, remodeling, repair and demolition of structures, and from road building and land clearing. Such waste includes, but is not limited to, bricks, concrete and other masonry materials, soil, rock, wall coverings, plaster, drywall, and other inert material, plumbing fixtures, non-asbestos insulation, roofing shingles, asphaltic pavement, glass, plastics that are not sealed in a way that conceals other wastes, wood, and metals that are incidental to any of the above. Solid waste that is not construction and demolition waste (even if resulting from the construction, remodeling, repair and demolition of structures, and from road building and land clearing) includes, but is not limited to, hazardous waste, asbestos-containing material, garbage, fluorescent electrical fixtures containing mercury, transformers containing polychlorinated biphenyls, thermostats containing mercury, refrigeration units containing chlorofluorocarbons, radioactive waste, tires, drums and containers with liquid or unrecognizable wastes, and fuel tanks;
 - 1.26 Container: Any device, in which a solid waste is stored, transported, treated, disposed, or otherwise handled;
 - 1.27 Contamination: A condition resulting from any alteration of the physical, chemical, or biological properties of any environmental media such as air, surface water, groundwater, and soil, or the release or discharge of any liquid, gaseous or solid substance into any waters of the state as will create a nuisance or render such waters harmful or detrimental or injurious to public health, safety, welfare, or the environment, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic or botanic life;
 - 1.28 Contaminant: Any physical, chemical, biological or radiological substance or matter in air, soil or water which is a result of human, animal, or other activity;
 - 1.29 Cover material: Soil or other material approved by the Director used to cover compacted solid waste, that is both free of objects that hinder compaction and is not conducive to vector harborage, feeding, or breeding;
 - 1.30 Department: The Tooele County Health Department created pursuant to the Local Health Department Act, Title 26A, Chapter 1, Utah Code Ann., 1953 as amended;
 - 1.31 Director: The Tooele County Health Department Director of Health, appointed by the Board of Health or the Director's designated representative;
 - 1.32 Discharge: The accidental or intentional releasing, spilling, leaking, pumping, pouring, emitting, emptying, or dumping of any solid waste or solid waste constituents, including leachate, into or on any air, land, or water;

- 1.33 Disposal facility: A solid waste management facility approved to handle solid waste;
- 1.34 Dust: Any particulate matter from soils, minerals, ash or other material capable of being suspended in air;
- 1.35 Etiologic agent: Any microorganism, helminth, or virus that causes, or significantly contributes to the cause of increased morbidity or mortality of human beings;
- 1.36 Facility or Site: Any place, tract of land, or structure used for the storage, collection, transfer, conversion, utilization, processing, treatment, incineration, pyrolyzation, handling, or disposal of solid waste;
- 1.37 Final cover: A compacted layer of cover material, at least 24 inches (61 centimeters) thick, that is placed on all surfaces of a landfill where no additional refuse will be deposited within one year. The upper six inches (15 centimeters) shall be soil of a composition suitable to sustain plant growth. The lower portion shall be a material that restricts infiltration and has a permeability less than or equal to the permeability of any bottom liner system or natural sub soils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and will minimize infiltration through the closed landfill by the use of an infiltration layer that contains a minimum 18-inches of earthen material, graded at a minimum two percent slope on the surface and a maximum of 33 percent slope on the sides;
- 1.38 Floodplain: The lowland and relatively flat areas adjoining inland and coastal waters, including flood prone areas of offshore islands, which are inundated by the one hundred-year flood. One hundred-year flood means a flood that has a one percent or greater chance of recurring in any year of a flood of a magnitude equaled or exceeded one in 100 years on the average over a significantly long period;
- 1.39 Freeboard: The vertical distance between the lowest elevation of the top of a tank, surface impoundment, or dike and the highest level of the surface of the solid waste contained therein;
- 1.40 Garbage: Solid and semisolid, putrescible animal and vegetable wastes resulting from the handling, preparing, cooking, storing, serving, and consuming of food or material intended for use as food, and all offal (excluding useful industrial by-products) from all public and private establishments and from all residences;
- 1.41 Generator: Any person that first creates or causes a product or material to become a solid waste or whose act or process produces a solid waste;
- 1.42 Groundwater: Subsurface water which is in the zone of saturation, including perched groundwater;
- 1.43 Groundwater table: The natural occurring surface of groundwater at which it is subjected to atmospheric pressure. Groundwater table does not include the potentiometric head level in a confined aquifer;
- 1.44 Hazardous waste: Solid waste, or a combination of solid wastes which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious or incapacitating irreversible illness, or pose a substantial present or potential hazard to human health or the environment if improperly treated, stored, transported, disposed, or otherwise managed, or any solid waste listed as a hazardous waste under Section R315-2-10 of the Utah Hazardous Waste Management Rules, or any solid waste that exhibits a characteristic of a hazardous waste as defined in Section R315-2-9 of the Utah Hazardous Waste Management Rules;
- 1.45 Household waste: Solid waste generated and discarded from any single or multiple dwelling, hotel, motel, campsite, ranger station, or other residential source. The container size normally and reasonably associated with households and household activities is five gallons or less;
- 1.46 Hydraulic conductivity: A measure of the capacity of a formation or material to transmit

- water. It is expressed as the volume of water that will move through a one unit square area under a unit hydraulic gradient in a specific time;
- 1.47 Impermeable: Having a hydraulic conductivity equal to or less than 1×10^{-7} centimeters per second as determined by field and laboratory permeability tests made according to standard test methods that may be correlated with soil densification as determined by a compaction test;
 - 1.48 Incineration: Controlled combustion whose primary purpose is to thermally break down solid, liquid, or gaseous combustible wastes to an ash residue that contains little or no combustible materials;
 - 1.49 Incinerator: An enclosed device using controlled flame combustion that neither meets the criteria for classification as a boiler nor is listed as an industrial furnace;
 - 1.50 Industrial waste: Solid waste generated by manufacturing or industrial processes. Such waste may include, but is not limited to, the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals manufacturing; food and related products preparation; inorganic chemicals manufacturing; iron and steel manufacturing; leather and leather products manufacturing; nonferrous metals manufacturing/ foundries; organic chemical production; plastics and resins manufacturing; pulp and paper production; rubber and miscellaneous plastic products production; stone, glass, clay and concrete products manufacturing; textile manufacturing; transportation equipment production; and water treatment;
 - 1.51 Industrial waste landfill: A solid waste management facility which is a landfill permitted to accept industrial waste;
 - 1.52 Inert waste: Noncombustible, non hazardous solid waste that retains its physical and chemical structure, including resistance to biological or chemical attack;
 - 1.53 Infectious waste: A solid waste that contains pathogens of sufficient virulence and quantity that exposure to the waste of a susceptible host could result in an infectious disease. Infectious waste shall include any and all of the following:
 - a. Biologic laboratory wastes, including cultures of etiologic agents, that pose a substantial threat to health due to their volume and virulence;
 - b. Pathologic specimens, including human or animal tissues, blood elements, excreta, and secretions that contain etiologic agents, and attendant disposable fomites;
 - c. Surgical specimens, including human or animal parts and tissues removed surgically or at autopsy that, in the opinion of the attending physician or veterinarian, contain etiologic agents, or attendant disposable fomites;
 - d. Equipment, instruments, utensils, and other disposable materials that are likely to transmit etiologic agents from the rooms of humans or the enclosures of animals that have been isolated because of suspected or diagnosed communicable disease;
 - e. Human dialysis waste materials including arterial lines and dialyzate membranes;
 - f. Carcasses of animals infected with etiologic agents that may present a substantial hazard to public health if improperly managed;
 - g. Sharps that are to be disposed, regardless of whether or not they have been used for injections or body fluid extractions;
 - h. Chemotherapy waste, including all disposable materials that have come in contact with all cytotoxic/antineoplastic agents during preparation, handling and administration of such agents. Such waste includes but is not limited to masks, gloves, gowns, empty intravenous tubing bags and vials and other contaminated materials. The above waste shall first be classified as empty and of such quantity that it is not subject to state or federal waste management regulations prior to being handled as infectious waste; and
 - i. Any other material that can present a significant danger of infection because it may reasonably be expected to be contaminated with etiologic agents;

- 1.54 Junk: Old, used, worn, or discarded metal, glass, paper, plastic or other material that has served its original intended purpose or that can be used again in some form;
- 1.55 Landfill: A solid waste management facility, or part of one, in which solid waste, or its residue after treatment, is intentionally placed, and which will remain in place after closure;
- 1.56 Land spreading facility: A solid waste processing facility where solid waste is applied to the soil surface or injected into the upper layer of the soil. Solid waste suitable for this purpose shall include, but not be limited to, sewage treatment plant sludge;
- 1.57 Leachate: Liquid that has passed through, contacted, or emerged from solid waste and contains any dissolved, suspended, or miscible materials, chemicals, or microbial waste products removed from the solid waste;
- 1.58 Liner: A continuous layer of natural or man-made materials beneath or on the sides of a disposal facility, surface impoundment, landfill, or landfill cell that restricts the downward or lateral escape of solid waste and constituents of such waste or leachate;
- 1.59 Liquid waste: Any solid waste material that contains "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA pub. no. SW-846, latest edition);
- 1.60 Liquid Scavenger Operation: Any business activity or solicitation by which wastes are collected, transported, stored, or disposed of by a collection vehicle. This shall include, but not be limited to, the cleaning out of septic tanks, sewage holding tanks, chemical toilets, and vault privies;
- 1.61 Litter: Any quantity of uncontained paper, metal, plastic, glass, or other solid waste;
- 1.62 Littering: The willful or negligent throwing, discharging, dropping, placing, depositing, or sweeping of litter or other solid waste on any premises other than in approved storage containers or disposal facility;
- 1.63 Mono-fill: A solid waste management facility which is a landfill or landfill cell into which only one type of solid waste is placed;
- 1.64 Municipality: A county, town, city, district, or designated agency thereof;
- 1.65 Municipal solid waste landfill: Any solid waste management facility which is a landfill or landfill unit permitted to receive household waste and that may, in addition, receive commercial waste, industrial waste, construction and demolition waste, or any other waste approved by the Director;
- 1.66 Nuisance: An act or condition that annoys, injures, or endangers the comfort, health, or safety of any person or that endangers the environment or interferes with the use of property;
- 1.67 Open burning: A fire whose products of combustion are emitted directly into the air without passing through a stack or chimney;
- 1.68 Open dump: Any disposal site or landfill that does not comply with this regulation;
- 1.69 Operator: Any person who owns, leases, operates, or manages a solid waste management facility;
- 1.70 Owner: Any person who alone, jointly, or severally with others, has legal title to a solid waste management facility or other property with or without accompanying actual possession thereof, or has charge, care, or control of any solid waste management facility, as legal or equitable owner, agent of the owner, lessor or lessee, or is an executor, executrix, administrator, administratrix, trustee, or guardian of the estate of the owner;
- 1.71 Person: Any individual, trust, firm, joint stock company, limited liability company, business, federal agency, partnership, corporation (including a government corporation), association, state, municipality, commission, political subdivision of a state, and interstate body, company, society, public or private entity, or any organization in any form;
- 1.72 Pollution: The condition caused by the presence in or on surface water, groundwater, soil, or air of any solid waste or substance derived there from in such quantity, or such nature

- and duration, or under such condition that the quality, appearance, or usefulness of the water, soil, land, or air is significantly degraded or adversely altered;
- 1.73 Processing facility: A solid waste management facility such as a transfer station, compost or pyrolysis plant, incinerator, recycling, reclamation or resource recovery facility, or location, fixed or mobile, where solid waste is stored, classified, consolidated, baled, shredded, composted, blended, solidified, salvaged, treated, or handled prior to final disposal. Processing facilities include, but are not limited to, solid waste incinerators, transfer stations, rail-haul facilities, land spreading facilities, composting facilities, surface impoundments, waste oil storage reprocessing or refining facilities, recycling facilities, reclamation facilities, and waste tire storage facilities. Processing facility does not include scrap metal processing facilities and automobile dismantling yards;
- 1.74 Putrescible: Organic matter that has a tendency to decompose with the formation of foul smelling by-products;
- 1.75 Pyrolysis: The chemical decomposition of material by heat in an oxygen-deficient atmosphere;
- 1.76 Pyrolysis plant: A place or facility where pyrolysis occurs;
- 1.77 Quality assurance: The application of standards and procedures to ensure that a product, procedure, or facility meets or exceeds desired performance criteria and documentation to verify the results obtained. Quality assurance includes quality control;
- 1.78 Quality control: Actions that provide a means to measure and regulate the characteristics of an item or service to contractual and regulatory standard requirements. Quality control includes those actions taken before construction, installation, sampling, analysis, cleaning, removal or other remedial action to ensure that the materials chosen and workmanship comply with the Department-approved quality control plan, engineering plans, reports, and specifications;
- 1.79 Recycling: The reuse of all or part of recovered solid waste by resource recovery for manufacturing, agriculture, power or heat production or any other process;
- 1.80 Recycling facility: Any place, plant, or equipment designed and operated to store, collect, redistribute, and return processed materials to market;
- 1.81 Refuse: Solid waste, except hazardous waste, including, but not limited to, garbage, construction and demolition waste, clothing, rags, and yard trimmings;
- 1.82 Residue: Any solid or liquid that remains after a treatment process;
- 1.83 Resource recovery: The processing of solid waste to produce materials or energy that may be used or reused in manufacturing, agriculture, power or heat production, or any other process;
- 1.84 Resource recovery facility: A processing facility designed and operated to separate or process solid or liquid waste into usable material including, but not limited to, fuel, heat, or other energy;
- 1.85 Rubbish: All solid waste except garbage and hazardous waste including, but not limited to, ashes, bedding, cardboard, paper, wood, cans, metal, glass, crockery, rubber, plastic, leather, rags, and yard trimmings;
- 1.86 Run-off: Any rainwater, leachate, or other liquid that drains over land from any part of a solid waste management facility;
- 1.87 Salvaging: The controlled removal or handling of junk or other waste material for processing, recycling, or other utilization;
- 1.88 Scavenge: The uncontrolled removal of solid waste from a solid waste management facility;
- 1.89 Seismic zone: An area with a 10 percent probability that the maximum horizontal acceleration in hard rock, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10g in 250 years;
- 1.90 Sewage: Human or animal wastes carried by water or other liquid from a dwelling,

- business building, institution, industrial establishment, or agricultural, recreational, or other location including, but not limited to, sewer systems, septic tanks, privy vaults, and cesspools, including any groundwater, surface water, and storm water that may be mixed with these wastes;
- 1.91 Sharps: Any discarded or contaminated article or instrument that may cause puncture or cuts. Such waste includes, but is not limited to, needles, syringes, pipettes, intravenous tubing with needles attached, glassware, lancets, and scalpel blades;
- 1.92 Site or Facility: Any place, tract of land, or structure used for the storage, collection, transfer, conversion, utilization, processing, treatment, incineration, pyrolyzation, handling, or disposal of solid waste;
- 1.93 Sludge: Any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial process, or from a wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other waste having similar characteristics and effect. Sludge does not include industrial discharges that are point sources subject to permits under the Utah Water Pollution Control Regulations;
- 1.94 Solid waste: Garbage, refuse, trash, rubbish, junk, asbestos waste, hazardous waste, infectious waste, industrial waste, inert waste, construction and demolition waste, dead animals, sludge, liquid or semi-liquid waste, used oil, other spent, or discarded materials, or materials stored or accumulated for the purpose of discarding; materials that have served their original intended purpose, or waste material resulting from industrial manufacturing, mining, commercial, agricultural, household, institutional, recreational, or other activities. Solid waste does not include solid or dissolved materials in domestic sewage or in irrigation return flows, or discharges for which a permit is required under state or federal regulations;
- 1.95 Solid waste management facility: Any place, site, or facility engaged in solid waste collection, transfer, storage, treatment, or disposal including, but not limited to, storage areas or facilities, processing facilities, landfills, or disposal facilities;
- 1.96 Special waste: Wastes not considered hazardous but may require complex or special management due to characteristics such as their physical, biological, or chemical characteristics, high moisture content or bulk. Special waste includes, but is not limited to, asbestos-containing material, infectious waste, dead animals, ash, and tires;
- 1.97 Storage and stockpile: The containment of any solid waste so it does not constitute disposal of that waste;
- 1.98 Surface impoundment: A solid waste management facility or part of one that is a natural topographical depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) and designed to hold solid waste in semi-solid or liquid form. Surface impoundment includes, but is not limited to, holding, storage, settling, blending or aeration pits, ponds, and lagoons;
- 1.99 Surface water: Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, inlets, canals, and all other bodies of surface water, natural or artificial, fresh or salt, public or private. Surface impoundments at solid waste management facilities are not surface waters;
- 1.100 Tank: A stationary device designed to contain an accumulation of solid waste, liquid or leachate, and constructed primarily of non-earthen material such as wood, concrete, steel, or plastic, that provides structural support;
- 1.101 Tire: A heavy rubber or petroleum tube, usually treaded, that is either pneumatic or solid that is used to be fixed about a wheel of a vehicle to reduce shock. Excluded from this definition are tires from devices moved exclusively by human power;
- 1.102 Tire shavings: A tire or waste tire that has been reduced in size through mechanical or other Department approved means where the greatest dimension of a minimum of 60 percent, by weight, of the pieces are no more than six inches and the greatest dimension of

- any piece is no more than 12 inches;
- 1.103 Transfer station: A processing facility where solid waste is transferred from collection to haulage vehicles for transportation to another facility or site for treatment or disposal;
- 1.104 Transporter: A person engaged in the off-site transportation of solid waste by vehicle. Transporter shall include, but not be limited to, waste contractors;
- 1.105 Treatment: Any method, technique, or process designed to change the physical, chemical, or biological character or composition of any solid waste or part of it to recover energy or materials from it, or to render it safer to transport, store, or dispose, or to make it amenable for recovery, storage, or to reduce its volume;
- 1.106 Vector: Any agent capable of transmitting a pathogen from one individual or organism to another. Vector includes, but is not limited to, mosquitoes, flies and other insects, rodents, and other vermin;
- 1.107 Vehicle: Any motor vehicle, trailer, water vessel, railroad car, or airplane;
- 1.108 Waste contractor: Any person engaged in the business of collecting, hauling, or transporting solid waste or who performs the functions of a waste contractor for another person. The term waste contractor does not include businesses that collect or transport solid waste as an incidental part of their business;
- 1.109 Waste tire: Any tire that has ceased to serve the purpose for which it was initially intended due to factors such as, but not limited to, wear or imperfections, or that has been discarded;
- 1.110 Wetlands: Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, under normal circumstances, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands shall include but not be limited to swamps, marshes, bogs, and similar areas;

2.0 GENERAL PROVISIONS

- 2.1 Purpose and applicability.
- a. The purpose of this regulation is to control the management of solid waste in a way that will: protect public health, safety, and welfare; prevent the spread of disease; prevent the creation of nuisances; prevent damage to property; and prevent air, water, noise, and other environmental pollution.
- b. This regulation shall apply to any person engaged in the handling, processing, transporting, or disposal of solid waste, properties where solid waste is accumulated, stored, disposed or managed, solid waste management facilities, and solid waste contractors. This regulation is adopted pursuant to the authorities contained in the Utah Environmental Quality Code, Title 19, Utah Code, Ann., 1953 as amended; and the Utah Local Health Department Act, Title 26A, Chapter 1, Utah Code Ann., 1953 as amended. Solid waste is also subject to regulation under various federal and state statutes and compliance with this regulation does not preclude compliance with those other requirements.
- 2.2 Jurisdiction
All solid waste management activities as designed in this regulation shall be subject to the regulatory direction and control of the Department as it carries out the purposes of this regulation.
- 2.3 Powers and duties
The Department, through the Director, shall be responsible for the administration of this regulation and, in addition to any other powers vested in it by law, shall:
- a. Require the submission of reports, plans, and specifications for solid waste management facilities as necessary to implement the provisions, requirements, and standards of this regulation;

- b. Issue permits and charge fees as necessary to implement the provisions, requirements, and standards of this regulation;
- c. Conduct inspections of solid waste management facilities and issue orders as necessary to affect the purpose of this regulations;
- d. Take samples and analyze solid waste or require the sampling and analysis of any such materials;
- e. Prohibit a specific waste from being accepted by a solid waste management facility if the acceptance violates this regulation or if a threat exists to the health, safety, or welfare of the facility employees, the users of the solid waste management facility, or the public;
- f. Review and comment on any proposed contract or agreement between any municipality, governmental unit, or person for the handling, treatment, processing, or disposal of any solid waste within Tooele County; and
- g. Do any and all acts permitted by law that are necessary for the successful enforcement of this regulation.

2.4 Scope

It shall be unlawful for any person or owner or operator of a solid waste management facility not to comply with any regulation promulgated by the Department.

2.5 General design, construction, operation and maintenance

Each solid waste management facility shall be designed, constructed, operated, and maintained in a way that will:

- a. Protect the public health, safety, and welfare;
- b. Prevent the creation of a nuisance, unsanitary condition, or potential environmental or public health hazard; and
- c. Conform to the requirements of this regulation; and
- d. Conform to all applicable air, noise, water, radiation control, and solid waste rules and regulations of the Department, the State of Utah, and the Federal government.

2.6 Prohibited acts

Except as otherwise provided in this regulation, it shall be unlawful for any person, generator, transporter, owner, operator, or employee of a solid waste management facility to:

- a. Dispose or to accept any liquid, solid, hazardous, infectious, or asbestos waste at a solid waste management facility that is not specifically permitted by the Department, or if applicable, by state or federal environmental agencies, to accept or process, or to dispose of any hot or smoldering waste or any other waste that may pose a hazard to the collection employees, vehicles, or solid waste management facility, or the public health or safety;
- b. Salvage without approval from the Director or to scavenge at a solid waste management facility;
- c. Feed domestic animals on a solid waste landfill, land spreading facility or other disposal site, unless approved by the Director;
- d. Open burn solid waste without prior approval from the Director;
- e. Create, operate, or allow an open dump to exist;
- f. Create, cause, or allow insect or rodent propagation, conditions for transmission of disease, any unsanitary condition, or any other health or public safety hazard;
- g. Accumulate, litter, store, collect, transport, transfer, treat, process, utilize, reclaim, recover, recycle, incinerate, or dispose any solid waste or hazardous waste in such a way that a health or public safety hazard or a nuisance is created;
- h. Fail to keep records or falsify records on the types or amounts of solid waste transported, treated, stored or disposed, including the name and location of the solid waste management facility;

- i. Cause a discharge of solid waste into water or waterways within Tooele County, including wetlands, that violates any requirements of the Clean Water Act including but not limited to, the Utah Pollutant Discharge Elimination System (UPDES), the Tooele County Health Department Wastewater Regulations or the area-wide or state-wide water quality management plan that has been approved under Section 208 of the Clean Water Act, as amended; or
- j. Construct any structure on any active or closed landfill or to use any property used as a landfill for any purpose without first obtaining written approval from the Director.

2.7 Notice

- a. If the Director has inspected any property and or solid waste management facility and has determined a violation of this regulation exists or has reasonable grounds to believe that there has been a violation of any part of this regulation, the Director shall give notice of the violation to the owner or other responsible person thereof.
- b. Prior to initiating a court complaint for the violation of this regulation, the Director shall issue a notice and order pursuant to Section 2.7(a) and shall:
 - 1. Describe the property or solid waste management facility;
 - 2. Give a statement of the cause for its issuance;
 - 3. Set forth an outline of the remedial action that complies with the provisions of this regulation;
 - 4. Set a reasonable time for the performance of any required remedial act; and
 - 5. Advise of right to an administrative hearing to review the allegations and requirements contained in the notice and order.
- c. The Director shall serve notice upon the owner or other responsible person of the property or solid waste management facility pursuant to Sections 2.7(a) and 2.7(b). Service shall be deemed complete if the notice is served in one of the following ways:
 - 1. Delivered in person;
 - 2. Sent by certified mail to the last known address of the owner or other responsible person;
 - 3. Posted at any entrance to or the office door abutting walls or staked on the property of the solid waste management facility; or
 - 4. Published in a newspaper of general circulation if the methods (1) through (3) of Section 2.7 (c) are unavailable.
- d. The Director shall not be required to issue a notice of violation and order prior to seeking judicial relief where the violator has previously been given notice and failed to comply.

2.8 Inspections

- a. It shall be the duty of the Director, upon the presentation of proper credentials, to make inspections of any property or solid waste management facility to ensure compliance with this regulation.
- b. Departmental inspections may be made with the consent of the property owner or other responsible person. If consent is not granted, a search may be made pursuant to an administrative search warrant issued by a court of competent jurisdiction.
- c. Upon request, the owner or other responsible person of any property or solid waste management facility shall receive a report setting forth all facts found that relate to his or her compliance status.

2.9 Condemning or closing a solid waste management facility or other property and recording noncompliance

- a. Following notice and opportunity for a hearing, any solid waste management facility or other property that fails to meet the requirements of this regulation, and

that has been found to be a threat to the public health, safety, or welfare, may be condemned and closed by the Department and designated by either a placard posted in a conspicuous place or according to Section 2.7.

1. The Department shall give notice in writing to the owner of the property or owner or operator of the solid waste management facility of the intent to condemn or close the facility.
 2. No solid waste management facility or other property that has been condemned, closed, and placarded shall accept solid waste or be used for the accumulation, storage, treatment, handling, transfer, processing, or disposal of solid waste until written approval is received from the Department. The Department shall remove the placard whenever the violation upon which condemnation, closing, and placarding were based has been remedied.
 3. No person shall deface or remove a placard from any solid waste management facility or property that has been posted, condemned or closed by the Department.
- b. Properties used for activities requiring a solid waste management facility permit or properties which have been determined, after notice and opportunity for a hearing pursuant to Section 26A-1-121, Utah Code Annotated, 1953, as amended, to be in violation of this regulation shall be recorded with the Records Office by the Department. The recording shall consist of a notation of solid waste activity or, if appropriate, a certificate of noncompliance. The record shall remain with the property until the property is brought into compliance and any solid waste present on the site is removed and contamination is remediated to levels acceptable to the Department.

2.10 Emergency orders

If the Director finds that an emergency exists that requires immediate action to protect the public health, he or she may, without notice or hearing, issue an order declaring the existence of an emergency and require that action be taken to meet the emergency. The order shall be effective immediately. Any person to whom the order is directed shall comply and abate the violation immediately; but, upon proper written petition to the Department, shall be granted a hearing within 48 hours. Within 24 hours after the hearing and according to the findings of the hearing, the Director shall continue the order in effect, modify it, or revoke it. If circumstances warrant because of the seriousness of the hazard, the Department may act to correct or abate the emergency without issuance of an order or directive or without waiting for the expiration of compliance time previously given in an order. The costs of correction or abating an emergency shall be charged to the property owner, owner or operator of the solid waste management facility or other person responsible. Procedures as given in Section 2.11 may be initiated to recover the cost of correcting or abating the emergency.

2.11 Collection of costs incurred for any abatement, containment, cleaning, closing, monitoring or sampling any solid waste management facility or other property

The Director, upon completion of any abatement, containment, cleaning, closing, or other costs incurred including monitoring or sampling of any property or solid waste management facility, shall prepare a statement giving justification for the activity, and an itemized statement of all costs, including administrative expenses incurred. The itemized statement shall be sent to the owner demanding payment to the Department within 20 days of the mailing date. If the owner fails to make payment within 20 days of the date of the mailing, the Director may file suit in a court of competent jurisdiction for all expenses incurred, together with reasonable attorney's fees, interest, and court costs.

2.12 Right to appeal

Any notice of violation and order issued pursuant to Section 2.7 shall become final

without further action unless, within ten days after the date of the notice of violation or order, the aggrieved party makes a written request for an administrative hearing before the Department. After receiving a timely written request for an administrative proceeding, the Department may schedule a conference or hearing at a mutually convenient time and date. Either party may request a subsequent hearing before the Board of Health within ten days after the date of the initial conference or hearing. The procedures provided for in Section 26A-1-121, Utah Code Ann., 1953 as amended, shall apply to all subsequent administrative appeals and judicial reviews.

2.13 Penalty

- a. Any person who is found guilty of violating any of the provisions of this regulation, by failing to comply with the requirements of this regulation or by doing a prohibited act, is guilty of a Class B misdemeanor, pursuant to Section 26A-1-123, Utah Code Annotated, 1953, as amended. If a person is found guilty of a subsequent similar violation within two years, that person is guilty of a class a misdemeanor, pursuant to Section 26A-1-123, Utah Code Annotated, 1953, as amended.
- b. Each day such violation is committed or permitted to continue shall constitute a separate violation.
- c. The City or County Attorney may initiate legal action, civil or criminal, requested by the Department to abate any condition that exists in violation of this regulation.
- d. In addition to other penalties imposed by a court of competent jurisdiction, any person found guilty of violating any of this regulation shall be liable for all expenses incurred by the Department, including but not limited to the costs incurred for sampling and analysis, cleaning and disposal or any other costs incurred in abating the hazard or nuisance.

2.14 Severability

If any provision, clause, sentence, or paragraph of this regulation or the application thereof to any person or circumstances shall be held to be invalid, such invalidity shall not affect the other provisions or applications of this regulation. The valid part of any clause, sentence, or paragraph of this regulation shall be given independence from the invalid provisions or application and to this end the provisions of this regulation are hereby declared to be severable.

2.15 Effective date

This regulation shall become effective 15 calendar days after adoption by the Tooele County Board of Health.

3.0 PERMITS, BONDS AND FINANCIAL RESPONSIBILITY

3.1 Department approval and permits required

- a. No construction building permit for a solid waste management facility or permit to transfer solid waste shall be issued by a municipality without approval from the Department.
- b. No business license for the operation of a solid waste management facility shall be issued by a municipality except upon the presentation of a signed inspection report from the Department indicating that all facilities, sites, and vehicles to be used in handling solid waste have been inspected and approved by the Department and a solid waste management permit has been issued to the applicant.
- c. No permit shall be issued by the Department without the applicant receiving applicable planning and zoning approval from the municipality where the solid waste management facility is to be located.
- d. No person shall operate a solid waste management facility or engage in the practice

of a waste contractor without approval and a corresponding valid permit from the Department, unless specifically exempted by this regulation.

- e. No person shall significantly alter or change the operating procedures of a solid waste management facility or increase the amount or type of solid waste handled without approval and a corresponding permit from the Department.
- f. The Department may deny the approval and application of a person for a new facility if the person owns or operates or has responsibility for an existing facility that violates this regulation.
- g. Permits shall not be transferable from one person to another, one site or solid waste management facility to another, or one vehicle to another without approval from the Department.

3.2 Application requirements for approval and permit

- a. Application for approval to construct a solid waste management facility or a permit to operate a solid waste management facility shall be submitted in writing to the Department, setting forth the plans, specifications, and reports as required in the applicable sections of this regulation. The Department may prescribe the form on which the information required under this regulation shall be submitted. Applications shall be made within the following time periods:
 - 1. For approval to construct a new solid waste management facility, at least 90 calendar days prior to the start of construction;
 - 2. For a permit to operate a new solid waste management facility, at least 30 calendar days prior to commencement of operation;
 - 3. For a permit to operate an existing solid waste management facility, no later than 180 calendar days after the effective date of this regulation, unless otherwise approved by the Director;
 - 4. For approval to modify an existing facility, such as the construction of a new landfill module, at least 30 calendar days prior to the start of construction.
- b. The Director may require the applicant to hold or to participate in one or more public hearings or meetings for the purpose of receiving public comment regarding the proposed site or facility. If a hearing is required, the applicant shall be responsible for notifying all residents and businesses within 1000 feet (305 meters) of the proposed site within 15 days prior to the hearing or meeting, for placing notification in a newspaper of general circulation in Tooele County at least 15 days prior to the date of the hearing or meeting, and for the expenses of notifying the residents and businesses and publishing the notice in the newspaper, and for the expenses associated with the use of the building where the hearing or meeting is held. The notice sent to residents and businesses and the notice published in the newspaper shall at a minimum describe the purpose of the hearing and the location, time and place of the hearing.
- c. Upon approval of the permit application, receipt of all the necessary fees as required in Section 3.3, and posting of the bond and providing the financial assurance as required in Section 3.6, the Department shall issue the permit. Such permit shall expire one year following the date of issuance or on the date specified by the Department. The permit shall be renewable within 60 calendar days prior to the expiration date. Renewal requests shall be in writing to the Department at least 30 calendar days prior to the expiration date, setting forth any proposed changes in the original operation plan.

3.3 Permit fees

- a. Unless specifically exempted in Section 3.4, solid waste management facilities and waste contractors shall pay a permit fee. The permit fees required in Section 3.3, except for the initial permit fee, shall become effective July 1 2004. The permit fees

shall be as follows:

1. For a municipal or industrial waste landfill, or a processing facility that operates as a transfer station accepting municipal solid waste and transferring the solid waste for disposal to a solid waste management facility located outside of Tooele County, the fee for a permit to operate a municipal or industrial waste landfill, or transfer station shall be established by the Tooele County Board of Health, per disposal site acre, for the initial permit application fee and a tonnage fee established by the Tooele County Board of Health, per ton (907 kilograms) or per cubic yard (.76 cubic meters) of solid waste accepted at the facility following permit approval. The permit application fee shall accompany the initial permit application and the tonnage fee shall be paid quarterly on the first day of January, April July, and October thereafter;
2. For a construction and demolition waste landfill or mono-fill, the fee for a permit to operate a construction and demolition waste landfill or mono-fill shall be established by the Tooele County Board of Health, per disposal site acre, for the initial permit application, and a tonnage fee established by the Tooele County Board of Health, per ton (907 kilograms) or per cubic yard (.76 cubic meters) of solid waste accepted at the facility following permit approval. The permit application fee shall accompany the initial permit application and the tonnage fee shall be paid quarterly on the first day of January, April, July, and October thereafter;
3. For a processing facility that blends or mixes liquid or semi-liquid waste and the wastes originate from more than a single source the fee for a permit to operate such a facility shall be established by the Tooele County Board of Health, for the initial permit application and a tonnage fee established by the Tooele County Board of Health, per ton (907 kilograms) of waste to be processed at the facility following permit application and the tonnage fee shall be paid quarterly on the first day of January, April, July, and October thereafter;
4. For a waste tire storage facility, the fee for a permit to operate a storage facility shall be established by the Tooele County Board of Health, per waste storage pile. The fee shall accompany the initial application and be paid annually thereafter;
5. For a waste contractor (excluding those engaged in the collection and transportation of infectious waste), the fee for a waste contractor permit shall be established by the Tooele County Board of Health, per collection vehicle used for solid waste collection. The fee shall accompany the initial application and be paid annually thereafter;
6. For a waste contractor engaged in the collection of infectious waste, the fee for a waste contractor permit shall be established by the Tooele County Board of Health, per vehicle used for the infectious waste collection and transport. The fee shall accompany the initial application and be paid annually thereafter;
7. For an infectious waste storage facility or transfer station, the fee for a permit to operate a storage facility or transfer station shall be established by the Tooele County Board of Health. The fee shall accompany the initial application and be paid annually thereafter;
8. For an infectious waste incineration or treatment facility used for off site treatment, the fee for a permit to operate an incinerator or treatment facility shall be established by the Tooele County Board of Health, per ton (907

kilograms) of infectious waste treated at the facility. The permit fee shall accompany the initial application and the tonnage fee shall be paid quarterly on the first day of January, April, July, and October thereafter; and

9. For a processing facility not specifically listed in Section 3.3 (a) (1) through (8), and for private landfills, including private industrial landfills, private industrial landfills, private construction and demolitions landfills and private mono-fills, receiving solid waste generated by the owner or operator of that landfill or processing facility, the fee to operate such facilities shall be established by the Tooele County Board of Health and based on tonnage per day. The fee shall accompany the initial application and be paid annually thereafter;
 10. For liquid scavenging operations engaged in the collection of liquid wastes, the fee for a liquid scavenger permit shall be established by the Tooele County Board of Health, per vehicle used for the liquid waste collection and transport. The fee shall accompany the initial application, and be paid annually thereafter.
- b. Incomplete permit applications shall subject the applicant to an hourly review fee for the review of subsequent documentation.
 - c. Permit fees shall only be used by the Department for solid waste management activities associated with this regulation including but not limited to surveillance and enforcement activities, administrative activities, educational activities, monitoring, and any other activity necessary for the successful application or enforcement of this regulation.
- 3.4 Exemptions or adjustments to the permit, permit fees, and bonds
- a. Exemptions or adjustments to the permit and permit fees shall be made by the Director based on the solid waste management facility's ability to demonstrate that handling practices and/or location do not endanger public health, safety, or the environment, or cause a nuisance or other health hazard. Requests for exemptions shall be made in writing, to the Director, outlining the reasons for the exempt status.
 - b. The following solid waste management facilities and waste contractors are exempt from the initial or annual operating permit, and the initial or annual operating permit fee, and the bond requirements:
 1. Hazardous waste management facilities permitted by state or federal agencies, except for facilities that also accept other solid waste, unless the solid waste accepted by the facility will be managed as a hazardous waste;
 2. Solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore, or drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy regulated by state or federal agencies;
 3. Publicly-owned wastewater treatment facilities permitted by the State of Utah, or the federal government;
 4. Temporary newspaper, aluminum, or other similar drop-off or collection containers that are completely enclosed, except for an opening to deposit the material, and the size of the container does not exceed 30 cubic yards (22.9 cubic meters), and the material is removed from the container on a regular basis;
 5. Recycling facilities, recovering pre-separated recyclable materials, such as newspaper, aluminum, glass, plastic, or other similar recyclable materials, having a residue generation of less than one ton per day and a facility design capacity of less than 30 tons per day, and provided such residues are non-

hazardous and non-putrescible. At least 50% of the material at the facility at the beginning of the calendar year must be recycled before the end of the same year and any material on-site must be recycled within two years and provided that the facility is designed to properly manage the solid waste and such storage does not create litter or a public nuisance;

6. Legally and lawfully licensed and situated scrap metal processing facilities, and automobile dismantling yards;
 7. Clean fill used for grading, provided the material is not contaminated;
 8. River and stream bank stabilization operations, provided only clean fill is used and provided the stabilization is approved or permitted by applicable state or federal agencies;
 9. Those who transport solid waste who are not a waste contractor who only haul construction and demolition waste that results from the operation of their business;
 10. Waste contractors who transport asbestos waste, if the waste contractor is a licensed and permitted asbestos contractor;
 11. Crematoriums or cemeteries, provided solid or hazardous waste other than infectious waste consisting of only recognizable human or animal anatomical remains are not disposed of at the facility;
 12. Incinerators, steam sterilizers, or autoclaves located on sites of infectious waste generators, processing only infectious waste generated on site;
 13. Generators of waste tires, provided the waste tires are generated as a result of selling new tires or re-treading operations, or generated as an incidental part of their business and provided no more than 1,000 waste tires are stored within or outside the facility or premises at any given time; and
 14. Agricultural waste, provided the solid waste is non-hazardous, and is disposed according to this regulation and not within any prohibited areas listed in Section 6.1.
- c. Solid waste management facilities whose debts and liabilities are the debts and liabilities of a municipal, state or federal government are exempt from the initial or annual operating permit fee, but are not exempt from the initial or annual operating permit, and the tonnage fee.

3.5 Suspension or revocation of approval or permit

Any approval permit, permit transfer, or application for permit renewal received or issued pursuant to this regulation may be denied, suspended, or revoked by the Director following notice and opportunity for a hearing for any of the following reasons:

- a. Failure of the reports, plans, or specifications to show the solid waste management facility will be constructed, operated, or maintained in accordance of this regulation;
- b. Submission of incorrect or false information in the application, reports, plans, or specifications;
- c. Failure to construct, operate, or maintain the solid waste management facility, site, or vehicle in accordance with the application, reports, plans, and specifications approved by the Department;
- d. Operation of the solid waste management facility, site, business, or vehicle in a way that causes or creates a nuisance or hazard to the public health, safety, or welfare;
- e. Violation of any rule or regulation, restriction, or requirement adopted by the Department;
- f. Violation of any condition on which the permit was issued;
- g. Failure to pay to the Department any required permit or tonnage fee required in Section 3.3 or failure to post or maintain any required surety bond required in Section 3.6;

- h. Failure to pay any deficiency in the required bond or failure to provide or maintain the financial assurance required in Section 3.6;
- i. Failure of the owner or operator of a solid waste management facility to permit or allow the Department to conduct inspections or obtain samples as necessary to determine compliance with this regulation; or
- j. Previous history of non-compliance with any local, state or federal environmental law, or previous revocation or permanent suspension of any permit issued under any local, state, or federal environmental law.

3.6 Bond and financial responsibility requirements

Prior to the issuance of a permit, applicants requesting permit approval for the construction or operation of a solid waste management facility that is a landfill, a treatment facility, a processing facility, or storage facility and is not specifically exempted shall acquire and file with the Department a surety bond or escrow from a Utah company, for the amount specified in Section 3.6 (b). If deemed necessary by the Department based on Section 3.6 (a) (1) through (5), the applicant shall acquire additional financial statements, corporate guarantees, insurances, letters of credit, trust funds, or commitment of a portion of the tipping fee in escrow. Bonds and additional financial assurances shall be filed in favor of the Department ensuring that the operation, maintenance, closure and post-closure of the solid waste management facility will be in accordance with this regulation and the solid waste management facility's Department approved operating plan.

- a. Cost estimates shall be based on a third party performing the closure and post-closure care at any time during the active life of the solid waste management facility and adjusted annually for inflation until final closure. The cost estimates shall include but not be limited to:
 - 1. The cost of obtaining, moving, and placing a final cover over the landfill or the cost of moving, transporting or treating and disposing the solid waste;
 - 2. The cost of vegetating the landfill or the cost of removing solid waste from the treatment or processing facility and leaving the property in a clean condition and free of contamination;
 - 3. The cost of installing and maintaining any groundwater monitoring wells, gas monitoring or any other required devices, and the costs of sampling and analysis for the time interval, including closure and post-closure periods, required in Section 7.5 and as approved in the operational plan;
 - 4. The cost of maintaining the integrity of the final cover of the landfill for a period approved by the Department and included in the operating plan; and
 - 5. The cost of corrective action for known releases and any other closure and post-closure requirements.
- b. Surety bonds or financial assurance for solid waste management facilities engaged in the storage, treatment, processing, or disposal of solid waste shall be based on the disposal costs for the maximum amount of solid waste that will be stored at the facility at any given time. The bond or financial assurance for a waste tire storage facility shall be \$150.00 per ton of tires stored at the waste tire storage facility.
- c. Solid waste management facilities whose debts and liabilities are the debts and liabilities of a municipal, state, or the federal government shall be exempt from the bond requirements but not from the financial assurance requirements.

3.7 Joint permitting and bonding

An applicant who jointly operates both a disposal facility and a processing facility on the same or contiguous piece of property may operate the facilities under a single permit and bond. If such a provision is made, the Department shall adjust the permit fee and bond amount to ensure the requirements of the regulation are met. In no case shall the permit fee and bond exceed the total amount if the application for the landfill and processing

facility were made separately.

4.0 WASTE CONTRACTOR REQUIREMENTS

4.1 Container construction, maintenance, and placement requirements

- a. Containers shall be constructed of metal, durable plastic, or rubber. Metal containers shall be painted to prevent rust and corrosion;
- b. Containers shall have on the front or side, the name and telephone number of the contractor legibly printed in letters at least one inch (2.54 centimeters) high. Containers provided to dwellings as part of a municipality-wide service may instead use an identification code;
- c. Containers shall be outfitted with tight-fitting lids or other covers approved by the Director;
- d. Containers shall be constructed with wide necks and mouths and tapered sides to prevent clogging and littering if containers are emptied manually;
- e. Containers shall be maintained in a clean condition and in good repair including repainting if necessary to prevent rust and corrosion. If the waste contractor furnishes solid waste storage containers, the contractor shall be responsible for maintaining the containers in a clean and good condition. The contractor shall have the proper facilities and equipment to clean and repair the waste containers provided or the waste contractor shall have working arrangements with a person who provides that service. The waste contractor shall plan and work with the property owner or occupant or both for placement of the storage containers to minimize traffic or other hazards and the prevention of a nuisance. Containers shall be placed in areas least offensive to adjoining properties and shall not be placed or located on a parking strip, except for the day of collection, or stored within three feet (.91 meters) of an adjoining property;
- f. Containers shall be designed and constructed in a way that they can be emptied without the collector coming into physical contact with the solid waste;
- g. Containers shall not be allowed to remain on any premise without being emptied on a weekly or other required or needed interval; and
- h. Containers not meeting these requirements shall not be used without approval from the Director.

4.2 Collection and transportation of solid waste

Each waste contractor shall be responsible for the satisfactory collection and transportation of all solid waste to a solid waste management facility approved by the Department. No waste contractor or employee of a waste contractor engaged in solid waste collection and transportation shall:

- a. Permit or allow any vehicle or trailer loaded with garbage, manure, slop, swill, refuse, or other solid waste to remain standing upon any premises, street, road, or highway any longer than necessary for loading and transporting except that solid waste may remain for a longer period of time in an emergency, such as severe weather conditions, equipment breakdown, or an accident;
- b. Haul, convey, or transport any solid waste in an open truck, transfer vehicle, open trailer, or other open conveyance for a distance of five blocks or more without making a waste collection stop, unless covered completely or secured to prevent littering or discharge;
- c. Operate any vehicle used for the collection and transportation of solid waste in a way that the contents discharge from the vehicle. If a discharge occurs during collection or transportation, the material shall be picked up immediately by the collector or transporter and returned to the vehicle and the area shall be properly

- cleaned;
 - d. Convey, transport, or haul any garbage, slop, swill, sewage, sludge, fecal material, or other similar solid waste, except in a sanitary receptacle or vehicle especially constructed for that purpose and with a valid permit from the Department; or
 - e. Collect waste materials that are unauthorized or that are smoldering, smoking, or burning.
- 4.3 Unloading solid waste
All solid waste shall be unloaded only within a solid waste facility or site approved by the Department. All unloading shall be in accordance with the requirements of the solid waste management facility accepting the waste, and the requirements of the Department.
- 4.4 Record keeping and reporting requirements
At the request of the Department, a waste contractor or other person collecting and transporting solid waste shall report to the Department the names and addresses of all places of business or persons where collection of solid waste is made and where such waste is hauled and deposited. The report shall be prepared in the format required by the Department.
- 4.5 Safety Plan and Training Requirements
Each waste contractor engaged in solid waste collection and transportation shall have a written safety plan for the collection, transportation, and disposal of solid waste. Each waste collector and operator of a solid waste collection or transportation vehicle shall be trained in each part of the safety plan prior to the collection, transportation, or disposal of solid waste and prior to the operation of the collection or transportation vehicle. The safety plan and training shall include the following parts:
- a. The proper operation and safety features of the solid waste collection vehicle;
 - b. The proper methods of collecting, transporting, and unloading solid waste;
 - c. A copy and understanding of the requirements for the collection, transportation, and disposal, including any of the prohibited acts listed in this regulation relating to the collection, transport and disposal of solid waste;
 - d. A description and understanding of the characteristics of solid waste and its hazardous properties;
 - e. The procedures that must be followed if:
 - 1. Actual or potential injury results from contact with solid waste;
 - 2. Spillage of solid waste occurs during collection or transportation;
 - 3. Hot or burning solid waste loads are encountered; or
 - 4. Unauthorized waste material is deposited in the containers to be collected.
 - f. The regulatory requirements pertaining to the type of waste the operators are permitted to collect and transport.

5.0 SOLID WASTE COLLECTION AND TRANSPORTATION VEHICLES

5.1 Vehicle inspection and permit requirements

Vehicles used by waste contractors to collect or transport solid waste shall be inspected and approved by the Department. Upon making application for the required permit or license or both, each vehicle used by the waste contractor for solid waste collection and transportation shall be made available to the Department for inspection. If the vehicle meets the requirements of Section 5.2 and is approved by the Department, the following documents shall be issued:

- a. An inspection report signed by the Director stating that the vehicle identified by the report has passed inspection;
- b. Two permit stickers that shall be placed on the vehicle by the Director to identify the vehicle as having been inspected for the current year, and such stickers shall not be

- removed, except by the Department, so long as the vehicle is used for hauling; and
 - c. A receipt showing payment of the permit fee.
- 5.2 Vehicle construction requirements
- Each vehicle to be used by a solid waste contractor in the collection or transportation of solid waste shall meet the following requirements:
- a. The vehicle body shall be clean, easily cleanable, and in good condition and repair;
 - b. The body shall be metal-lined with steel and welded at all seams or constructed of other materials approved by the Department;
 - c. The size capacity of the vehicle body or tank shall be certified by the manufacturer or a size certification company approved by the Department;
 - d. The vehicle shall be easily loaded and emptied;
 - e. The tailgate or hopper of the vehicle shall be constructed so the contents of the body will not spill or blow from the vehicle while in motion;
 - f. A heavy-duty canvas or other acceptable heavy-duty cover that is adequate in size to cover the open body of the vehicle shall accompany the vehicle;
 - g. The name and telephone number of the person or company owning the vehicle and the size capacity of the truck body or tank shall be permanently affixed on the body in letters and numbers that are legible and are at least three inches (7.6 centimeters) high;
 - h. All equipment attached to a vehicle hauling liquid or hazardous waste, including but not limited to pumps, hoses, valves, and the containers or tanks or both used to contain or pump the waste, shall be maintained water-tight and in good repair; and
 - i. The vehicle shall comply with all applicable air pollution and noise control ordinances and regulations.
- 5.3 Vehicle maintenance requirements
- a. All equipment used for the collection and transportation of solid waste shall be maintained in good condition and cleaned with a frequency and method determined by the Department to prevent the propagation or attraction of flies, rodents, or other vectors and prevent the creation of a nuisance.
 - b. A collection vehicle that fails to meet the requirements of this regulation shall be repaired or corrected immediately. If the corrections are not made to the collection vehicle its use shall be discontinued and the permit issued to the owner of the vehicle shall be revoked pursuant to the revocation provision of Section 3.5.
- 5.4 Vehicles to be used for permitted use only
- Permitted solid waste collection and transportation vehicles shall be used to collect and transport only the type of solid waste for which they were designed and approved by the Department when the permit was issued.
- 5.5 Liquid Scavenger Operations
- The Tooele County Health Department incorporates by reference the Utah State Rule R317-550, U.A.C.

6.0 SOLID WASTE LANDFILLS

- 6.1 Restricted siting locations
- Unless otherwise approved by the Department, solid waste landfills shall not be located, or expansion of existing facilities allowed, within the following areas:
- a. Any unstable area, and areas likely to be impacted by landslide or mudflow, unless it has been satisfactorily demonstrated to the Director that standard engineering measures have been incorporated ensuring stability of the site and its waste components;
 - b. Wetlands, unless it has been satisfactorily demonstrated to the Director that: no alternatives exist that have less environmental impact; the site will not cause or

contribute to any violation of federal, state, or local regulations, or any water quality standards; the site will not jeopardize the continued existence of endangered or threatened species; and the site will not result in any destruction or degradation of wetlands as determined by the appropriate regulatory agency;

- c. Within 200 feet (60 meters) of a fault area, unless it has been satisfactorily demonstrated to the Director that no alternatives exist or that no displacement within the Holocene Epoch has occurred;
- d. Any seismic zone, unless it has been satisfactorily demonstrated to the Director that engineering measures have been incorporated that will ensure containment;
- e. One-hundred-year flood plains, unless engineering measures have been incorporated that will ensure diversion of flood water from the disposal site;
- f. Within 10,000 feet (3,048 meters) of an airport runway used by turbojet aircraft or within 5,000 (1,524 meters) of an airport runway used by only piston-type aircraft, unless it is satisfactorily demonstrated to the Director the site creates no bird hazard to aircraft;
- g. Recharge zones for drinking water aquifers;
- h. Within 1,500 feet (450 meters) of a wellhead or spring protection area, unless it can be satisfactorily demonstrated to the Director that the site is not within the zone of contribution of the well, well field, or spring;
- i. Within any dam failure area; and
- j. Within 1/4 mile (402 meters) of existing incompatible permanent dwellings or structures including but not limited to residential areas, schools, churches, hospitals and historic structures, unless it can be satisfactorily demonstrated to the Director that the facility will not negatively impact public health or the facility will not be negatively impacted by such areas.

6.2 Department approval and bond required

- a. No construction or operation of a solid waste management facility shall be initiated prior to the approval of the Department.
- b. No significant modification, change, or alteration shall be made in the construction or operation of a solid waste management facility without the approval of the Department.
- c. No person shall operate a landfill without first obtaining a permit from the Department and posting a bond in favor of the Department and providing the additional financial assurances required in Section 3.6.

6.3 Report and plan approval requirements for permits

Before issuance of approval to construct or a permit to operate a landfill, a report shall be submitted to the Department for review and approval. The report shall be prepared by a registered professional engineer, except this requirement may be waived by the Director if justified by the size, simplicity or location of the landfill. Unless otherwise directed by the Director, the report shall include the following information:

- a. The names, addresses, and telephone numbers of the persons responsible for the actual operation and maintenance of the landfill, and the number of personnel to be employed at the site;
- b. The present and future population and area to be served by the proposed landfill;
- c. Evidence of land ownership, lease agreements, and a copy of agreements or permission to use the property as a landfill;
- d. The description, site boundaries, and the total area of the proposed landfill;
- e. A plat map or aerial photograph that accurately shows the exact location of the proposed landfill, current land use, and zoning within 1/4 mile (402 meters) of the site. The map or aerial photograph shall be of sufficient scale and shall show all homes, industrial buildings, airports, wells, watercourses, surface drainage channels,

rock outcroppings, roads, general and irregular topography and other applicable details. All such details shall be identified and indicated on the plat map or aerial photograph;

- f. A soil description including pH, metal concentrations for the metals listed in Appendix A of this regulation, and the ion exchange capacity to a depth of at least five feet (1.5 meters) below the proposed landfill or proposed excavations and a detailed description of geology of the area. Sample collection shall be obtained by soil borings, trenching, or other methods approved by the Director;
- g. A description of surface water within 1/4 mile (402 meters) of the proposed landfill, including seasonal variation, and a description of minimum and maximum groundwater elevations throughout the landfill site, groundwater flow patterns, and the groundwater quality and quantity. In addition, the Director may require the installation of groundwater monitoring wells and a water quality sampling and analysis program of ground and surface waters prior to construction and operation of the landfill, during its operation, and after closure of the site. If well installation is required, the following provisions of the program shall be submitted for approval by the Department Director:
 - 1. The number, location, and depth of up gradient and down gradient monitor wells;
 - 2. The method of construction and the configuration of the monitor wells;
 - 3. The name of the person to perform the sampling, the sampling methods, the sampling frequency, and the sampling time period;
 - 4. The type of analysis that is to be performed;
 - 5. The method(s) and procedures of analysis;
 - 6. The construction, sampling, and analytical quality assurance and quality control; and
 - 7. The name of the laboratory performing the analysis;
- h. A description of liners to be installed to prevent migration of waste, leachate and other contaminants;
- i. The availability, amounts, source, and characteristics of cover material and the cover design, including cover material needed for emergency fire control and closure;
- j. Potential leachate and decomposition gas generation, including the amount and physical and chemical characteristics of the leachate and decomposition gas, and the methods of control, monitoring, collection, treatment and disposal;
- k. The anticipated present and future type, quantity (daily and total), and source of solid waste to be deposited at the landfill including those sources within Tooele County, those sources outside Tooele County and those sources outside the State of Utah;
- l. A description of all record keeping to be provided by the facility so that amounts and type of waste to be accepted may be determined;
- m. The intended operation of the program and procedures including:
 - 1. The hours and days of operation;
 - 2. Existing and proposed structures and utilities;
 - 3. The method and plan of land filling;
 - 4. The type and availability of equipment for efficient excavating, earth moving, spreading, compaction, and other needs;
 - 5. Fencing and other provisions made for control of access and the prevention of scattering of waste material by wind;
 - 6. Provisions for fire, dust, bird, vector and odor control;
 - 7. A written plan outlining the procedures to be taken to exclude hazardous, liquid, or any other solid waste that is not specifically permitted to enter the facility; the plan shall include the following:

- a. The inspection frequency of incoming loads based on a random selection of the loads, approved by the Director;
 - b. Inspection of suspicious loads;
 - c. Record keeping of inspections;
 - d. Training of facility personnel in recognizing hazardous wastes and non-permitted wastes;
 - e. Procedures for notifying the Department of hazardous or non-permitted wastes discovered at the site, or hazardous waste loads rejected; and
 - f. Procedures for isolating and handling hazardous or other non-permitted waste.
 - 8. Provision for employee training and a description of safety and emergency response and communication procedures;
 - 9. Provisions made for traffic control and user notification requirements;
 - 10.. Procedures to handle special waste;
 - 11. Methods of salvaging or recovering wastes for recycling;
 - 12. Methods of controlling run-on/run-off waters;
 - 13. Employee facilities; and
 - 14. Any other pertinent information that clearly indicates the orderly development, operation, and completion of a sanitary landfill.
 - n. Evidence of year-round accessibility, including an all-weather road to the landfill and access roads to the waste unloading areas;
 - o. The expected life span of the landfill, and the use of the land following its completion;
 - p. A plan meeting the requirements of Section 6.9 that describes the methods, procedures, and processes that will be used for partial (if applicable) and final closure of the landfill; and
 - q. A description of any other activities necessary to satisfy the closure and post-closure performance standards.
- 6.4 Conditions for plan approval
- a. Plan approval will depend in part upon adequate isolation, avoidance of excessively irregular topography, groundwater elevations, extremely pervious soil formations, surface rock formations and outcroppings, and close proximity to natural drainage channels. There shall be at least 5 feet (1.5 meters) of separation between the base of the disposal modules or trenches and the highest groundwater elevation. Exceptions to this requirement will be considered on a case-by-case basis, if the solid waste management facility can be modified to demonstrably preclude contaminants into the groundwater.
 - b. Upon approval of the plans and supporting information, those requesting permit approval will be notified in writing by the Department. Approval will include appropriate limitations on types of solid waste to be accepted.
 - c. The Department may revise its approval or disapproval to construct or its permit to operate a landfill in order to make it compatible with new rules and regulations that are adopted by the Department, the State of Utah, or the federal government.
- 6.5 Minimum design and operating requirements
The Tooele County Health Department incorporates by reference the Utah State Rule R315-302 and R315-303, U.A.C.
- 6.6 Groundwater and surface water monitoring
The Tooele County Health Department incorporates by reference the Utah State Rule R315-308, U.A.C.
- 6.7 Property deed recording
- a. Following final closure of the solid waste landfill or landfill unit, the owner or

operator shall record a notation on the deed to the landfill property, or some other instrument that is normally examined during a title search, that will in perpetuity notify any potential purchaser of the property of the previous use of the property as a solid waste landfill and any use restrictions.

- b. If the owner or operator or any subsequent owner or operator of the land upon which a solid waste landfill unit is located wishes to remove wastes and waste residues, the liner (if any), or contaminated soils, he or she shall first request from the Director approval for such removal. The owner or operator may also request permission from the Director to remove or modify the notation on the deed to the landfill property or other instrument normally examined during title search if all wastes are removed and no contamination of groundwater or soil is present.

6.8 Closure and post-closure

The Tooele County Health Department incorporates by reference the Utah State Rule R315-302, U.A.C.

6.9 Asbestos waste disposal facilities

Solid waste landfills that also are permitted by the Department to accept asbestos waste or asbestos waste mono-fills shall in addition to the requirements set forth in Section 6.1 through 6.5 and 6.8 through 6.9, meet the requirements of the Utah State Rule R315-315-2, hereby incorporated by reference.

7.0 CLOSING OF EXISTING OR ABANDONED OPEN DUMPS

7.1 Closure requirements

Existing or abandoned open dumps shall be closed within 180 calendar days following the effective date of this regulation, or sooner if ordered by the Department, and in accordance with the following requirements:

- a. Absence of rats and other vermin shall be positively established. If rats or other vermin are present, an extermination procedure shall be established and carried out by qualified individuals prior to closing;
- b. All fires shall be extinguished before the final cover of earth is applied;
- c. All solid wastes shall be consolidated, compacted, and covered with at least two feet (61 centimeters) of final cover material as defined in this regulation;
- d. The final grading shall provide proper surface drainage and prevent ponding;
- e. The area shall be planted with appropriate grass or other vegetation, unless other approval is given by the Director; and
- f. Any other corrective measures to protect the public health, safety, or welfare shall be taken as directed by the Director, which may include, but not be limited to, litter control, groundwater monitoring, gas monitoring, leachate management, and continued management and maintenance of the integrity of the final cover.

8.0 SOLID WASTE PROCESSING FACILITY REQUIREMENTS

8.1 Restricted siting locations

Unless otherwise approved by the Director, solid waste processing facilities shall not be located, or expansion of existing processing facilities allowed within the restricted siting locations described in Section 6.1 of this regulation.

8.2 Approval and permit required

- a. No construction or operation of a processing facility shall be initiated prior to the approval of the Department, and no significant modification, change, or alteration shall be made in the construction or operation of a processing facility without the approval of the Department.

- b. No person shall operate a processing facility without first obtaining a permit from the Department and posting a bond as required in Sections 3.1 through 3.7 of this regulation.

8.3 Plan and plan approval requirements

Unless otherwise approved by the Director, before approval to construct is given and before a permit to operate a processing facility is issued, a report for each proposed processing facility shall be submitted to the Department for review and approval. The plans for a processing facility shall be prepared by a registered professional engineer, except this requirement may be waived by the Director if justified by the size and type of facility. Unless otherwise directed by the Director, the report shall include:

- a. The names, addresses, and telephone numbers of the owner of the processing facility and the person responsible for the facility operations;
- b. The present and future population and area to be served by the facility;
- c. A legal description and site boundaries, evidence of land ownership, lease agreements allowing use of the property as a processing facility, and total area of the proposed site;
- d. A plat map or aerial photograph of the area showing the specific location of the processing facility and the land use and zoning within 1/4 mile (402 meters) of the facility. The map or aerial photograph shall be of sufficient scale and shall show all homes, industrial buildings, roads, general and irregular topography, and other applicable details. Boundaries of the processing facility and all such details shall be identified and indicated on the plat map or aerial photograph;
- e. A plot plan of the processing facility including:
 - 1. The means of limiting access including but not limited to fencing, gates, and natural barriers;
 - 2. The method of acceptably screening the facility from the surrounding area;
 - 3. A general layout of equipment and flow patterns;
 - 4. Road access and traffic control; and
 - 5. The location of existing and proposed utilities servicing the processing facility;
- f. Detailed drawings and specifications of all buildings, structures, equipment, storage areas, and other facility plans;
- g. Design criteria, rated capacities, expected performance data, and noise emission data;
- h. Air emissions data including expected type of emissions, the amount of each emission, any chemical transformations of the emissions which may result after their release, dispersion patterns of the emissions, fall out and wet fall of the emissions, the impact of the emissions on non-attainment area, the type of emission monitoring including stack monitoring, the potential health impacts of the emissions and the number of people or the area which may be affected by the emissions;
- i. Appurtenances and procedures intended:
 - 1. To handle heavy or bulky waste, special waste, or waste that may require special handling;
 - 2. To store solid waste beyond the end of the working day;
 - 3. To control or prevent dust, odors, fire, explosions, noise, and wind-blown materials; and
 - 4. To handle solid waste and repairs if there is a major processing facility breakdown including power failure, equipment failure or other failure inhibiting operation of the facility.
- j. The number and types of vehicles and trailers used to transport solid waste and residues into and out of the facility and the procedures for loading and unloading the vehicles and trailers;
- k. The anticipated present and future type, quantity, and sources of waste to be handled

and a breakdown of those sources within Tooele County, those outside Tooele County and those outside the State of Utah, to be recycled or processed. The moisture content of the waste to be handled in the processing facility;

- l. Methods of record keeping and determining the amounts and types of waste accepted at the facility; Methods of volume reduction, treating, or processing, including but not limited to incineration, composting, compaction, compression, baling, shredding, grinding, tamping, separating, classifying, drying, and blending;
- m. The primary and secondary types and sources of fuel to be used by the processing facility;
- n. The names and locations of solid waste disposal sites where solid waste from the processing facility will be hauled;
- o. Methods of collecting, treating and disposing any liquid waste including leachate, and other residues resulting from the operation of the processing facility;
- p. The daily quantity and characteristics of residue and the disposal location for all residue including but not limited to fly and bottom ash residue, by-products resulting from air pollution control devices, and quench water, and the method in which each residue will be managed and disposed;
- q. Salvaging, recycling, resource-recovery, or reclamation activities operated in conjunction with the facility, on the incoming solid waste and the outgoing residue;
- r. The proposed plan for disposition or utilization of the processed compost or waste material, including copies of signed contracts for utilization or other evidence of assured utilization of composted or processed waste materials;
- s. The availability of shelter and sanitary facilities for operating personnel; Daily cleanup procedures;
- t. Groundwater and surface water protection measures and monitoring plans in accordance with Section 6.7 of this regulation if it is determined by the Director that the processing facility's operation could potentially impact groundwater or surface water;
- u. Air emissions and gas monitoring plans and frequencies if it is determined by the Director that the processing facility's operation could potentially impact air quality or pose a gas or explosion hazard;
- v. A written plan outlining the procedures to be taken to exclude radioactive, hazardous, liquid, or any other unauthorized solid waste not specifically permitted to enter the processing facility. The plan shall include a method approved by the Director of inspecting and assuring inspection and separation and shall include, but not be limited to, the following:
 1. Random inspections of incoming loads;
 2. Inspection of all suspicious loads;
 3. Record keeping of inspections;
 4. Training of facility personnel in recognizing hazardous wastes and non-permitted waste;
 5. Procedures for notifying the Department of hazardous and non-permitted waste discovered at the facility or hazardous waste rejected; and
 6. Procedures for isolating hazardous and non-permitted waste from other solid waste.
- w. Methods and procedures for decontaminating equipment and containers;
- x. Provisions for employee training, a description of safety procedures and clothing and equipment to be used by personnel, a description of communication methods, and a description of emergency procedures to be employed in the event of any release or discharge or an accident including containment, cleanup, decontamination, and notification;

- y. A written plan describing the methods and procedures that will be used to close the facility and provide post-closure care. If the processing facility is an existing facility at the time of adoption of this regulation the written plan shall be submitted to the Department within 180 calendar days after the effective date of this regulation; and
- z. Any other information specifically requested by the Director to determine compliance with this regulation.

8.4 Pre-open and construction inspection

Upon completion of construction and prior to initial operation, the Department shall be notified so an inspection may be made of the facility to determine conformance with the approved plan and with the applicable provisions of these regulations. Performance tests of the processing facility may be required by the Director. A report covering the results of any performance tests shall be prepared by the design engineer of the project and submitted to the Department with a copy of all supporting data.

8.5 Minimum design and operating requirements

Unless otherwise approved by the Director, each processing facility shall be designed, operated, and maintained to meet the following minimum requirements:

- a. The processing facility shall be situated, equipped, operated, and maintained to minimize interference with other community activities;
- b. Any processing facility located less than 500 feet (152.5 meters) from a residence shall be obscured by a fence at least eight feet (2.4 meters) high with 75 percent screening, whether the residence is established before or after installation of the facility. This rule may be modified or an exemption granted in writing by the Department, if the Director is satisfied that the public health or welfare will not be adversely affected;
- c. All-weather roads, negotiable by loaded vehicles, shall be provided within the facility, shall connect the facility with public roads and shall be designed and maintained to prevent traffic congestion, traffic hazards, and air and noise pollution;
- d. A sign shall be posted at the entrance to the processing facility that indicates the name, permit number, hours of use, penalty for unauthorized use, necessary safety precautions, types of waste accepted or prohibited, and any other pertinent information that will ensure the health and safety of the public and employees;
- e. A building that is roofed and enclosed on at least three sides, or otherwise enclosed, shall be provided to satisfactorily control dust, litter, and other solid waste;
- f. Scales or methods approved by the Director of accurately determining the amount of waste received at the processing facility shall be provided;
- g. The unloading area shall be adequate in size and design to facilitate the rapid unloading of solid waste from collection and transporting vehicles with minimum delay or confusion:
 - 1. Unloading of solid waste shall take place only within the enclosed structure or designated areas approved by the Director;
 - 2. Solid waste shall be confined to the approved unloading, loading, and handling areas; and
 - 3. Dust, odor, and noise resulting from the unloading of solid waste and the operation of the processing facility shall be controlled at all times and comply with applicable laws.
- h. Transfer vehicles and trailers shall be loaded and operated to prevent dropping, leaking, sifting, blowing, or discharge of solid waste.
- i. A processing facility shall accept and process only the type of solid waste approved by the Director:
 - 1. Solid waste that is burning or at a temperature likely to cause fire shall not be accepted in the processing facility;

2. Any large, heavy, or bulky items that cannot be handled in the routine operation shall be excluded from the facility unless special provision is made for handling;
 3. Radioactive, hazardous and other non-permitted wastes shall not be accepted at a processing facility. The Department shall be notified immediately if such wastes are refused by the facility or are discovered by the owner or operator of the facility;
 4. At least 10 percent of the incoming loads based on a random selection of the loads shall be inspected;
 5. All suspicious loads shall be inspected;
 6. A record shall be kept of the inspections conducted; and
 7. Facility personnel shall be trained to recognize permitted and non-permitted waste and shall be instructed on the proper notification procedures if non-permitted waste is encountered;
- j. A sufficient number of transfer vehicles or trailers shall be available to preclude excessive storage of solid waste. Transfer vehicles or trailers containing garbage shall be removed or emptied as often as necessary to maintain good sanitation (but at least every 24 hours), and transfer vehicles and trailers shall be cleaned as frequently as necessary to prevent objectionable odors, vector conditions, or any other nuisances;
- k. All residues from the processing facility, including all solid waste remaining at the end of the working day, shall be promptly disposed at an approved solid waste disposal facility or properly stored in a way consistent with the applicable provisions of this regulation. Accumulations of garbage and refuse shall be controlled to minimize odors and prevent infestation by insects or rodents, and supplemental effective vector control measures shall be initiated immediately by the operator if necessary to prevent or eliminate insects and rodents;
- l. Fly and bottom ash residue from solid waste incinerators or other processing operations shall be analyzed by the owner or operator for its hazardous characteristics prior to disposal at a solid waste landfill. The sampling and analysis frequency shall be determined by the Director as part of the facility's operational plan and may be revised (increased or decreased);
- m. Provisions shall be made to effectively collect, treat, and dispose leachate and drainage from the processing operation, and the site shall be designed so surface drainage will be diverted around or away from the operational areas of the facility. Leachate drainage from the processing facility shall be sampled and analyzed prior to disposal and shall not be allowed to drain or discharge into surface water except pursuant to a State Pollution Discharge Elimination System permit and shall not cause or contribute to contamination of groundwater quality or a violation of any established groundwater or surface water standards;
- n. All wastewater from the facility shall be discharged into a sanitary sewer if approved by the Sanitary Sewer District or other system approved by the Director;
- o. Floor surfaces shall be constructed of impervious materials, readily cleanable by flushing, and equipped with floor drains or a sump pump connected to a sanitary sewer system or its equivalent approved by the Director to facilitate the removal of moisture;
- p. Salvaging shall be conducted in a way that it prevents injury and interference with required facility operation and prevents the creation of any unsightly condition, nuisance, or vector harborage.
1. Salvaged material shall be removed from the facility within 24 hours, unless confined to an approved storage area.
 2. Drugs, cosmetics, foods, beverages, hazardous wastes, poisons, pesticides,

- infectious wastes or other similar materials capable of impairing public health shall not be salvaged unless approved by the Director;
- q. Materials resulting from composting or similar processes and offered for sale or use by the general public:
 - 1. Shall contain no pathogenic organisms;
 - 2. Shall not reheat upon standing;
 - 3. Shall be innocuous;
 - 4. Shall be relatively odor free;
 - 5. Shall contain no sharp particles or objects that would cause injury to persons handling the compost or material; and
 - 6. Shall not otherwise endanger the public health or safety;
 - r. Adequate provisions shall be made for routine operational maintenance of the processing facility and all appurtenances:
 - 1. Processing facilities, including access roads, shall be cleaned as often as necessary to prevent conditions creating a health hazard, littering, or a nuisance;
 - 2. All plumbing shall be properly maintained and the floors well drained and free of standing water; and
 - 3. Repair or replacement of operational equipment shall be made efficiently and quickly;
 - s. If for any reason the processing facility is rendered inoperable, an approved alternate method shall be used for solid waste processing or disposal;
 - t. Equipment shall be provided to control accidental fires and arrangements shall be made with the local fire protection agency to immediately provide services if needed;
 - u. Methods of communication shall be provided for emergency purposes, and all utility services shall be properly maintained;
 - v. Emergency procedures shall be adopted and provided to employees in the event of any discharge of solid waste from any transport vehicle, processing facility, storage facility or disposal facility, including the emergency clean-up procedures, decontamination procedures and notification procedures of emergency and Departmental personnel;
 - w. Adequate shelter and sanitary facilities shall be available for facility or site personnel including, but not limited to, protection from cold and wet weather, hand-washing and toilet facilities, and drinking water;
 - x. The processing facility shall be operated under the close supervision of responsible individuals who are familiar with the requirements and operational procedures of the facility:
 - 1. Qualified personnel shall be at the landfill to supervise activities during all hours of scheduled operation;
 - 2. Public access to the facility shall be limited to times when an operations employee is on duty; and
 - 3. Visitors, users, and employees of a site shall have restricted access to operations where exposition hazards exist or where hazardous materials are stored or handled;
 - y. Reports or records shall be kept and submitted to the Department as requested, describing:
 - 1. The types and amounts of solid waste handled, composted, processed, treated or incinerated;
 - 2. The amount of fuel, compost, or other recovered or recyclable material produced from solid waste;
 - 3. The amount and composition of by-products or residue removed;
 - 4. The disposition of by-products or residue;

5. Combustion temperatures and residence times;
6. Stack testing and other air pollution monitoring results;
7. Inspection records, training procedures, and notification procedures required in Section 8.4 (i); and
8. Other information on the operation of the processing facility required by the Director.

8.6 Processing facility closure requirements

- a. The owner or operator of the processing facility shall close the facility in a way that the need for further maintenance and the post-closure formation and release of leachate, gases, or odors to the air, groundwater, or surface water is minimized.
- b. At least 90 calendar days prior to the close of the processing facility, the owner or operator shall notify the Department of closure. An inspection shall be made by the Department to determine corrective repair and any additional closure and post-closure care needed.
- c. At least 30 calendar days prior to closure, the owner or operator of the facility shall notify users of the facility of closure. If the users are a municipality, business, or waste contractor the notification shall be given directly. If the public is a user of the processing facility a notice shall be posted at the facility.
- d. The owner or operator of the facility shall begin closure activities of the facility in accordance with the Department approved closure plan no later than 30 calendar days following final receipt of waste at the facility. In addition to the closure and post closure activities approved in the closure and post-closure plan, the owner or operator shall conduct closure and post-closure care consisting of but not limited to:
 1. The removal of all solid waste material and waste residues from the facility property, unless the facility is also considered a disposal facility;
 2. The monitoring of groundwater and surface water for a period of time determined by the Department, to protect the public health and welfare;
 3. The sampling and analysis of soil to assure no contamination of soils has occurred; and
 4. The construction of additional fencing or other appropriate structures to limit access and the posting of signs indicating closure of the facility and alternative disposal locations.
- e. Following closure and post-closure care of the processing facility, the Department shall determine if the closure and post-closure care has been completed in accordance to the closure and post-closure plan. The Department may require prior to final approval that a qualified engineer certify closure.

8.7 Surface impoundments

In addition to the requirements set forth in Sections 8.1 through 8.6 relating to solid waste processing facilities, surface impoundments shall comply with the requirements of Section 8.7 (a) through (i) below:

- a. Surface impoundments shall be greater than two feet (0.6 meters) deep and shall be designed and constructed with a minimum two foot (0.6 meters) freeboard consisting of soil or other material approved by the Director. The freeboard shall at all times extend two feet (0.6 meters) above the top of the highest point of the waste within the surface impoundment.
- b. Surface impoundments shall be constructed with a liner system to minimize percolation. The liner system shall either be constructed of an impermeable clay having a hydraulic conductivity of 1×10^{-7} (or less) centimeters per second or a synthetic or oam-made liner approved by the Director.
- c. The base of the surface impoundment shall be a minimum of five feet (1.5 meters) above both the seasonal high groundwater table and the top of bedrock.

- d. A minimum of one up gradient and two down-gradient groundwater-monitoring wells, or more if required by the Director, shall be installed at the surface impoundment site. Groundwater monitoring wells shall be installed and sampled according to the requirements set forth in Section 6.7. In lieu of or in addition to groundwater monitoring wells, the Director may require a secondary liner system for the surface impoundment;
 - e. Baseline water quality data listed in Appendix A of this regulation shall be established prior to depositing any material in the surface impoundment. Soils shall be analyzed for pH and the metals listed in Appendix A. The Director may, if it deems necessary, require additional chemical analysis prior to depositing waste in the surface impoundment;
 - f. The owner or operator of a surface impoundment shall verify that the cleaning, blending, or removal of any sludge from the surface impoundment does not in any way damage the integrity of the liner system;
 - g. Surface impoundments shall be completely emptied annually, unless otherwise approved by the Director. The Department shall be notified seven days prior to such emptying to enable the Department to inspect the liner prior to refilling. Any damage to the liner shall be repaired prior to placing or filling the surface impoundment with any liquid, semi-liquid, or other waste;
 - h. Samples of groundwater from monitoring wells or other monitoring devices shall be collected and analyzed on a quarterly interval, unless otherwise approved by the Director, for the following parameters; chloride, nitrate, sulfate, total hardness, alkalinity, total organic carbon, chemical oxygen demand and the field parameters listed in Appendix A. On a semi-annual basis, samples shall be analyzed for the priority metals listed in Appendix A and for persistent organic compounds of concern or as directed by the Director; and
 - i. A report shall be submitted annually to the Department that includes the results of all required analyses, the sources and quantities of all materials placed in the surface impoundment, the date and the amounts of material removed from the impoundment, and the location of where the material was taken.
- 8.8 Land spreading facilities
- In addition to the requirements set forth in Sections 8.1 through 8.6 relating to processing facilities, land-spreading facilities shall meet the requirements of the Utah State Rule R315-307 U.A.C., hereby incorporated by reference.

9.0 WASTE TIRES

- 9.1 Waste tire generator and transporter requirements
- a. Each generator of ten or more waste tires per month shall transfer custody of the waste tires only to a solid waste contractor who is permitted by the Department as a waste tire transporter. A person is exempt from this requirement if the generator transports his or her own waste tires and keeps an accurate record of the number of waste tires generated or transported.
 - b. No person, waste tire transporter, firm, business, municipality, or other public or private entity generating or transporting waste tires shall dispose waste tires except at an approved solid waste management facility having a current operating permit from the Department.
 - c. Waste tire transporters shall keep an accurate record of the number of waste tires collected and the date the waste tires were collected. Records shall be kept for each individual waste tire generator and the location of the solid waste management facility and dates the waste tires were disposed. Records shall be made in triplicate

copies with one copy provided to the waste tire generator, one copy provided to the disposal site, and one copy kept by the transporter and provided to the Department upon request. Records shall be retained by the waste tire transporter for a minimum of five years.

- 9.2 Land filling of waste tires and tire shreddings
- a. No person shall dispose of more than four tires at one time at an approved landfill.
 - b. Tires with a rim diameter greater than 24.5 inches (62 centimeters) and tire shreddings or other tire material derived from the shredding of tires may be disposed of at an approved landfill.
- 9.3 Waste tire storage facility requirements
- Waste tire storage facilities, in addition to the requirements set forth in Section 3.1 through 3.3, 3.6, and 8.1 through 8.6 of this regulation, shall be designed, constructed and operated as follows:
- a. Tires shall be stored in a way that affords fire protection by limiting the storage area or tire piles to 5,000 square feet (465 square meters) of contiguous tires with an elevation not exceeding ten feet (three meters) at the highest peak;
 - b. A clear space at least 50 feet (15.2 meters) wide shall be provided and maintained between each storage area and waste tire pile and a distance of 40 feet (12.1 meters) from the perimeter of the property and 50 feet (15.2 meters) from all buildings is provided and maintained. Such space shall not be obstructed by buildings or debris and shall not contain weeds, trees, or other flammable material;
 - c. The tire storage area or tire piles shall be fenced to control access;
 - d. Separation of each storage area by tire type and or a separation of recyclable tires from non-recyclable tires shall be provided to simplify future sorting;
 - e. Sufficient soil and other materials approved by the Director, in adequate amounts for fire extinguishing purposes and the availability of equipment to accomplish the purpose shall be provided;
 - f. Acceptable vector control measures including, but not limited to, impermeable plastic sheets or other approved barriers that give protection from an accumulation of precipitation, and chemical treatment approved by the Director or shredding of the tires to eliminate vector breeding, and storing the tires in a way that allows complete drainage shall be provided;
 - g. Maintenance of approach roads and spacing between waste tire piles so that fire fighting and emergency response equipment can easily enter the site shall be provided; and
 - h. An adequate plan outlining emergency response procedures including, but not limited to, fire control and insect eradication shall be provided to the Department.

10.0 INFECTIOUS WASTE

- 10.1 Storage and disposal requirements applicable to all generators of infectious waste
- a. All generators of infectious waste, regardless of the quantity, shall containerize, store and dispose of infectious waste in a way and at a location inaccessible to unauthorized persons, and in a way that affords protection from animals, precipitation, and wind. The waste shall not provide a breeding place or food source for insects or rodents or cause any other nuisance or public health or safety hazard.
 - b. Sharps such as syringes and needles, capable of causing skin puncture shall be contained for disposal as infectious waste in labeled metal or rigid plastic puncture resistant containers, completely enclosed to prevent contact and spillage.
- 10.2 Requirements applicable to health care facilities, infectious waste contractors and

processing facilities

- a. The requirements of Section 10.2 through 10.7 shall apply to all health care facilities and generators that produce more than 50 pounds (22.7 kilograms) of infectious waste per month, infectious waste processing facilities and infectious waste contractors.
- b. All generators of infectious waste listed in (a) above shall have and provide for their employees a written plan that includes: the types of waste handled as infectious waste; the treatment, storage, and disposal procedures employed; the procedures to be followed if any person comes in contact with infectious waste; and the safety procedures all employees will follow related to the handling of infectious waste. Employees shall be thoroughly trained in the plan prior to handling infectious waste. The plan shall be kept on file and available to the Department on request and the Department may verify that all employees are properly trained. The employer shall review and update the plan annually or more often if necessary.

10.3 Approval and permit requirements

Except as exempted in Section 3.4 (b) (12) of this regulation, no construction or operation of an infectious waste collection operation, transfer or storage facility or processing facility shall be initiated prior to the approval of the Department. No significant modification, change, or alteration shall be made in the construction or operation of a facility without the approval of the Department.

10.4 Storage and containment requirements

- a. All infectious waste containers and storage areas shall be marked with the words infectious waste, biohazard or with the international infectious waste symbol.
- b. Infectious waste containers shall be stored in a manner that will minimize odors and shall not be stored in or near patient areas, or food storage or preparation areas.
- c. Infectious waste, except for sharps capable of puncturing or cutting, shall be contained in disposable plastic bags that are impervious to moisture and that have a minimum thickness of 3.0 mills or other thickness having equivalent or greater strength. The bags and containers shall be securely tied or sealed to prevent leakage of liquid or solid wastes during storage, handling, or transport.
- d. Sharps shall be contained for disposal in leak proof, rigid, puncture-resistant containers such as cartons or metal cans that are taped closed or equipped with tight fitting lids to preclude loss of the contents. The containers shall be clearly labeled "INFECTIOUS WASTE".
- e. All bags and containers used for containment and disposal of infectious waste shall be red in color or if another color, conspicuously labeled with the words "INFECTIOUS WASTE" or with the international biohazard symbol and the word "BIOHAZARD".
- f. Compactors or grinders shall not be used to process infectious waste until after the waste has been rendered noninfectious. Infectious waste in bags or other disposal containers shall not be subject to compaction by any compacting device and shall not be placed in a portable or mobile trash compactor for storage or transporting.
- g. Infectious waste contained in disposable containers, shall be placed for storage or handling in disposable or reusable pails, cartons, drums, dumpsters or portable bins. The containment system shall be leak proof, have tight-fitting covers, and be kept clean and in good repair. The containers may be of any color and shall be conspicuously labeled with the words "INFECTIOUS WASTE" or with the international biohazard symbol and the word "BIOHAZARD" on the lid and on the sides so they are readily visible from any lateral direction when the container is upright.
- h. Reusable pails, drums, dumpsters, or bins used for containment of infectious waste

shall not be used for containment of other solid waste or uses unless decontaminated.

- i. Trash chutes shall not be used to transfer infectious waste.

10.5 Decontamination of reusable containers

Unless the surfaces of the containers have been completely protected from contamination by disposable liners, bags, or other devices removed with the waste, reusable containers for infectious waste shall be thoroughly washed and decontaminated each time they are emptied by:

- a. Exposure to hot water of at least 180 degrees Fahrenheit (82 degrees Celsius) for a minimum of 15 seconds;
- b. Exposure to a chemical sanitizer by rinsing with or immersion in one of the following for a minimum of three minutes:
 - 1. Hypochlorite solution (500 milligrams per liter available chlorine);
 - 2. Phenol solution (500 milligrams per liter active agent);
 - 3. Iodoform solution (100 milligrams per liter available iodine);
 - 4. Quaternary ammonium solution (400 milligrams per liter active agent).
- c. Other methods approved by the Director.

10.6 Transportation requirements

- a. Infectious waste contractors or any other person transporting 50 or more pounds (22.7 kilograms) of infectious waste shall identify the infectious waste collection and transportation vehicle on each side with a permanently affixed and conspicuously displayed rectangular sign or decal 9.8 by 13.8 inches (25 by 35 centimeters) in size with red labeling on a white background with the words "Infectious Waste" or with the international biohazard symbol and the word "Biohazard".
- b. Infectious waste shall be transported only to a solid waste management facility approved for the treatment or disposal of infectious waste. The waste shall be transported in a leak proof, fully enclosed container or vehicle compartment.
- c. Quantities of more than 50 pounds (2.7 kilograms) of infectious waste shall not be transported in the same vehicle with other solid waste unless the infectious waste is separately contained in rigid reusable containers, kept separate by barriers from other waste, or unless all the waste is to be treated or disposed as infectious waste in accordance with this regulation.
- d. Infectious waste shall not be unloaded and reloaded or transferred to another vehicle unless the loading and unloading has been approved by the Director or the unloading is done at a solid waste management facility approved as an infectious waste transfer station. Such solid waste management facility shall keep the infectious waste in a secured area separate from other wastes. If the infectious waste is to be stored from any period of time following unloading at the treatment or transfer or storage facility, such storage shall be in a refrigerated unit capable of cooling and maintaining the waste at or below a temperature of 32 degrees Fahrenheit (0 degrees Celsius).
- e. Employers of persons engaged in manually loading or unloading containers of infectious waste on or from transport vehicles shall provide, and require the wearing of, protective gloves, coveralls, and if deemed necessary, face shields, or respirators. Soiled protective clothing shall be disposed at the infectious waste facility or decontaminated.
- f. Surfaces of transport vehicles that have contacted spilled or leaked infectious waste shall be decontaminated.

10.7 Treatment and disposal requirements

Unless otherwise approved by the Director, treatment or disposal of infectious waste shall

be by one of the following methods:

- a. By incineration in a controlled air multi-chambered incinerator that meets, at a minimum, the Air Quality standards and residence times established by the State of Utah and that provides complete combustion of the waste to carbonized or mineralized ash. Hazardous wastes shall not be incinerated in an infectious waste incinerator unless such incinerator is also permitted as a hazardous waste incinerator. Radioactive waste shall only be disposed of at a facility approved for radioactive waste disposal. Infectious waste ash may be disposed as non-infectious solid waste provided it is otherwise non-hazardous;
- b. By burial at a landfill approved to accept infectious waste, provided the infectious waste is buried immediately with cover material or non-infectious solid waste prior to compaction to ensure that equipment and persons are not contaminated by subsequent compaction and covering operation. Unless land filling is the only available alternative infectious wastes consisting of recognizable human anatomical remains and fetal remains shall be disposed by incineration, at a crematory, or internment at an approved cemetery;
- c. By discharge to a sewer system approved by the Director if the infectious waste is liquid and provided the waste will not remain viable in the sewer system;
- d. By heat sterilization in a steam sterilizer, or by another sterilization technique, approved by the Director that renders the waste non-infectious. Operating procedures for steam sterilizers shall include, but not be limited to:
 1. Adoption of standard written operating procedure for each steam sterilizer including time, temperature, pressure, type of waste, type of containers, closure on containers, pattern of loading, water content, and maximum load quantity;
 2. Attainment of a temperature of 250 degrees Fahrenheit (121 degrees Celsius) for one-half hour or longer, depending on quantity and compaction of the load, in order to achieve sterilization of the entire load. A check of recording and or indicating thermometers shall be made during each complete cycle to ensure the required temperature attainment. Thermometers shall be calibrated at least annually or more frequently if needed;
 3. Use of heat sensitive tape or other device for each container that is processed to indicate the attainment of adequate sterilization conditions; and
 4. Use of the biological indicator, Bacillus Stearothermophilus placed at the center of a load at least once a month, to confirm the attainment of adequate sterilization conditions.

11.0 ASBESTOS

In addition to the requirements set forth in Section 6.9 of this regulation, the Department incorporates by reference the Asbestos Rules promulgated by the Utah Air Quality Board in Rule R307-1-8, Utah Administrative Code.

APPROVED AND ADOPTED this _____ day of _____, 2004

ATTEST:

MYRON E. BATEMAN

Health Officer

Tooele County Health Department

TOOELE COUNTY BOARD OF HEALTH:

KATHY TAYLOR, CHAIR

APPENDIX A
Water Quality Analysis Table

	GROUND AND Baseline Parameters	SURFACE WATER Routine Parameters	LEACHATE All Samples
FIELD PARAMETERS			
Dissolved Oxygen (DO)	X	X	X
Floaters or Sinkers ²	X		X
Odor ³	X	X	X
pH	X	X	X
Specific Conductance	X	X	X
Static Water Level	X	X	X
Temperature	X	X	X
LEACHATE INDICATORS			
Alkalinity	X	X	X
Ammonia	X	X	X
Bicarbonate	X	X	X
Biochemical Oxygen Demand (BOD)	X		X
Carbonate ⁴	X	X	X
Chemical Oxygen Demand (COD)	X	X	X
Chloride	X	X	X
Nitrate	X	X	X
Phenols	X		X
Sulfate	X	X	X
Total Dissolved Solids (TDS)	X	X	X
Total Kjeldahl Nitrogen (TKN)	X		X
Total Organic Carbon (TOC)	X	X	X
Total Organic Halogen (TOH)	X	X	X
Turbidity	X		X
METALS ⁵			
Aluminum	X		X
Antimony	X	X	X
Arsenic	X	X	X
Barium	X	X	X
Beryllium	X	X	X
Boron	X		X
Cadmium	X	X	X
Calcium	X		X
Chromium (total & hexavalent)	X	X	X
Cobalt	X	X	X
Copper	X	X	X
Cyanide	X		X
Iron	X	X	X
Lead	X	X	X
Magnesium	X	X	X
Manganese, dissolved	X	X	X

Mercury	X	X	X
Nickel	X		X
Potassium	X		X
Selenium	X	X	X
Silver	X	X	X
Sodium	X	X	X
Thallium	X	X	X
Vanadium	X	X	X
Zinc	X	X	X
ORGANIC CONSTITUENTS			
Volatile Organics ⁶ (as listed below)	X	X	X
Acetone		Cis-1,3-Dichloropropene	
Acrolein		Trans-1,3-Dichloropropene	
Acrylonitrile		Ethylbenzene	
Benzene		2-Hexanone (Methyl butyl ketone)	
Bromochloromethane		Methyl bromide (Bromomethane)	
Bromodichloromethane		Methyl chloride (Chloromethane)	
Bromoform (Tribromomethane)		Methylene bromide (Dibromomethane)	
Carbon disulfide		Methylene chloride (Dichloromethane)	
Carbon tetrachloride		Methyl ethyl ketone (2-Butanone)	
Chlorobenzene		Methyl iodine (Iodomethane)	
Chloroethane (Ethyl chloride)		4-Methyl-2-pentanone (MIBK)	
Chloroform (Trichloromethane)		Styrene	
Dibromochloromethane		1,1,1,2-Tetrachloroethane	
1,2-Dibromo-3-chloropropane		1,1,2,2,-Tetrachloroethane	
1,2-Dibromoethane (EDB)		Tetrachloroethylene (PCE)	
1,2-Dichlorobenzene (ortho)		Toluene	
1,4-Dichlorobenzene (para)		1,1,1-Trichloroethane (Methyl chloroform)	
Trans-1,4-Dichloro-2-butene		1,1,2-Trichloroethane	
1,1-Dichloroethane		Trichloroethylene (TCE)	
1,2-Dichloroethane		Trichlorofluoromethane (Freon II)	
1,1-Dichloroethylene		1,2,3-Trichloropropane	
Cis-1,2-Dichloroethylene		Vinyl acetate	
Trans-1,2-Dichloroethylene		Vinyl chloride	
1,2-Dichloropropane		Xylenes	

Notes

¹ Surface water and leachate only.

² Any floaters or sinkers found shall be analyzed separately for baseline parameters.

³ Any odors noticed during well development, purging, or sampling must be noted and reported.

⁴ Carbonate must be calculated unless the pH is above 8.2.

⁵ Standard analytical procedures for the heavy metals are provided in EPA Report SW-846 "Test Methods for Evaluating Solid Waste" third edition, November 1986, as revised December 1987, includes either Method 6010 or a method from the 7000 series of methods, or other approved methods.

⁶ Standard analytical procedures for the organic constituents are provided in SW-846 as Method 8260.